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A COMPARISON OF TEACHER OPINIONS AND STUDENT ATTITUDES TOWARDS MULTIPLE INTELLIGENCE THEORY SUPPORTED SCIENCE AND TECHNOLOGY LESSON

(Çoklu Zeka Kuramı Destekli Fen Ve Teknoloji Dersine Yönelik Öğrenci Tutumları İle
Öğretmen Görüşlerinin Karşılaştırılması)

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Abstract

In this study, the attitude of 6th, 7th, and 8th grade students towards “Science and Technology” lesson, studying at junior schools of the Ministry of Education and Culture of the Turkish Republic of Northern Cyprus are compared to the opinions of teachers on the attitude of students towards the above mentioned lesson. Science and technology teaching does not only contribute to students acquiring cognitive behaviors, but it also contributes to acquiring affective behaviors. For an individual to acquire cognitive behaviors related to a field of science, he or she needs to have positive feelings, interest, and behaviors towards that field. Literature shows that introductory characteristics like interest and attitude have a substantial contribution to success in a cognitive sense. In this context, the study compares the attitudes of 6th, 7th, and 8th grade students towards Science and Technology lesson, and the opinions of teachers on the attitudes of students. For gathering data, the ‘Attitude Scale towards Science and Technology Lesson’ developed in the 2008-2009 academic year was used for students. For the opinion of teachers on the attitudes of students, a structured interview form was used. Attitude Scale towards Science and Technology Lesson has 2 factors. As a result of the analysis of basic components, first and second factor powers change between .882 and .310, and factors explain 54% of total variant. The inner consistency quotient of the scale (Cronbach Alfa) is .92, and the equal two parts reliability is .91. Descriptive scanning model was used in the study. In order to contribute to future teaching of Science and Technology, the study proposes a new Science and Technology Teaching Program and the updating of textbooks based on this program.

Key-words: Attitude scale, Science and technology lesson, affective behavior, book study.

Özet

Bu çalışmada, Kuzey Kıbrıs Türk Cumhuriyeti, Milli Eğitim ve Kültür Bakanlığına bağlı ortaokullarda öğrenim gören 6, 7 ve 8. sınıf öğrencilerinin “Fen ve Teknoloji” dersine yönelik tutumları ile öğretmenlerin öğrencilerin söz konusu derse karşı tutumları hakkındaki görüşleri karşılaştırılmıştır. Fen ve teknoloji öğretimiyle öğrencilerin sadece bilişsel davranışlar kazanmalarına değil, aynı zamanda duyuşsal davranışlar kazanmalarına da katkı sağlanmaktadır. Bireyin herhangi bir bilim dalı ile ilgili bilişsel nitelikli davranışları kazanabilmesi için, o alana karşı his, ilgi veya tutumlarının olumlu olması gerekmektedir. Literatürde ilgi, tutum gibi duyuşsal giriş karakteristiklerinin bilişsel anlamdaki başarıda önemli katkısı olduğu gerçektir. Bu bağlamda çalışmada 6, 7 ve 8. sınıf öğrencilerinin Fen ve Teknoloji dersine yönelik tutumları ile öğretmenlerin öğrencilerin tutumları hakkındaki görüşleri karşılaştırılmıştır. Bu amaçla veri toplama aracı olarak araştırmacılar tarafından 2008-2009 öğretim yılında geliştirilen ‘Fen ve Teknoloji Dersi’ne Yönelik Tutum Ölçeği’ ve öğretmenlerin öğrencilerin tutumları hakkındaki görüşlerini belirlemek üzere araştırmacılar tarafından hazırlanan yapılandırılmış görüşme formu kullanılmıştır. Fen ve Teknoloji Dersi’ne Yönelik Tutum Ölçeği 2 faktörlüdür. Temel bileşenler analizi sonucunda birinci ve ikinci faktör yükleri .882 ile .310 arasında değişir ve faktörler toplam varyansın % 54’ünü açıklamaktadır. Ölçeğin iç

tutarlık katsayısı (Cronbach Alfa) .92, eşit iki yarı güvenirligi ise .91'dir. Araştırmada betimsel tarama modeli kullanılmıştır. Araştırma, gelecekteki Fen ve Teknoloji öğretimine katkı sağlayabilmek amacı ile yeni bir Fen ve Teknoloji Öğretim Programı ve buna bağlı olarak oluşturulacak ders kitaplarının güncelleştirilmesini önermektedir.

Anahtar Sözcükler: Tutum ölçęęi, Fen ve teknoloji dersi, duyuşsal davranış, kitap inceleme.

Introduction

Life sciences are part of daily life, and regardless of age, all people try to understand the events happening in this world through life sciences. Science, contrary to popular belief, is not the sum of constant and acute knowledge. Scientific knowledge changes as new findings are obtained, and constantly reviewed in order to explain nature in a better way. Thus it can be said that, science is the whole of knowledge, organized by researching the world and the whole universe in a systematic way and it constantly changes.

Learning science can be viewed from two opposing and extreme points. The first of these is to see science as a completely matured and stable pile of knowledge, and the students not knowing science yet, therefore a group of people to transfer the present accumulation of knowledge in a productive way. In this case, teaching methods become extremely teacher centered and transferring knowledge from the known to the unknown. The second view has the inclination to perceive science as an incomplete effort that everyone will use to understand nature, and thus requires everything to be re-discovered. According to this view, besides being a pile of knowledge, science is an inheritance that includes the historical process and methods of how that knowledge was accumulated, and needs to be widened. Therefore, for educators, what the student does physically and intellectually is more important than what the teacher does. Rather than learning in a passive way, the student engaging in activities to bring out and assess a needed knowledge, working actively to produce and obtain knowledge, and present it for discussion in proper ways like a scientist is defined as meaningful learning (Sarpten, 2008). Science is not only a sum of realities about the world, but at the same time it is a way of research and thinking, taking experimental dimension, logical thinking, and constant questioning as its basis. Technology, used together with scientific concepts, is not only technological equipment or their implementations, but all the concepts and skills obtained from all other disciplines in order to solve a problem and place it in the service of humanity. The curiosity already in the students should be stimulated in this direction. According to Gürdal (1992), it should be the duty of the education system to keep this investigative and curious side of students constantly active.

Science and technology topics are at the top of what primary and secondary school students are most curious about and ask the most questions. As students learn a new topic, they engage in learning more about it by asking new questions. If it was not for this thirst for learning, Galileo would not have discovered four moons of Jupiter with the telescope he made with two lenses, and then design more developed binoculars and telescopes, thus the presence of other planets would not become known.

As in the example of Galileo, it has been put forward by various studies in literature that academic success is directly and indirectly related to many factors. Affective characteristics should be taken as one of the most important of these factors. It can be said that affective factors such as, attitude, self-containment, motivation, and anxiety can affect the desire and interest of students towards the lesson, and this in turn will affect their performances and academic success.

According to contemporary teaching approaches, it is not aimed for students to memorize scientific knowledge in Science and Technology lessons, but to acquire the attitudes and cognitive process skills needed to solve scientific problems that they will encounter throughout their lives. Thus, students will approach events like scientists do, and will form the basis of scientific learning (Regis, Albertazzi and Roletto, 1996).

It is rather difficult to acquire knowledge in a field without having interest in it (Tekin, 2000). It is widely accepted that attitudes of students towards science has great effect in their learning science and using scientific knowledge (Dallal, 1997). Attitude towards science and success in science has been a traditional focus point of many scientific researches (Hossain, 2000). A study by Dallal (1997) showed that people who construct complicated and detailed structures in science are also inclined to form positive attitudes in this field.

Attitudes are some of the most important determiners of human behaviors. Attitudes of individuals significantly affect their loves, hates, and behaviors (Morgan, 1991). Attitude, in general is defined as a phenomenon that directs the behaviors of an individual and causes prejudice in the decision making process (Ülgen, 1997). A similar definition of attitude is that it is the inclination of someone to show positive or negative behavior towards an event, object, or group of people (Turgut, 1997). As can be seen from these definitions, attitudes contain many characteristics of how people will behave in different situations. In short, attitude is not an observable behavior; it is an action preparing for a behavior. Therefore, individuals gain some information about that attitude object. Then they express it as an emotional reaction, and finally turn it into a behavior.

On the other hand, there is a high level of relationship between cognitive learning and affective learning given at school. It is stated that, according to Bloom's "Holistic Learning Theory", while affective domain characteristics have the power of explaining only 25% of the changes in learning products, the ratio of cognitive domain behaviors and affective domain characteristics combined together can explain 65% of the distribution of success (Senemoğlu, 2001; Selçuk, 1996). Therefore, measuring attitudes, and knowing the level of attitudes people possess towards the object or situation in question is a much needed situation in many fields (Erkuş, 2003).

Positive affective characteristics that students may acquire will simplify learning, increase student and teacher success, and improve the effectiveness of the program. It can be seen that the science teaching program contains cognitive, affective, and psychomotor domain behaviors. However, having limited number of studies in affective domain behaviors and disregarding the measurement and assessment of behaviors in this domain makes studies in affective domain incomplete. Turgut (1997) explains that, affective domain behaviors found their way into teaching programs in the last 15-20 years and rather sporadically, therefore studies in assessing classroom success and effectiveness of programs remains insufficient.

Some of the researches in the teaching of science in recent years are concentrating on the relationship between individual differences of students and their success in science. It is very important in planning teaching of science, to know the learning styles of students, their attitudes towards science and their motivations. Individuals display differences in learning styles, their motivations towards the lesson and their attitudes, and this, results in having different levels of success in science.

The period in which Science and Technology lesson is taught spans an important part in personality development. Therefore, it is important that textbooks used for this period should be written in a manner to help students develop positive attitude towards Science and Technology. It is very meaningful to establish the effect of Science and Technology text books on attitudes towards Science and Technology, written according to the Science and Technology teaching programs, which were developed parallel to the new educational views in North Cyprus after 2004.

Based on this context, the aim of this study is to compare the attitudes of 6th, 7th, and 8th grade students towards Science and Technology lesson and the views of the teachers on student attitudes, and to find out the effect of newly prepared Science and Technology textbooks on the attitudes of students towards Science and Technology lesson. Hence, answers to the following questions are sought:

1. How are the attitudes of students towards the teaching-learning process of Science and Technology Lesson?
2. How are the attitudes of students towards the term 'Science and Technology Lesson'?
3. How are the attitudes of students towards Science and Technology lesson?

Limitations

This study is limited to the attitude grades of 6th, 7th, and 8th grade students in TRNC Lapta Yavuzlar Lycée in 2009-2010 academic year, the views of Science and Technology teachers of Lapta Yavuzlar Lycée, and 6th, 7th, and 8th grade Science and Technology Student books and Workbooks, written in the TRNC.

Methodology

Qualitative and quantitative study patterns are used together in the study. It can, therefore, be said that a mixed methodology is used. Qualitative research is using qualitative data collection methods, such as observation, interview, document analysis, in order to follow a qualitative process aiming to put forward perceptions and events in natural environment, realistically, and in a holistic way (Yıldırım, Şimşek, 2008: 39).

An interview form was structured by the researchers in accordance with the qualitative study pattern of this research. In the quantitative part of the study, a "Science and Technology Lesson Attitude Scale", again developed by the researchers, was used to obtain attitude grades of students towards the lesson.

Participants

The participants of the study are 33 students (16 males, 17 females) in the 6th year, 35 students (16 males, 19 females) in the 7th year, 37 students (18 males, 19 females) in the 8th year, and 4 (3 females, 1 male)

Science and Technology teachers teaching at Lapta Yavuzlar Lycée.

Collection and Analysis of Data

Interview Form: A structured interview form, prepared by the researchers was used in the study (Lk. App. 1). In the preparation of the form, 8 interview questions were prepared through literature review and interviews with teachers. Later, a total of 5 questions were chosen to be included in the form, with the help of expert views and views from classroom teachers. Moving from here, probing questions were established in order to reach responses parallel to the aims of the study in the interviews. Thus, the interview form was given its final shape by obtaining expert view again.

Interviews were realized in one week, having one interview with each participant. The duration of interview with each participant lasted 50 minutes on average. Data was collected through interviews during this time. Interviews were executed one to one, in close environment, bearing in mind the principle of confidentiality. Researchers talked with the participants forming the sample in detail, and data was recorded with a voice recording device.

Content analysis method, one of the methods in qualitative methods was used in the analysis of data. The data of the study was collected through a structured interview form, developed by the researchers. Gathered data was analyzed with the ‘content analysis’ technique, which includes establishing main patterns, coding, and categorizing. Qualitative data obtained was then expressed using percentage values. Expert view was obtained in order to increase the reliability of the study and to ensure consistency.

Attitude Scale towards Science and Technology Lesson: Two-factor “Attitude Scale towards Science and Technology Lesson” was used in the study, developed by the researchers (Lk. App. 2). The above mentioned scale was developed by the researchers during the 2009-2010 academic year and it was presented with the article “A Study in Developing an Attitude Scale, Towards Science and Technology Lesson” at the 39th ISEP (The International Society for Educational Planning) conference held in Savannah, Georgia, USA, in 7-10 October, 2009.

The first factor, named by the researchers “The Teaching-Learning Dimension of the Science and Technology Lesson”, and comprising of 21 items, explains 34% of the total variant related to the scale. The second factor, named “Dimension Related to the term Science and Technology Lesson”, and comprising of 9 items, explains 19.8% of the total variant related to the scale. Total variant explained by both factors is 53.8%.

The internal consistency (Cronbach Alpha) quotient, obtained by the application of 30 item “Attitude Scale towards Science and Technology Lesson” to 425 students is .92. Equal two half reliability was calculated by the researchers for the reliability of the scale. First half reliability is .87, second half reliability is .85. The reliability quotient for the whole of the scale (Spearman-Brown) is .91. These quotients are proof of the reliability of the scale.

Findings And Interpretations

The obtained findings were analyzed and given in this section. The order of sub questions of the study was followed in presenting the findings and interpretations.

Findings and Interpretations Related to the First Sub Problem.

What are the attitudes of students related to the teaching-learning process of Science and Technology lesson?

The findings related to the attitude grades of participating teachers obtained from interviews, and of participating students obtained from the “Attitude Scale towards Science and Technology Lesson” are as follows.

Table 1: Opinions of Participating Teachers and Students on the Teaching-Learning Process of Science and Technology Lesson

Student Attitudes According to Teachers	f	%
They have fun in the lesson and they do it with love.	4	100%
They feel curiosity and will to do the lesson.	4	100%
They find topics pleasant, interesting, and systematic.	3	75%
They get bored in some topics of the lesson.	1	25%
They do not feel any difficulty in the Science and Technology lesson.	3	75%
They find the Science and Technology lesson difficult.	1	25%

As it can be seen from Table 1, 100% of the participating teachers said students have fun in the Science and Technology lesson and they do it with love, 100% said they feel curiosity and a will to do the Science and Technology lesson. 75% of the participating teachers said students find the topics of the Science and Technology lesson pleasant, interesting, and systematic, 25% said students get bored doing some of the topics of the Science and Technology lesson. Parallel to these findings, all the participating teachers expressed views that 6th, 7th, and 8th grade students do the Science and Technology lesson willingly and like it, and their attitudes towards the Science and Technology lesson are positive.

Findings obtained from the “Attitude Scale towards Science and Technology Lesson”, which comprises the qualitative part of the research, also supports the above findings. According to the first factor of the study, “Teaching-Learning Process of the Science and Technology Lesson”, 6th year students taking

Science and Technology lesson got the average grade of $X=81.12$, 7th grade students got the average grade of $X=80.03$, and 8th grade students got the average grade of $X=81.84$. Bearing in mind that the highest obtainable grade from Factor I of the scale is 105, it can be said that attitude grades of 6th, 7th, and 8th grade students towards the teaching-learning process of Science and Technology lesson is highly positive.

Consequently, these findings can be interpreted to say that the attitudes of students towards the teaching-learning process of Science and Technology Lesson are highly positive, and teachers also carry the same opinion.

Findings and Interpretations Related to the Second Sub Problem.

What are the attitudes of students towards the term “Science and Technology Lesson”?

The findings related to the attitude grades for the second sub problem of the study obtained through interviews with participating teachers, and through the “Attitude Scale towards Science and Technology Lesson” applied to participating students are as follows.

Table 2: Views of Participating Teachers, Students on the term “Science and Technology Lesson”

Student Attitudes According to Teacher Opinions	f	%
Laboratory, experiments, scientific environments	4	100%
Easy to succeed, fun lesson	3	75%
Difficult to succeed, complicated lesson	1	25%

As it can be seen from Table 2, 100% of the participating teachers expressed that, students perceive “laboratory, experiments, and scientific environments when they hear Science and Technology lesson. Again, 75% of participating teachers said that students perceive Science and Technology lesson as an “easy to succeed, fun lesson”, while 25% think students perceive this lesson as a “difficult to succeed, complicated lesson”.

Findings from the “Attitude Scale towards Science and Technology Lesson”, which comprises the qualitative part of the research, support the findings mentioned above. In relation to the term “Science and Technology Lesson”, which is the second factor of the scale, 6th year students studying Science and Technology lesson obtained the average grade of $X=36.27$, 7th year students obtained the average grade of $X=35.80$, and 8th year students obtained the average grade of $X=38.43$. Bearing in mind that the highest obtainable grade from Factor II of the scale is 45, it can be said that the attitude grades of 6th, 7th, and 8th grade students in relation to the term “Science and Technology lesson” of the scale is highly positive.

Finally, these findings can be interpreted as students having highly positive attitudes towards the term “Science and Technology Lesson”, and teachers are of the same opinion.

Findings and Interpretations Related to the Third Sub Problem.

What are the attitudes of students towards the Science and Technology lesson?

The findings related to the attitude grades for the third sub problem of the study obtained through interviews with participating teachers, and through the “Attitude Scale towards Science and Technology Lesson” applied to participating students are as follows.

Table 3: Views of Participating Teachers on the Attitudes of Students towards Science and Technology Lesson

Student Attitudes According to Teacher Opinions	f	%
They want to Science and Technology lesson in their free time	2	50%
They watch TV channels and programs on Science and Technology	4	100%
They read published materials on Science and Technology	4	100%

As it can be seen from Table 3, 50% of the participating teachers said that students want to do Science and Technology lesson in their free time. 100% of the participating teachers stated that students watch TV channels and programs on Science and Technology, and that they read published materials on Science and Technology. Parallel to these findings participant teachers also said that students “want to discuss in class the interesting experiments and scientific environments that they watch on TV”, “do interesting experiments which they come across in magazines and other publications, in school laboratory”, and “are highly impressed by the Science and Technology videos they watch in classroom”. In addition, all the participating teachers pointed out that students would love to take part in the “Science and Technology Club” of the school.

Findings from the “Attitude Scale towards Science and Technology Lesson”, which comprises the qualitative part of the research, support the findings mentioned above. Looking at the total attitude grades obtained from the whole of the scale, it can be seen that 6th grade students studying Science and Technology lesson obtained the average grade $X=117.38$, 7th grade students obtained the average grade $X=122.85$, and 8th grade students obtained the average grade $X=129.58$. Bearing in mind that the highest grade obtainable from the whole of the scale is 150, it can be said that attitudes of 6th, 7th, and 8th grade students towards “Science and Technology” lesson is highly positive.

Consequently, these findings can be interpreted to say that the attitudes of students towards Science and Technology lesson are highly positive, and teachers are of the same opinion.

Conclusion And Recommendations

According to the opinions of Science and Technology teachers teaching at Lapta Yavuzlar Lycée, TRNC, during the 2009-2010 academic year, and based on the grades the students of that school obtained in

the “Attitude Scale towards Science and Technology Lesson”, the conclusion was reached that attitudes of students towards Science and Technology lesson are highly positive.

According to the opinions of Science and Technology teachers, students have fun in the lesson and they enjoy doing it. Similarly, students have a curiosity and desire for Science and Technology lesson, and they enjoy doing it. Moreover, the conclusion was reached that the attitudes of students towards the teaching-learning process of the Science and Technology lesson are highly positive.

According to the opinions of teachers, the conclusion was reached that students perceive “laboratory”, “experiments”, and “scientific environments” when they hear Science and Technology, and they see this lesson as enjoyable and not difficult to succeed in. It was also established that attitudes of students towards the term “Science and Technology Lesson” is highly positive.

Based on the opinions of Science and Technology teachers, the conclusion was reached that students watch Science and Technology programs and TV channels, they read published materials in these topics and want to do the experiments they read in them at school, and they want to take part in the “Science and Technology Club” of the school for extra-curricular activity.

On the other hand, the findings of the study form the basis for the necessity of the effect of attitudes mentioned in the introduction on the teaching of science and technology, and the theories on its importance, arising from scientific research to take their rightful place in educational systems.

Bases on these conclusions, it is recommended that

- The Science and Technology teaching programs and textbooks used in the 6th, 7th, and 8th grades in the TRNC should be preserved and their contents on student attitudes developed, “Science and Technology” teaching programs and textbooks for other levels and grades should be re-written within this context.
- Teaching programs and textbooks for lessons other than Science and Technology should be revised and re-written with this view.
- Experimental, qualitative studies should be carried out in relation to teaching programs and textbooks prepared with this view, thus providing support to them on a scientific basis.
- Similar studies should be carried out on a wider scale and at different educational levels.

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App. 1 INTERVIEW FORM

Aim of the Study;

To study the COMPARISON OF ATTITUDES OF STUDENTS TOWARDS MULTIPLE INTELLIGENCE THEORY SUPPORTED SCIENCE AND TECHNOLOGY LESSON AND THE OPINION OF TEACHERS

INTRODUCTION

Hello, I am doing a scientific research on the attitudes of students towards the multiple intelligence theory supported Science and Technology lesson, and the opinions of teachers. Your opinions are needed for the attitudes of students towards the multiple intelligence theory supported Science and Technology lesson, to be used in the study. Therefore, I aim to find out your opinions on this subject.

- Everything you will tell me during the interview process will be confidential. Moreover, names will not be mentioned in the report while writing the results of the study.
- Is there a question you would like to ask me or any thought you would like to convey with what I have said, before we start?
- I would like to record this interview if you give permission. Is there any inconvenience with this?
- I assume this interview will last about an hour. If you allow me, I would like to start.

INTERVIEW QUESTIONS

FACTOR I: "Dimension related to the teaching-learning process of the Science and Technology Lesson"

1- According to you, what feelings to students have during the teaching-learning process of the lesson?

- Are they having fun and doing the lesson fondly? Or, do they get bored and do the lesson unwillingly?
- Do they have a curiosity and willingness to do the lesson? Or, do they want it to finish soon?

2- What are the thoughts of students related to the topics of the "Science and Technology Lesson"?

- Do they find the topics difficult and complicated or easy and systematic?

FACTOR II: "Dimension related to the term Science and Technology Lesson"

3- According to you, what do students first perceive about this lesson when they hear "Science and Technology Lesson"?

- Laboratory, experiments, interesting topics, difficult problems, boring topics etc.

4- In your opinion, what kind of lesson perception does "Science and Technology Lesson" forms on students?

- Easy to succeed, fun lesson? Or, difficult to succeed, boring lesson?

FACTOR III: Attitudes of Students towards Science and Technology Lesson

5- What are your observations of the attitudes of students towards the Science and Technology lesson?

- Do they spare time for this lesson? Do they want to do Science and Technology lesson in their free time?
- Do they watch TV programs and channels on Science and Technology?
- Do they buy and read published materials? Etc.

App. 2

		Completely Agree	Agree	No Idea	Disagree	Completely Disagree
1.	I like Science and Technology lesson.					
2.	Topics in Science and Technology lesson are very good.					
3.	Science and Technology lesson is fun.					
4.	I like Science and Technology lesson very much.					
5.	I learn things most about Science and Technology lesson.					
6.	Science and Technology lesson is a very good lesson.					
7.	There are interesting events in Science and Technology lesson					
8.	I understand Science and Technology lesson with difficulty.					
9.	I have difficulty in the topics of Science and Technology lesson.					
10.	Some topics of Science and Technology lesson are boring.					
11.	Science and Technology lesson is useful.					
12.	Science and Technology lesson is a difficult lesson.					
13.	Science and Technology lesson is an enjoyable lesson.					
14.	Topics of Science and Technology lesson are difficult to digest.					
15.	Topics of Science and Technology lesson are easy.					
16.	It is interesting to go to the lab in Science and Technology lesson.					
17.	Experiments in Science and Technology lesson are fun.					
18.	Science and Technology textbook makes it easy to understand the lesson.					
19.	I listen to Science and Technology lesson with affection.					
20.	I do not realize how time passes in Science and Technology lesson.					
21.	Science and Technology lesson is very important in our times.					
22.	Science and Technology lesson is boring.					

23.	Topics of Science and Technology lesson are not important.					
24.	Topics of Science and Technology lesson are not interesting.					
25.	I do not think Science and Technology lesson is very necessary.					
26.	I have no interest in Science and Technology lesson.					
27.	I hate Science and Technology lesson.					
28.	I do Science and Technology lesson unwillingly.					
29.	I learn unnecessary things in Science and Technology lesson.					
30.	I am unhappy taking Science and Technology lesson.					