



# Analysis of questionnaires to assess the 'Motivational Learning Environment' (MoLE) of upper secondary level students in Ireland

# A report by the UCC / ICASE partners for PROFILES WP7

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#### **Executive Summary**

The purpose of this study was to see what effect an inquiry-based taught module might have on students' attitudes to school science. In early 2012 five hundred and eighty second level students (ca. 16 years of age) completed **two** questionnaires before the module was taught. Some weeks later, after the module was taught, they completed two identical questionnaires.

The first questionnaire asked students to describe their actual experience of school science. The second questionnaire asked them to indicate how they thought it schould be. The 'reality', as they perceived it, was different from what they considered to be ideal.

After the module was completed the students' ideas of ideal science lessons had not changed significantly. However their perception of the reality had shifted significantly towards the ideal.

The post-test indicated the following:

- science lessons were more enjoyable
- the students felt happier
- they had more time to think
- topics were perceived as more important for themselves and for society
- they had more opportunity to make suggestions
- they were making more of a personal effort to understand and participate
- they felt that the class was cooperative and making more of an effort.

### **1** Introduction

This report outlines the findings of the **MoLE** questionnaires ('Motivational Learning Environment') that were administered by the UCC group in 2012. The questionnaire was developed by Claus Bolte, Department of Chemistry Education, Freie Universität Berlin – Germany in 2009, under Work Package 7 (WP7: Student Gains) of the **PROFILES** project ("Professional Reflection-Oriented Focus on Inquiry-based Learning and Education through Science").

The PROFILES steering committee agreed on using one specific instrument, i.e. the "Instrument for Analysing the 'Motivational Learning Environment' (MoLE)". The partners used this instrument into to collect pre-test and post-test data.

The full questionnaires are reproduced in Appendix 2.

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Figure 1: Layout of the questionnaires

#### 2. Administration of the questionnaires

Thirty different class groups (**580 students** in all) completed the questionnaires before and after a module was taught in accordance with the PROFILES requirements. The results were initially collected and analysed by the teachers involved. For this report all the data were later compiled and analysed.

In the pre-test two questionnaires, each with 14 questions, were given to each student. The same questionnaires were used in the post-test.

The fourteen questions in Questionnaire 1 related to the **reality** of students' experience of science education. Each of the fourteen questions in Questionnaire 2 corresponded with those in the first questionnaire but asked the students what they thought their experience of science education **should be**.

The fourteen questions might be roughly grouped as follows:

Enjoyableness, sense of contentment
Level of difficulty of the subject
Presentation of the subject
The importance of the subject
Teacher approachability
Class involvement
Personal involvement

Table 1: Rough grouping of questions

### 3. The sample population

Of the 580 students surveyed 175 were male and 405 were female. They were in the third, fourth and fifth years of second level education. Their ages ranged from 12 to 18; four did not state their age or date of birth. Most were sixteen years of age and nearing the end of their fourth year of second level education when the survey was completed.

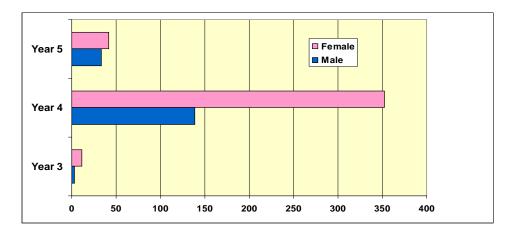


Figure 2: Gender profile of the students

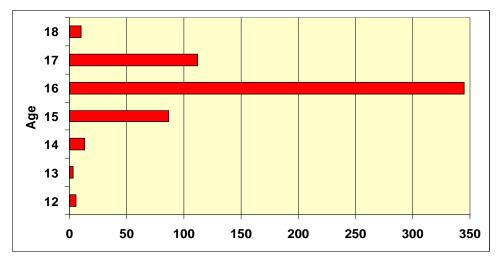


Figure 3: The age profile of the students

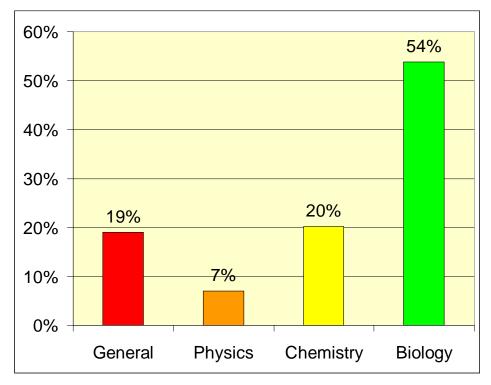
6. How would you rate your ability in the science subjects you are currently studying? ( compared to your classmates)					
Weighting	-1	0	-1		
	High	Medium	Low	Low	High
Biology	218	286	32		
Chemistry	101	259	82		
Physics	88	229	116		
Science	135	278	33		

Figure 4: Students' assessment of their own ability in science subjects.

(An arbitrary weighting was used to represent this graphically.)

All the students in the study were in second level schools and most of them (97.6%) were in senior classes.

Question 8 asked students to indicate what science subjects they were studying. If some were studying more than one then they did not indicate that in their response; the total number of responses was equal to the total number of students (580).



**Figure 5:** The percentage of students (*n* = 580) studying various science subjects.

#### 4. Responses to the questionnaire 1

The frequencies of responses to all the items in the questionnaires are given in Appendix 1. Some of the more significant findings are presented in this section.

#### 4.1 Questions 1 Enjoyableness of science lessons

The students' actual enjoyment of science lessons shows an improvement in the post-test questionnaires with higher percentages selecting 'more enjoyable' options.

Options	1	2	3	4	5	6	7
1. For me the lessons in the above subject are:	Extremely enjoyable	Very enjoyable	Enjoyable	Fairly enjoyable	Somewhat unenjoyable	Very unenjoyable	Extremely unenjoyable
Before	1					I	I
n = 580	4%	9%	26%	42%	13%	3%	3%
After							I
n = 580	9%	19%	34%	25%	8%	2%	3%

Table 2: Summary of responses to question 1 in Questionnaire 1. ('Before' and 'After')

By using a simple weighting (e.g. 1, 2, 3, 4, 5, 6, 7) to the 'Before' and 'After' percentages (for question 1) we can estimate the amount of change that occurred (see Table 3). In this case the change is **equivalent** to **51% of the students selecting the next lowest option** (which for this questions means moving towards the more 'Enjoyable' end of the spectrum).

Using a weighting of -3, -2, -1, 0, 1, 2, 3 would produce the same estimate of change.

Options	1	2	3	4	5	6	7	Sum	
Before	4%	18%	78%	167%	63%	18%	24%	372%	Change
After	9%	39%	101%	101%	42%	11%	18%	322%	-51%

**Table 3:** Estimating the change in responses to question 1 in Questionnaire 1.

In what follows, this process will be used to estimate the extent of the changes that occurred in the responses to all the questions.

#### 4.2 Summary of all responses to Questionnaire 1

The size of the 'estimate of change' shown in the last column of Table 4 indicates the extent to which students' responses had changed. **Negative values** indicate swings towards the left side of the range of options and **positive values** indicate swings towards the right.

Very enjoyable	-		Very unenjoyable		-51%
Very contented			Very unhappy		-36%
Rarely	+		Very often		15%
Rarely		-	Very often		47%
Rarely	-		Very often		10%
Rarely	•	-	Very often		-10%
Very important			Very unimportant		-39%
Very important		-	Very unimportant		-36%
Rarely			Very often		5 <b>9</b> %
Rarely	1		Very often		11%
Very cooperative			Very uncooperative		-31%
Very large			Very small		-46%
Very great			Very small		-24%
Rarely		•	Very often		20%
	Very contented         Very contented         Rarely         Rarely         Rarely         Very important         Very important         Very important         Rarely         Rarely         Very important         Very great	Very contented       Image: Contented         Rarely       Image: Contented         Rarely       Image: Contented         Rarely       Image: Contented         Rarely       Image: Contented         Very important       Image: Contented         Very important       Image: Contented         Rarely       Image: Contented         Rarely       Image: Contented         Rarely       Image: Contented         Very important       Image: Contented         Rarely       Image: Contented         Very large       Image: Contented         Very great       Image: Contented	Very contented   Rarely   Rarely   Rarely   Rarely   Rarely   Very important   Very important   Rarely   Rarely   Rarely   Very important   Very important	Very contented       Very unhappy         Rarely       Very often         Very often       Very often         Rarely       Very often         Very important       Very often         Very important       Very unimportant         Very important       Very often         Very often       Very often         Rarely       Very often         Very important       Very often         Very often       Very often         Rarely       Very often         Very often       Very often         Very often       Very often         Very cooperative       Very often         Very large       Very small         Very great       Very small	Very contented       Very unhappy         Rarely       Very often         Very important       Very often         Very important       Very unimportant         Very important       Very often         Rarely       Very often         Very important       Very often         Rarely       Very often         Rarely       Very often         Very important       Very often         Rarely       Very often         Very often       Very often         Very large       Very small         Very great       Very small

**Table 4:** Summary of responses to all questions in Questionnaire 1. The 'estimate of change', shown as a percentage and an arrow, indicates the extent of the difference between the 'Before' and 'After' responses. (For clarity, only two of the seven options are displayed.)

The responses to questions 3, 5, 6, 10 and 14 did not show much change. The responses to questions 1, 2, 7, 8, 11 and 12 show changes equivalent to between 31% and 51% of students selecting the next 'lowest' option (i.e. towards the left side of the range of options.

The responses to questions 4 and 9 show changes equivalent to between 47% and 59% of students selecting the next 'highest option (i.e. towards the right side of the range of options.

#### 5. Responses to questionnaire 2

Questionnaire 2 addressed the same fourteen areas as Questionnaire 1 but asked students what how things '**should be**' rather than how they were in reality. It was administered before and after an inquiry-based module was taught. The extent of the change in the students' opinions is was estimated as described earlier (in and is summarised in Table 5.

1. For me, lessons in the above subject should be enjoyable.	Very enjoyable	•	Very unenjoyable	3%
<ol> <li>For me, I should feel contented in my lessons in the above subject.</li> </ol>	Very contented	-	Very unhappy	-12%
<ol> <li>For me, in lessons of the above subject, I should understand the subject matter.</li> </ol>	Rarely	+	Very often	4%
<ol> <li>For me, in lessons of the above subject, I should have time to think about the questions.</li> </ol>	Rarely	-	Very often	-13%
<ol> <li>For me, lessons of the above subject should be about signs and symbols.</li> </ol>	Rarely	t	Very often	-17%
<ol> <li>For me, lessons of the above subject should be about studying facts and figures.</li> </ol>	Rarely	•	Very often	-1%
<ol><li>For me, lessons of the above subject should be useful in my everyday life.</li></ol>	Very important	•	Very unimportant	3%
<ol> <li>For me, lessons of the above subject should be relevant to society in general.</li> </ol>	Very important	+	Very unimportant	-9%
<ol> <li>For me, in lessons of the above subject I should get the opportunity to make suggestions to the teacher</li> </ol>	Rarely	•	Very often	-2%
10 For me, in lessons of the above subject I should get the opportunity to ask questions.	Rarely	•	Very often	-2%
<ol> <li>For me, in lessons of the above subject I would enjoy it when the level of co- operation of the class could be described as</li> </ol>	Very cooperative	*	Very uncooperative	-4%
<ol> <li>For me, in lessons of the above subject I would enjoy it when the level of effort that the class makes could be described as</li> </ol>	Very large	*	Very small	-4%
13. In lessons of the above subject, the level of effort that I would make to understand the subject matter could be described as:	Very great	+	Very small	-10%
14. In lessons of the above subject, the degree to which I would participate could be described as:	Rarely	-	Very often	11%

**Table 5:** Summary of responses to Questionnaire 2. The 'estimate of change', shown as a percentage and an arrow, indicates the extent of the difference between the 'Before' and 'After' responses. (For clarity, only two of the seven options are displayed.)

It is clear that there was relatively little change in students' opinions of ideal science lessons after the module had been taught.

#### 6. Conclusions

There was a clear difference between the students' experience of science lessons before and after the inquiry-based module was taught. The post-test indicated the following:

- science lessons were more enjoyable
- the students felt happier
- they had more time to think
- topics were perceived as more important for themselves and for society
- they had more opportunity to make suggestions
- they were making more of a personal effort to understand and participate
- they felt that the class was cooperative and making more of an effort.

The 'before' and 'after' reponses to Questionnire 2 showed relatively little change in the students' ideas of what science lessons should be like. This may indicate that their original responses were well considered and were reaffirmed by the inquiry-based module.

## Appendix 1: Tabulated totals

			Opt	ions			No	o. of r	espo	nse to	o the	optic	ons	
Question	1	2	3	4	5	6	1	2	3	4	5	6	7	n
1. Please write down the name of the class in which you are a student in your school.	text													
<ol> <li>Please write down your class level (First year, second year, Transition year, etc)</li> </ol>	1st	2nd	3rd	4 TY	5th	6th	0	0	14	491	75	0	0	580
3. What is your date of birth?	dob													576
4. Are you male or female?	mal e	fem ale					175	404						5 <b>79</b>
5. Please write down the first letter of the name of the street in which you live and the house number, e.g. B/54 or L/25	text							<u> </u>	I					
6. How would you rate your ability in the science subjects you are currently studying? (High, Average or low compared to your classmates)														
Biology	High	Med ium	Low				218	286	32					536
Chemistry	High	Med ium	Low				101	259	82					442
Physics	High	Med ium	Low				88	229	116					433
Science	High	Med ium	Low				135	278	33					446
<ol> <li>Please indicate the type of school that you are attending.</li> </ol>	Prim ary	Jun. sec.	Sen. sec				0	14	566					580
8. Please indicate the type of science course that you are studying:	Gen eral	Phy sics	Che mist ry	Biol ogy			110	41	117	312				580

#### Totals (Questionnaire 1, pre-test)

	Opt	ions						
Questionnaire 1 (Before)	1	2	3	4	5	6	7	п
1. For me the lessons in the above subject are:	24	53	151	242	73	17	20	580
2. In my lessons in the above subject I feel:	12	75	205	222	41	14	11	580
3. In my lessons in the above subject, I understand the subject matter	6	27	108	87	163	143	46	580
<ol> <li>In my lessons in the above subject, the time         I have to think about the questions asked         may be described as     </li> </ol>	31	38	182	116	125	62	26	580
<ol> <li>The content of my lessons in the above subject are always about signs and symbols.</li> </ol>	26	143	243	83	57	22	5	579
<ol> <li>The content of my lessons in the above subject are always about studying facts and figures.</li> </ol>	11	57	189	121	115	66	20	579
7. The level of importance to my everyday life of the topics I study in my lessons in the above subject may be described as:	34	73	148	156	111	36	22	580
8. The level of importance to society in general of the topics I study in my lessons in the above subject may be described as:	46	99	145	162	78	28	22	580
9. Please indicate how often you get the opportunity to make suggestions to the teacher in lessons in the above subject:	50	104	137	79	93	69	48	580
10. Please indicate how often you get the opportunity to ask questions in lessons in the above subject:	14	32	74	74	114	143	129	580
11. Please indicate the level of co-operation that the students in your class display in lessons of the above subject:	23	84	189	180	67	23	14	580
12. The level of effort that the class makes in the lessons of the above subject may be described as :	13	60	181	224	56	19	27	580
13. The level of effort that I make to understand the subject matter in lessons of the above subject may be described as:	43	113	157	191	54	9	13	580
14. The degree to which I participate in lessons of the above subject may be described as:	7	13	80	105	126	148	100	579

#### Totals (Questionnaire 2, pre-test)

	Options										
Questionnaire 2 (Before)	1	2	3	4	5	6	7	n			
<ol> <li>For me, lessons in the above subject should be enjoyable.</li> </ol>	186	173	129	60	17	9	6	580			
<ol><li>For me, I should feel contented in my lessons in the above subject.</li></ol>	149	174	153	71	16	9	7	579			
<ol><li>For me, in lessons of the above subject, I should understand the subject matter.</li></ol>	240	168	90	54	8	11	9	580			
<ol> <li>For me, in lessons of the above subject, I should have time to think about the questions.</li> </ol>	109	167	175	91	23	14	1	580			
<ol><li>For me, lessons of the above subject should be about signs and symbols.</li></ol>	33	28	89	188	168	49	25	580			
<ol> <li>For me, lessons of the above subject should be about studying facts and figures.</li> </ol>	27	62	108	243	97	28	15	580			
<ol><li>For me, lessons of the above subject should be useful in my everyday life.</li></ol>	146	139	164	76	32	14	8	579			
<ol> <li>For me, lessons of the above subject should be relevant to society in general.</li> </ol>	125	141	163	87	42	14	8	580			
<ol> <li>For me, in lessons of the above subject I should get the opportunity to make suggestions to the teacher</li> </ol>	98	163	183	90	34	4	8	580			
10 For me, in lessons of the above subject I should get the opportunity to ask questions.	197	169	126	58	11	9	10	580			
11. For me, in lessons of the above subject I would enjoy it when the level of co- operation of the class could be described as	117	243	150	50	9	5	6	580			
12. For me, in lessons of the above subject I would enjoy it when the level of effort that the class makes could be described as	106	159	193	97	11	6	7	579			
13. In lessons of the above subject, the level of effort that I would make to understand the subject matter could be described as:	107	174	143	104	38	8	5	579			
<ol> <li>In lessons of the above subject, the degree to which I would participate could be described as:</li> </ol>	13	19	50	76	103	159	160	580			

#### Totals (Questionnaire 1, post-test)

	Options							
Questionnaire 1 (After)	1	2	3	4	5	6	7	n
1. For me the lessons in the above subject are:	50	113	195	147	49	11	15	580
2. In my lessons in the above subject I feel:	31	137	199	166	35	5	7	580
3. In my lessons in the above subject, I understand the subject matter	6	15	101	95	142	162	59	580
4. In my lessons in the above subject, the time I have to think about the questions asked may be described as	7	34	126	124	153	96	40	580
5. The content of my lessons in the above subject are always about signs and symbols.	31	129	227	88	72	21	11	579
6. The content of my lessons in the above subject are always about studying facts and figures.	13	55	225	104	94	72	16	579
7. The level of importance to my everyday life of the topics I study in my lessons in the above subject may be described as:	59	118	150	125	84	26	18	580
8. The level of importance to society in general of the topics I study in my lessons in the above subject may be described as:	82	120	159	120	61	21	17	580
9. Please indicate how often you get the opportunity to make suggestions to the teacher in lessons in the above subject:	37	46	114	90	126	88	79	580
10. Please indicate how often you get the opportunity to ask questions in lessons in the above subject:	8	28	69	72	132	124	146	579
11. Please indicate the level of co-operation that the students in your class display in lessons of the above subject:	52	102	197	159	41	24	5	580
12. The level of effort that the class makes in the lessons of the above subject may be described as :	42	104	195	177	38	11	13	580
13. The level of effort that I make to understand the subject matter in lessons of the above subject may be described as:	63	130	169	162	38	9	8	579
14. The degree to which I participate in lessons of the above subject may be described as:	8	16	56	97	112	158	132	579

#### Totals (Questionnaire 2, post-test)

	Options							
Questionnaire 2 (After)	1	2	3	4	5	6	7	n
1. For me, lessons in the above subject should be enjoyable.	189	177	113	60	20	6	14	579
<ol><li>For me, I should feel contented in my lessons in the above subject.</li></ol>	162	191	135	65	17	5	4	579
<ol><li>For me, in lessons of the above subject, I should understand the subject matter.</li></ol>	226	166	105	52	15	7	8	579
<ol> <li>For me, in lessons of the above subject, I should have time to think about the questions.</li> </ol>	139	153	183	68	24	8	4	579
5. For me, lessons of the above subject should be about signs and symbols.	34	49	114	161	149	52	20	579
<ol><li>For me, lessons of the above subject should be about studying facts and figures.</li></ol>	31	62	133	192	111	29	21	579
7. For me, lessons of the above subject should be useful in my everyday life.	144	146	141	80	53	12	3	579
8. For me, lessons of the above subject should be relevant to society in general.	127	166	137	92	43	11	3	579
<ol> <li>For me, in lessons of the above subject I should get the opportunity to make suggestions to the teacher</li> </ol>	106	169	161	96	31	8	8	579
10 For me, in lessons of the above subject I should get the opportunity to ask questions.	196	178	118	55	17	5	10	579
11. For me, in lessons of the above subject I would enjoy it when the level of co- operation of the class could be described as	147	197	164	55	9	4	3	579
12. For me, in lessons of the above subject I would enjoy it when the level of effort that the class makes could be described as	131	149	176	84	21	15	3	579
<ol> <li>In lessons of the above subject, the level of effort that I would make to understand the subject matter could be described as:</li> </ol>	125	160	175	71	33	7	8	579
14. In lessons of the above subject, the degree to which I would participate could be described as:	6	21	35	72	117	169	159	579

#### **Appendix 2: The questionnaires**

#### Dear students,

Are science lessons interesting? We would like to find out what science lessons should be like according to your opinion.

On the following sheets you will find two questionnaires. Please remember that there are no right or wrong answers to the questions asked in the questionnaires. We are interested in your <u>personal opinion</u>!

In addition to the two questionnaires, on the first page we ask for some background information about yourself. All information you provide will be kept confidential and will only be used for research purposes.

Thank you very much for your cooperation and your help!

<ol> <li>Please write down the name of the class in which you are a student in your school.</li> </ol>	
<ol> <li>Please write down your class level (First year, second year, Transition year, etc.)</li> </ol>	
3. What is your date of birth?	
4. Are you male or female?	† female † male
5. What is your nationality?	1
<ol><li>Please write down the first letter of the name of the street in which you live and the house number, e.g. B/54 or L/25</li></ol>	
7 How would you rate your ability in the science subjects you are currently studying? (High, Average or low compared to your classmates)	Biology Chemistry Physics Science (ignore those which do not apply)

Please indicate the type of school that you are attending.

Junior Sch	ool Middl	e School	High School					
(Primary	) (Junior s	econd level)	(Upper second level)					
Please indicate the type of science course that you are studying:								

General Science*	Physics	Chemistry	Biology

\*This included any type of general science course (integrated, co-ordinated, etc.).





#### **Questionnaire 1**

This questionnaire is designed to obtain your views on the ACTUAL or REAL lessons which you attend in the area of science.

When answering the following questions, please think about the ACTUAL or REAL lessons that you attend in the above subject.

Please indicate your chosen answer by putting an X in the appropriate box.

1. For me the lessons in the above subject are: Extremely Very Enjoyable Fairly Somewhat Very Extremely enjoyable enjoyable enjoyable unenjoyable unenjoyable unenjoyable 2. In my lessons in the above subject I feel: Extremely Very Contented Extremely Fairly Somewhat Very contented contented contented unhappy unhappy unhappy 3. In my lessons in the above subject, I understand the subject matter..... Fairly often Never Rarely Sometimes Often Very often Always 4. In my lessons in the above subject, the time I have to think about the questions asked may be described as... Never Rarely Sometimes Fairly often Often Very often Always 5. The content of my lessons in the above subject are always about signs and symbols. Never Rarely Sometimes Fairly often Often Very often Always 6. The content of my lessons in the above subject are always about studying facts and figures. Rarely Fairly often Often Never Sometimes Very often Always 7. The level of importance to my everyday life of the topics I study in my lessons in the above subject may be described as: Extremely Fairly Somewhat Extremely Very Important Very important important important unimportant unimportant unimportant









8. The level of importance **to society** in general of the topics I study in my lessons in the above subject may be described as:

	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
9. Pleas subject		w often you ge	t the opportunit	y to make sugge	stions to the tea	cher in lessons	in the above
	Never	Rarely	Sometimes	Fairly often	Often	Very often	Always
10. Ple	ase indicate h	ow often you g	et the opportun	ity to ask questic	ons in lessons in	the above subj	ect:
	Never	Rarely	Sometimes	Fairly often	Often	Very often	Always
11. Plea subject		ne level of co-c	peration that th	e students in you	ır class display iı	n lessons of the	above
Subject							
	L Extremely	Verv	L Cooperative	∟ Fairly	Somewhat	Verv	
	cooperative	cooperative	Cooperative	cooperative		,	uncooperative
	cooperative	cooperative		cooperative	uncooperative	uncooperative	uncooperative
12. The	e level of effort	that the class	makes in the le	ssons of the abo	ve subject may	be described as	3:
	Extremely	Very	Large	Fairly	Rather	Very	Extremely
	Large	large		large	small	small	small
13. The describ		that I make to	understand the	e subject matter i	n lessons of the	above subject i	may be
	Extremely	Very	Great	Fairly	Rather	Very	Extremely
	small	great	great	-	great	small	small
14. The	e dearee to wh	ich I participat	e in lessons of t	he above subjec	t may be describ	ed as:	
	Never	Rarely	Sometimes	Fairly often	Often	Very often	Always
			2 5	. Sing enem	•		

Thank you for taking the time to complete this questionnaire. Your co-operation is very much appreciated







#### **Questionnaire 2**

This questionnaire is designed to obtain your views on the IDEAL lessons which you would like to attend in the area of science, i.e. what you think lessons SHOULD be like. When answering the following questions, please think about the IDEAL lessons that you would like to

attend in the above subject, i.e. what you think the lessons should be like.

Please indicate your chosen answer by putting an X in the appropriate box.

1. For me, lessons in the above subject should be enjoyable.

	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
2. For ı	ne, I should fe	el contented ir	n my lessons in	the above subject	ct.		
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
0 F							
3. For i	ne, in lessons		-	understand the	-	_	_
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
4. For i	me. in lessons	of the above s	ubiect. I should	have time to thir	nk about the que	stions.	
	□		□ □		□	Π	
	Extremely	Verv	Important	Fairly	Somewhat	Verv	Extremely
	important	important		important	unimportant	,	unimportant
		•		·		·	
5. For ı	me, lessons of	the above sub	ject should be a	about signs and s	symbols.		
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
_							
6. For ı	ne, lessons of	the above sub	ject should be a	about studying fa	cts and figures.		

Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
important	important		important	unimportant	unimportant	unimportant

7. For me, lessons of the above subject should be useful in my everyday life.

Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
important	important		important	unimportant	unimportant	unimportant











8. For me, lessons of the above subject should be relevant to society in general.

8. For r	me, lessons of	the above su	ibject should be	e relevant to <b>so</b>	ciety in general.		
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
	·						
9 For n	ne in lessons	of the above	subject I should	l get the opport	unity to make sugg	estions to the te	eacher
011 01 11							
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important	important	important	unimportant	•	unimportant
	imponant	important		imponant	unimportant	unimportant	unimportant
<b>10</b> E							
10 For	me, in lessons	_	subject I shou		tunity to ask quest	_	_
	Extremely	Very	Important	Fairly	Somewhat	Very	Extremely
	important	important		important	unimportant	unimportant	unimportant
		s of the above	e subject I woul	d enjoy it when	the level of co-ope	eration of the cla	ass could be
describ	ed as						
	Extremely	Very	Cooperative	Fairly	Somewhat	Very	Extremely
	cooperative	cooperative		cooperative	uncooperative	uncooperative	uncooperative
12. For	me, in lesson	s of the above	e subject I woul	d enjoy it when	the level of effort t	that the class m	akes could be
describ	ed as						
	Extremely	Very	Large	Fairly	Rather	Very	Extremely
	Large	large		large	small	small	small
13. In l	essons of the	above subjec	t, the level of ef	fort that I would	I make to understa	nd the subject r	natter could be
describ							
	Extremely	Very	Large	Fairly	Rather	Very	Extremely
	Large	large	C	large	small	small	small
	0 -	0-					
14 In I	essons of the	above subject	t the degree to	which I would r	participate could be	e described as:	
	Never	Rarely	Sometimes	□ Fairly often	Often	LI Very often	Always
	INCVEI	italely	Sometimes	i any onen	Olien	very Ulteri	niwaya

Thank you for taking the time to complete this questionnaire. Your co-operation is very much appreciated.



