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## THE PERCEPTIONS OF THE TEACHERS ON THE APPLICATION OF PARALLEL PRINCIPLE IN PRIMARY SCHOOLS

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**ABSTRACT.** The aim of this study is presenting the perceptions of teachers on the effects of implementation of the parallel principle on productivity of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> grade primary school students. General screening method was used in the study. The population of the study consists of 1234 teachers working in 79 primary school of Van in the academic year period of 2013-2014 and the study group consists of 200 classroom teachers from 20 schools, which were selected randomly. The research data were collected by questionnaire developed by the researcher and the solutions were made with the SPSS program. As a result of the study, it is presented that linking courses increases the knowledge of the students, makes the information transfers and learning the courses easier by solidifying them and facilitates the permanence. Furthermore, the teachers should prepare the syllabuses by considering the common subjects between the courses.

**Keywords:** Multi-disciplinary approach, primary school, linking the courses



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## INTRODUCTION

In primary schools, educational activities and all lessons are given by the same class teachers. The major reasons for all lessons being given by the same teacher can be expressed as the students being in their concrete operations period and as the effect of Gestalt psychology. Due to this Gestalt psychology and concrete operations period, unification of lessons (courses as History, Geography and Science are unified under Social Studies lesson in classes 1, 2 and 3, and starting from the 4<sup>th</sup> class, courses as History and Geography courses are unified under Social Studies and courses as Physics, Chemistry and Biology are unified under Science lesson) is applied in primary schools in the education system of our country.

Parallel Principle, which can also be stated as linking the courses, can be expressed in planning and application as teaching the lesson topics in the manner to support and complete each other. For example, when a teacher teaches "Our Body" unit, it includes studies as making pictures of the body in art lessons, singing songs about our body in music class and solving problems including our body in mathematics lesson. Parallel Principle application enables attainments as strengthening learning, increasing motivation and transfer making.

Education programs take the responsibility to train man power qualified to maintain social order. Accordingly, education programs should consider requirements of society, innovations and contemporary changes and take individuals to accommodate this process as a goal. Consequently, recently, educating creative and productive individuals who enjoy learning, have the ability to think critically and the ability to associate events is expected from the schools. At this point, Multi-disciplinary approach which also considers knowledge and skills of different disciplines and contributes in motivation increase of students has an important place in contemporary education system. (Yarımca, 2011).

With respect to multi-disciplinary association, as Baykal (2004) has conveyed, (King and Brownell 1966) have given ten descriptive criteria:

1. There are specific objects (propositions, concepts, compositions, forms, rhythms, harmonies, etc.) in a discipline which include creating ideas and are the expressions of imagination.
2. A discipline has a distinctive social fabric constituted of dedicated members.
3. A discipline has a field of dominance where the interests of its members are focused.
4. A discipline has its own "heroes", followers and a history comprised of the accumulation of their statements.
5. A discipline also has methods to test hypotheses along with content.
6. Premises, principles and other propositions of a discipline constitute a consistent whole.
7. In a discipline, a specialized language or another symbolic system is created; new definitions are brought to old concepts or required new concepts are created.
8. Members of a discipline establishes communication in different environments (symposium, conference, congress, panel, etc.) by different equipments (journals, books, internet, etc.).
9. A discipline has premises, cognitive values and ambitions on reality, human nature, etc.
10. A discipline develops educational tools and processes to introduce and spread itself.

It's obviously seen that majority of the academic programs shall be identified as "multidisciplinary" when the multi-disciplinary approach is adopted. (Baykal, 2004).

Multidisciplinary education may be defined as discipline subject fields being arranged meaningfully around specific concepts or themes and presented (Yıldırım, 1996). Purpose in multi-disciplinary approach is both learning a selected subject as a meaningful whole and creating an opportunity for examining the same subject in terms of different disciplines for the students (Yalçın and Yıldırım, 1998).

In multidisciplinary education, a specific concept, problem or subject is taken as the basis, and information and skills which may shed light on this subject from various aspects are received and integrated.

By interdisciplinary arrangement, it is possible to learn information and skills of specific disciplines and to integrate them meaningfully. (Aydın and Balım, 2005).



Multi-disciplinary approaches are attempts requiring more or less integration or even some changes in disciplines. (Stember, 1998). Multi-disciplinary approach is a knowledge view and program approach using more than one discipline language and methods to test a subject, title, problem or experiment (Jacobs, 1989).

Multi-disciplinary approach is defined as “A sense of program benefiting from method and knowledge of more than one discipline to examine a theme, concept or problem” according to Jacobs (1989); “Conceptual integration of concepts in different disciplines” according to Erickson (1995); and “Arranging traditional subject fields meaningfully around specific concepts and presenting” according to Yıldırım (1996). Multidisciplinary education gains a student a versatile way of thinking. This thinking way shall be an important step to be taken in educating individuals who are continuously self-renewing, using information he learned and able to take decisions (Yıldırım, 1996: 91).

Students express their point of view on presenting a subject by associating with other fields within the framework of multidisciplinary education programs as that they generally enjoy it more than traditional class environments (Hatch and Smith, 2004: 49). The core idea thought for students in multidisciplinary education is enabling them to see the big picture which is correct in their world-view. Multidisciplinary education may make contribution to natural learning process of students and their way of perceiving the world. Multidisciplinary education arises as a natural result of continuously changing and developing information fields (Yıldırım, 1996: 90).

Studies and discussions made until today shows that multi-disciplinary approach is focused on “holistic education” which aims learning for everyone (Chrysostomou, 2004). Idea of integration with multi-disciplinary approach is first seen in Plato’s Politeia. According to his point of view, development in the education of a young person can be maintained by harmonic units. After centuries, new ideas parallel to this view are developed. Rousseau has asserted that learning by using only books and in an atmosphere isolating the class from environment in education is irrelevant to real world and is meaningless. In the last century, Dewey has defended a similar view saying that compulsory education shall be unsuccessful. In his opinion, children can be sent to school by imposing but learning cannot be realized by force. In conformity with the constructivist approach, every person structures information by their own living. Again in social learning theory of the Russian psychologist Vygotsky, interactions between social groups and disciplines and Gardner’s theory of multiple intelligences have helped explaining multidisciplinary approach (Chrysostomou, 2004; Ellis and Fouts 2001).

When looking at the common application in Turkish Education System, it is seen that multidisciplinary education is taken as the basis, in other words, a specific subject is handled within the framework of a specific discipline. In multidisciplinary education, along with examining a concept comprising the subject of a lesson, it is important to learn also different subject fields taking part in the process and information and skills related to this concept. By this way, information and skills on specific disciplines may be learned with multidisciplinary education process, moreover, these information and skills may be combined and used (Yıldırım 1996).

Multidisciplinary (integrated) education is an approach assisting students to combine and integrate information in different fields and focusing them to think at analysis-synthesis level through concepts. This approach is very important in gaining vitality to educational environment, enabling students to use their creativity and above all, encouraging them to show interest in lessons and ensure teaching (Aybek 2001). If teachers’ knowledge and skills in disciplines are insufficient, this is a big problem for them to integrate and teach these disciplines. For some reason, teachers have no experience in searching relations and connections between the disciplines of the program (Mason 1996).

The effective education today is no longer a process which information is loaded in minds and is transformed to a process of learning “the art of using information in life” (Özgüven, 2001: 18). By this way, it is possible to gain to society individuals who are physically and emotionally healthy, happy, efficient and productive in terms of physical, intellectual and emotional aspects (Yenal, 1999: 16). Programs should be prepared within the direction of common goals to gain qualified students to society. Programs may be integrated by using different models in the directions of desired aims, a single discipline, interdisciplinary or student (learner) oriented (Fogarty, 1991: 61).

It is important for teachers to prepare lesson plans by considering common subjects with other lessons in learning-teaching process within the framework of educational program. Teachers should be able to meet before the education period and make all preparations together, from class order to daily plans. This association should concentrate on cooperation in exchange of views, maintaining source distribution, determination of common use of the opportunities, preparation of lesson plans from target to tools (Başar, 1999: 45). The point which our teachers should pay attention is besides the group preparing the program should consider education as a whole, they should put their own field forward and put emphasis on the content (Delier, 2005: 128) and according to Dobbs (1998: 109–112); developments are experienced in education, practice and habits by different disciplines establishing connections between themselves.

There is a need for a meaningful association between fields to increase and enrich learning. By an interdisciplinary organization, education process helps both in learning information and skills of specific disciplines and in using them by putting them together in a meaningful way (Yıldırım, 1996: 89).



## METHOD

### Problem Status

Countries wish to educate more successful individuals within the educational systems. Primary schools in our country forms the basis of the education to train these individuals. In this study, specifying teachers' opinions on application of Parallel Principle applied in education in the first four years of compulsory education in our country and making suggestions to the relevant people within the direction of these opinions to correct defects determined in the practice are determined as the basic problem.

### Importance of the Study

By this study, it is aimed to determine the opinions of primary school teachers on quality and effects of Parallel Principle in the education applied in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> classes of primary schools. With the research to be performed, opinions of teachers in the position of implementer of teaching in our educational system on Parallel Principle in education and offer suggestions to the educational planners, administrators, teachers and other relevant people.

### Purpose of the Study

In this study, it is intended to present opinions of teachers on quality and effects of application of Parallel Principle in education applied in Primary schools. Within the direction of this basic purpose, answers to the following sub-purposes shall be searched.

1-What are the opinions of teachers on quality and effects of application of Parallel Principle in education applied in Primary schools?

2-Do opinions of teachers on quality and effects of application of Parallel Principle in education applied in Primary schools show meaningful differences according to;

**a**-Gender,**b**-Educational background, **c**-Age,**d**-Professional Seniority as a Teacher?

### Population and Sample

Van Province is determined as the target population. According to information received from Van Provincial Directorate for National Education, there are 79 primary schools in the Centrum of Van province as of the class year of 2013–2014. However, as reaching to all of these schools is impossible in terms of time and cost, our study group is determined by selecting 20 primary schools randomly from those 79 schools in the Centrum of Van province having over 20 teachers. The scale is applied on 86 female and 114 male, 200 teachers in total, on 10 teachers in the teacher's room from each of these 20 schools on the day the questionnaire is given. Centrum Village schools connected to Van are excluded.

### Model, Development and

### Analysis of Data Collection Tool

The research is a descriptive study in objective screening model. In this study, "Scale for Teacher's Opinion on Parallelism in Education" which is developed by the researchers is used as data collecting tool. In development of the measuring tool, primarily the relevant field literature is scanned, an item pool is created and items selected from this pool and draft form are submitted to opinions of five academicians in different fields of the Department of Educational Sciences having at least Doctorate degree. Experts have examined the tool both in terms of language and expression and scope and the final shape is given to the tool according to the suggestions received.

"Scale for Teacher's Opinion on Parallelism in Education" having triple Likert type response format ((Never, Sometimes, Always) and comprised of 24 items in total is applied on the study group constituted of 200 teachers after opinions on structure and scope validity are obtained.

One of the statistical methods used for the validity studies of scales is known as factor analysis. Primary purpose of the factor analysis is to minimize to a basic dimension and summarize the great number of variables which are thought to have relation between each other to simplify understanding and interpreting.

Analysis of data collected in the scope of the study is made by SPSS for Windows 18.00 statistics program on computer.

## FINDINGS

Findings obtained in the research performed to determine knowledge level of class teachers relevant to the application of Parallel Principle are presented.



**Table 1:** Distribution of the Participants according to the Demographic Data

<b>Gender</b>	<b>F</b>	<b>Percentage (%)</b>
Female	86	43%
Male	114	57%
<b>Age</b>		
Between the ages of 20-25	56	28.0%
Between the ages of 26-31	66	33.0%
Between the ages of 32-37	67	33.5%
Between the ages of 38 and over	11	5.5%
<b>Your Professional Seniority</b>		
Between the years of 1-5	73	36.5%
Between the years of 6-10	105	52.5%
Between the years of 11-15	19	9.5%
Between the years of 15 and over	3	1.5%
<b>Educational Background</b>		
Undergraduate	182	91%
Master's Degree	18	9%
Doctorate	0	0%
<b>Total</b>	<b>200</b>	<b>100%</b>

As seen in Table 1, sample group is constituted of 114 (57%) Male and 86 (43%) Female, 200 teachers in total. 56 of the sample group (28.0%) are in between the ages of 20-25 group; 11 (5.5%) are in between the ages of 38 and over. 73 of the teachers comprising the sample group (36.5%) are working in between the years of 1-5; 105 (52.5%) are working in between the years of 6-10; 3 (1.5%) are working in between the years of 15 and over. Of the teachers attended the questionnaire, 182 (91%) were undergraduate and 18 (9%) have done master's degree.

**Table 2:** Distribution of Gender according to Educational Background

<b>Your Gender</b>	<b>Educational Background</b>			<b>Total</b>
	Undergraduate	Master's Degree	Doctorate	
Female	86	0	0	86
Male	96	18	0	114
<b>Total</b>	<b>182</b>	<b>18</b>	<b>0</b>	<b>200</b>

In Table 2, 18 teachers are studying/have studied for master's degree and all of those studying/have studied for master's degree are male.

**Table 3:** Distribution of Age according to Professional Seniority

<b>Your Age</b>	<b>Your Professional Seniority</b>				<b>Total</b>
	Between 1-5 years	Between 6-10 Years	Between 11-15 Years	15 Years and Over	
Between the ages of 20-25	56	0	0	0	56
Between the ages of 26-31	7	49	0	0	66



Between the ages of 32-37	0	56	11	0	67
Between the ages of 38 and over	0	0	8	3	11
<b>Total</b>	<b>73</b>	<b>105</b>	<b>19</b>	<b>3</b>	<b>200</b>

As seen in Table 3, distribution of teachers' age according to the professional seniorities; 56 teachers between the ages of 20-25 have seniorities between the years of 1-5, 7 teachers between the ages of 26-31 have seniorities between the years of 1-5, 49 teachers have seniorities between the years of 6-10, 56 teachers between the ages of 32-37 have seniorities between the years of 6-10, 11 teachers have seniorities between the years of 11-15, 8 teachers between the ages of 38 and over have seniorities between the years of 11-15, and 3 teachers have seniorities between the years of 15 and over.

**Table 4:** Distribution of Participants according to Genders

Your Gender	Average	N	S. Deviation	t	p
Female	1.34	86	.47		
Male	2.78	114	.60	44.736	.000
<b>Total</b>	<b>2.16</b>	<b>200</b>	<b>.90</b>	<b>44.736</b>	<b>.000</b>

p < 0.01

As seen in Table 4, distribution of teachers attending the research according to their genders; Females' average is 1.34, and males' average is 2.78 and a meaningful difference is determined at 0.01 level according to independent t test.

**Table 5** Distribution of Participants according to Their Age Range

Your Age	Average	N	S. Deviation	t	p
Between the ages of 20-25	1.0000	56	.00		
Between the ages of 26-31	1.5455	66	.50	33.981	.000
Between the ages of 32-37	2.0000	67	.00		
Between the ages of 38 and over	2.0000	11	.00		
<b>Total</b>	<b>1.5700</b>	<b>200</b>	<b>.49</b>	<b>33.981</b>	<b>.000</b>

p < 0.01

As seen in Table 5, distribution of the attendants according to age range; the averages are 1.00 between the ages of 20-25, 1.5455 between the ages of 26-31, 2.00 between the ages of 32-37, and 1.57 between the ages of 38 and over. A meaningful difference is determined at 0.01 level according to independent t test.

**Table 6** Distribution of Participants according to Their Professional Seniority

Your Professional Seniority	Average	N	S. Deviation	t	p
Between 1-5 Years	1.23	73	.42		
Between 6-10 Years	2.53	105	.50		
Between 11-15 Years	3.42	19	.50	36.512	.000
15 Years and Over	4.00	3	.00		
<b>Total</b>	<b>2.16</b>	<b>200</b>	<b>.90</b>	<b>36.512</b>	<b>.000</b>

p < 0.01

As seen in Table 6, distribution of the attendants according to their professional seniorities; the averages are 1.23 for teachers between the years of 1-5, 2.53 for teachers between the years of 6-10, 3.42 for teachers between the years of 11-15 and the average is 4 for teachers between the years of 15 and over and a meaningful difference is determined at 0.01 level according to t test.



**Table 7** Distribution of Participants according to Their Educational Background

Educational Background	Average	N	S.Deviation	t	p
Undergraduate	2.02	182	.80	53.7292	.000
master's degree	3.61	18	.50		
Doctorate	0	0	.00		
<b>Total</b>	<b>2.16</b>	<b>200</b>	<b>.90</b>	<b>53.7292</b>	<b>.000</b>

p < 0.01

As seen in Table 7, distribution of the attendants according to their educational backgrounds; undergraduate average is 2.02, and master's degree average is 3.61 and a meaningful difference is determined at 0.01 level according to t test.

**Table 8.** Average and Standard Deviations of the Responses of the Teachers Attending the Survey

Item	Explanation of the Items	Average	S. Deviation
1.	I consider associating a lesson with other disciplines in planning and teaching important.	2.70	.48
2.	Students may associate what they learn with other lessons and daily life.	2.52	.51
3.	Linking the courses concretizes the subject and enables memorability.	2.67	.49
4.	Students recognize that information they obtain in lessons are associated with each other.	2.03	.52
5.	There is a need for a meaningful association between fields to increase and enrich learning.	2.61	.53
6.	Linking the courses may cause shortage of time.	2.12	.54
7.	Linking the courses enables students to make knowledge transfer.	2.67	.53
8.	Linking the courses increases students' interest in lesson.	2.66	.50
9.	Linking the courses enables students to develop different points of view towards incidents.	2.46	.68
10.	Linking the courses enables students to build cause and effect relation.	2.35	.55
11.	I pay attention on integrated activities to be intended for educational targets.	2.46	.52
12.	Linking the courses shows differences in class levels (1-2-3-4).	2.50	.60
13.	Attainments are insufficient in linking the courses.	2.03	.53
14.	Multidisciplinary education gains a student a versatile way of thinking.	2.64	.53
15.	Students enjoy presentation of a subject by associating with other fields more than traditional class environments.	2.37	.70
16.	Aggregation models join students' visual, auditory and touching perceptions.	2.45	.56
17.	Parallelism in education is compatible with Gestalt Psychology.	2.36	.52
18.	Teaching lessons in education in compliance with Parallel Principle increases the quality of education.	2.60	.51
19.	Teaching lessons in education in compliance with Parallel Principle helps strengthening.	2.54	.50
20.	Teaching lessons in education in compliance with Parallel Principle increases motivation to the lesson and the subject.	2.56	.51

As seen in Table 8, in teachers' opinions about the application of parallel principle in primary schools, while the item 'I consider associating a lesson with other disciplines in planning and teaching important' takes the first place with (2.70); 'Students recognize that information they obtain in lessons are associated with each other' and 'Attainments are insufficient in linking the courses' items take the last place with (2.03).

**Table 9.** Distribution of Differences according to the Gender of the Teachers Participated in the Survey

Explanation	Gender	N	X	SS	t	P
1	Female	86	2.30	.510	-14.60	.000
	Male	114	3.00	.000		
2	Female	86	1.98	.107	-31.95	.000



	lessons and daily life.	Male	114	2.92	.256		
3	Linking the courses concretizes the subject and enables memorability.	Female	86	2.24	.483	-16.70	.000
		Male	114	3.00	.000		
4	Students recognize that information they obtain in lessons are associated with each other.	Female	86	1.72	.451	-8.597	.824
		Male	114	2.27	.446		
5	There is a need for a meaningful association between fields to increase and enrich learning.	Female	86	2.10	.460	-20.75	.000
		Male	114	3.00	.000		
6	Linking the courses may cause shortage of time.	Female	86	1.77	.417	-9.246	.000
		Male	114	2.38	.488		
7	Linking the courses enables students to make knowledge transfer.	Female	86	2.23	.567	-14.45	.000
		Male	114	3.00	.000		
8	Linking the courses increases students' interest in lesson.	Female	86	2.20	.487	-17.31	.000
		Male	114	3.00	.000		
9	Linking the courses enables students to develop different points of view towards incidents.	Female	86	1.75	.458	-28.99	.000
		Male	114	3.00	.000		
10	Linking the courses enables students to build cause and effect relation.	Female	86	1.90	.292	-13.79	.000
		Male	114	2.69	.463		
11	I pay attention on integrated activities to be intended for educational targets.	Female	86	1.96	.184	-19.76	.000
		Male	114	2.83	.374		
12	Linking the courses shows differences in class levels (1-2-3-4).	Female	86	1.87	.335	-30.67	.000
		Male	114	2.97	.160		
13	Attainments are insufficient in linking the courses.	Female	86	1.70	.456	-8.818	.759
		Male	114	2.28	.451		
14	Multidisciplinary education gains a student a versatile way of thinking.	Female	86	2.16	.505	-17.69	.000
		Male	114	3.00	.000		
15	Students enjoy presentation of a subject by associating with other fields more than traditional class environments.	Female	86	1.69	.461	-21.49	.000
		Male	114	2.88	.319		
16	Aggregation models join students' visual, auditory and touching perceptions.	Female	86	1.91	.275	-20.63	.009
		Male	114	2.85	.348		
17	Parallelism in education is compatible with Gestalt Psychology.	Female	86	1.95	.211	-13.01	.000
		Male	114	2.66	.473		
18	Teaching lessons in education in compliance with Parallel Principle increases the quality of education.	Female	86	2.06	.335	-29.60	.000
		Male	114	3.00	.000		
19	Teaching lessons in education in compliance with Parallel Principle helps strengthening	Female	86	1.98	.107		
		Male	114	2.96	.184	-43.69	.034
20	Teaching lessons in education in compliance with Parallel Principle increases motivation to the lesson and the subject.	Female	86	1.97	.151	-72.12	.001
		Male	114	3.00	.000		

In Table 9, when opinions of teachers on Parallel Principle application in education in primary schools are viewed according to genders; meaningful differences are determined in items 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18,





19 and 20. These are respectively; in item '*I consider associating a lesson with other disciplines in planning and teaching important*' a meaningful difference is determined on behalf of males ( $t=14.60$   $p=.000$   $P<.050$ ). In item '*Students may associate what they learn with other lessons and daily life*', a meaningful difference is determined on behalf of males ( $t=31.95$   $p=.000$   $P<.050$ ). In item '*Linking the courses concretizes the subject and enables memorability*', a meaningful difference is determined on behalf of males ( $t=16.70$   $p=.000$   $P<.050$ ). In item '*There is a need for a meaningful association between fields to increase and enrich learning*', a meaningful difference is determined on behalf of males ( $t=20.75$   $p=.000$   $P<.050$ ). In item '*Linking the courses may cause shortage of time*', a meaningful difference is determined on behalf of males ( $t=9.246$   $p=.000$   $P<.050$ ). In item '*Linking the courses enables students to make knowledge transfer*', a meaningful difference is determined on behalf of males ( $t=14.45$   $p=.000$   $P<.050$ ). In item '*Linking the courses increases students' interest in lesson*', a meaningful difference is determined on behalf of males ( $t=17.31$   $p=.000$   $P<.050$ ). In item '*Linking the courses enables students to develop different points of view towards incidents*', a meaningful difference is determined on behalf of males ( $t=28.99$   $p=.000$   $P<.050$ ). In item '*Linking the courses enables students to build cause and effect relation*' a meaningful difference is determined on behalf of males ( $t=13.79$   $p=.000$   $P<.050$ ). In item '*I pay attention on integrated activities to be intended for educational targets*' a meaningful difference is determined on behalf of males ( $t=19.76$   $p=.000$   $P<.050$ ). In item '*Linking the courses shows differences in class levels (1-2-3-4)*', a meaningful difference is determined on behalf of males ( $t=30.67$   $p=.000$   $P<.050$ ). In item '*Multidisciplinary education gains a student a versatile way of thinking*' a meaningful difference is determined on behalf of males ( $t=17.69$   $p=.000$   $P<.050$ ). In item '*Students enjoy presentation of a subject by associating with other fields more than traditional class environments*', a meaningful difference is determined on behalf of males ( $t=21.49$   $p=.000$   $P<.050$ ). In item '*Aggregation models join students' visual, auditory and touching perceptions*', a meaningful difference is determined on behalf of males ( $t=20.63$   $p=.009$   $P<.050$ ). In item '*Parallelism in education is compatible with Gestalt Psychology*' a meaningful difference is determined on behalf of males ( $t=13.01$   $p=.000$   $P<.050$ ). In item '*Teaching lessons in education in compliance with Parallel Principle increases the quality of education*' a meaningful difference is determined on behalf of males ( $t=29.60$   $p=.000$   $P<.050$ ). In item '*Teaching lessons in education in compliance with Parallel Principle helps strengthening*' a meaningful difference is determined on behalf of males ( $t=43.69$   $p=.034$   $P<.050$ ). In item '*Teaching lessons in education in compliance with Parallel Principle increases motivation to the lesson and the subject*' a meaningful difference is determined on behalf of males ( $t=72.12$   $p=.001$   $P<.050$ ).

**Table 10.** Distribution of Differences according to the Educational Background of the Teachers Participated in the Survey

<b>No</b>	<b>Explanation</b>	<b>Educational Background</b>	<b>N</b>	<b>X</b>	<b>SS</b>	<b>t</b>	<b>P</b>
1	I consider associating a lesson with other disciplines in planning and teaching important.	Undergraduate	182	2.67	.494	-2.823	.005
		Master's Degree	18	3.00	.000		
		Doctorate	0				
2	Students may associate what they learn with other lessons and daily life.	Undergraduate	182	2.47	.511	-4.317	.000
		Master's Degree	18	3.00	.000		
		Doctorate	0				
3	Linking the courses concretizes the subject and enables memorability.	Undergraduate	182	2.64	.502	-3.006	.003
		Master's Degree	18	3.00	.000		
		Doctorate	0				
4	Students recognize that information they obtain in lessons are associated with each other.	Undergraduate	182	1.93	.448	10.019	.000
		Master's Degree	18	3.00	.000		
		Doctorate	0				
5	There is a need for a meaningful association between fields to increase and enrich learning.	Undergraduate	182	2.57	.548	-3.266	.001
		Master's Degree	18	3.00	.000		
		Doctorate	0				
6	Linking the courses may cause shortage of time.	Undergraduate	182	2.03	.497	-8.188	.000
		Master's Degree	18	3.00	.000		



		Doctorate	0				
7	Linking the courses enables students to make knowledge transfer.	Undergraduate	182	2.63	.546		.005
		Master's Degree	18	3.00	.000	-2.809	
		Doctorate	0				
8	Linking the courses increases students' interest in lesson.	Undergraduate	182	2.62	.518		
		Master's Degree	18	3.00	.000	-3.052	.003
		Doctorate					
9	Linking the courses enables students to develop different points of view towards incidents.	Undergraduate	182	2.41	.697		.000
		Master's Degree	18	3.00	.000	-3.567	
		Doctorate	0				
10	Linking the courses enables students to build cause and effect relation.	Undergraduate	182	2.29	.544		.000
		Master's Degree	18	3.00	.000	-5.515	
		Doctorate	0				
11	I pay attention on integrated activities to be intended for educational targets.	Undergraduate	182	2.40	.525		.000
		Master's Degree	18	3.00	.000	-4.783	
		Doctorate	0				
12	Linking the courses shows differences in class levels (1-2-3-4).	Undergraduate	182	2.45	.608		.000
		Master's Degree	18	3.00	.000	-3.821	
		Doctorate	0				
13	Attainments are insufficient in linking the courses.	Undergraduate	182	1.93	.460		.000
		Master's Degree	18	3.00	.000	-9.754	
		Doctorate	0				
14	Multidisciplinary education gains a student a versatile way of thinking.	Undergraduate	182	2.60	.543		.002
		Master's Degree	18	3.00	.000	-3.008	
		Doctorate	0				
15	Students enjoy presentation of a subject by associating with other fields more than traditional class environments.	Undergraduate	182	2.31	.709		.000
		Master's Degree	18	3.00	.000	-4.097	
		Doctorate	0				
16	Aggregation models join students' visual, auditory and touching perceptions.	Undergraduate	182	2.40	.564		.000
		Master's Degree	18	3.00	.000	-4.489	
		Doctorate	0				
17	Parallelism in education is compatible with Gestalt	Undergraduate	182	2.29	.504	-5.907	.000



Psychology.		Master's Degree	18	3.00	.000	
		Doctorate	0			
18	Teaching lessons in education in compliance with Parallel Principle increases the quality of education.	Undergraduate	182	2.56	.519	-3.582
		Master's Degree	18	3.00	.000	
		Doctorate	0			
19	Teaching lessons in education in compliance with Parallel Principle helps strengthening.	Undergraduate	182	2.50	.512	-4.132
		Master's Degree	18	3.00	.000	
		Doctorate	0			
20	Teaching lessons in education in compliance with Parallel Principle increases motivation to the lesson and the subject.	Undergraduate	182	2.51	.522	-3.916
		Master's Degree	18	3.00	.000	
		Doctorate	0			

In Table 10, when teachers' opinions on Parallel Principle application in education in primary schools are viewed according to educational background, meaningful differences are determined in items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 and 20. These are respectively; in item 'I consider associating a lesson with other disciplines in planning and teaching important' a meaningful difference is determined on behalf of master's degree (t=2.823 p=.005 P<.050). In item 'Students may associate what they learn with other lessons and daily life' a meaningful difference is determined on behalf of master's degree (t=4.317 p=.000 P<.050). In item 'Linking the courses concretizes the subject and enables memorability', a meaningful difference is determined on behalf of master's degree (t=3.006 p=.003 P<.050). In item 'Students recognize that information they obtain in lessons are associated with each other', a meaningful difference is determined on behalf of master's degree (t=10.019 p=.000 P<.050). In item 'There is a need for a meaningful association between fields to increase and enrich learning' a meaningful difference is determined on behalf of master's degree (t=3.266 p=.001 P<.050). In item 'Linking the courses may cause shortage of time' a meaningful difference is determined on behalf of master's degree (t=8.188 p=.000 P<.050). In item 'Linking the courses enables students to make knowledge transfer', a meaningful difference is determined on behalf of master's degree (t=2.809 p=.005 P<.050). In item 'Linking the courses increases students' interest in lesson', a meaningful difference is determined on behalf of master's degree (t=3.052 p=.003 P<.050). In item 'Linking the courses enables students to develop different points of view towards incidents' a meaningful difference is determined on behalf of master's degree (t=3.567 p=.000 P<.050). In item 'Linking the courses enables students to build cause and effect relation' a meaningful difference is determined on behalf of master's degree (t=5.515 p=.000 P<.050). In item 'I pay attention on integrated activities to be intended for educational targets' a meaningful difference is determined on behalf of master's degree (t=4.783 p=.000 P<.050). In item 'Linking the courses shows differences in class levels (1-2-3-4)' a meaningful difference is determined on behalf of master's degree (t=3.821 p=.000 P<.050). In item 'Attainments are insufficient in linking the courses' a meaningful difference is determined on behalf of master's degree (t=9.754 p=.000 P<.050). In item 'Multidisciplinary education gains a student a versatile way of thinking' a meaningful difference is determined on behalf of master's degree (t=3.008 p=.002 P<.050). In item 'Students enjoy presentation of a subject by associating with other fields more than traditional class environments' a meaningful difference is determined on behalf of master's degree (t=4.097 p=.000 P<.050). In item 'Aggregation models join students' visual, auditory and touching perceptions' a meaningful difference is determined on behalf of master's degree (t=4.489 p=.000 P<.050). In item 'Parallelism in education is compatible with Gestalt Psychology' a meaningful difference is determined on behalf of master's degree (t=5.907 p=.000 P<.050). In item 'Teaching lessons in education in compliance with Parallel Principle increases the quality of education' a meaningful difference is determined on behalf of master's degree (t=3.582 p=.000 P<.050). In item 'Teaching lessons in education in compliance with Parallel Principle helps strengthening' a meaningful difference is determined on behalf of master's degree (t=4.132 p=.000 P<.050). In item 'Teaching lessons in education in compliance with Parallel Principle increases motivation to the lesson and the subject' a meaningful difference is determined on behalf of master's degree (t=3.916 p=.000 P<.050).

No article is found on our subject written either in the country or abroad, and no views expressing differences according to gender, educational background, age, or professional seniority have been found.

## CONCLUSION AND SUGGESTIONS

In the analyses performed, a meaningful difference is seen in terms of genders and educational background of the teachers attended the survey. This situation may be interpreted as the teachers are effective in the application of Parallel Principle according to their genders and educational background.

The item 'I consider associating a lesson with other disciplines in planning and teaching important' has been the highest value with an average of 2.70. Besides, the items 'Linking the courses concretizes the subject and enables memorability' and 'Linking the courses enables students to make knowledge transfer' with an average of 2.67, the item 'Linking the courses increases students' interest in lesson' with an average of 2.66, the item 'Multidisciplinary education gains a student a versatile way of thinking' with an average of 2.64, the item 'There is a need for a meaningful association between fields to increase and enrich learning' with an average of 2.61, the item 'Teaching lessons in education in



compliance with Parallel Principle increases the quality of education' with an average of 2.60 have taken place among the most preferred items.

The items 'Students recognize that information they obtain in lessons are associated with each other' and 'Attainments are insufficient in linking the courses' is the lowest value with an average of 2.03. Besides, the item 'Linking the courses may cause shortage of time' with an average of 2.12, the item 'Linking the courses enables students to build cause and effect relation' with an average of 2.35, the item 'Parallelism in education is compatible with Gestalt Psychology' with an average of 2.36, and the item 'Students enjoy presentation of a subject by associating with other fields more than traditional class environments' with an average of 2.37 are the items taken the lowest values.

Majority of the teachers adopt the view 'always' on association with other disciplines in lesson teaching, and that linking the courses concretizes the subject and enables memorability, that a meaningful cooperation between fields are required to increase learning and that linking the courses simplifies making knowledge transfer for students.

Majority of the teachers adopt the views that 'sometimes' information the students obtain in different lessons are associated with each other, that linking the courses may cause shortage of time and that linking the courses enables students to build cause and effect relation.

It is important for teachers, program makers to take the application of this principle into consideration while making the program, administrators to help in the application of this principle, and the teachers to make planning and application in compliance with Parallel Principle and teach.

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