

Full Length Research Paper

Multiple intelligence levels of physical education and sports school students

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The purpose of this research is to analyze the multiple intelligence levels of academies of physical education and sports students according to some demographic factors. To obtain data about multiple intelligence levels in the research, the multiple intelligence inventory, developed by Özden (2003), was applied to a total of 1.199 students, of which 541 are girls and 658 are boys. For resulting evaluation of the data, the frequency in SPSS program was applied, for independent groups the t-test and one-way analysis of variance (ANOVA) was applied and to find the origin group of the differences, Scheffe-F test was applied. According to the multiple intelligence levels results between the sexes in the study, significant differences were found in the subscales of visual ($p=0.000$) and rhythmic intelligence ($p=0.000$). As for the results of the multiple intelligence levels between sections, the averages of multiple intelligences at inter-departmental levels are not statistically significant ($p<0.05$) although there occurred averages in favor of the Department of Physical Education Training in the results obtained from lower dimensions.

Key words: Physical education, multiple intelligence, verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, musical-rhythmic intelligence, bodily intelligence, interpersonal intelligence, intrapersonal intelligence, naturalistic intelligence.

INTRODUCTION

It has become an essentiality for the individuals to have the skills which adjust to new conditions in a world changing continuously. Therefore, each country should train individuals, who will make the country progress for next centuries, will make use of information correctly, will produce information, have a great power of thinking and perception, can cope with the problems and produce dissimilar solutions against the increasing problems in a short time (Tekin and Taşgın, 2008).

It has become an important issue to analyze the level of intelligences of the educators, trainers and managers, who will come from the academies of physical training and sports and who have a significant role in training a healthy and intelligent generation, distinctively for their thinking, perception and ability to solve problems. With the Multiple Intelligence Theory, Gardner defined intelligence again by putting forward a new kind of thought about intelligence. According to Gardner, intelligence is the set of abilities and skills that are unique to each person in order to live in this changing world and

adjust them to the changes. In 1983, Gardner, who suggested seven different areas of intelligence that function separately from each other in some degree, has increased this number to eight by adding naturalistic intelligence. The Multiple Intelligence Theory, which Gardner put forward in 1983, made the understanding of IQ intelligence test, which included only the linguistic and mathematical intelligences of the people and maintained the domination of intelligence on education and communities for many years, disappear (Demirel, 1999; Campbell, 1996). Multiple areas of intelligence: verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, musical-rhythmic intelligence, bodily intelligence, interpersonal intelligence, intrapersonal intelligence and naturalistic intelligence (Lash, 2004).

Verbal-linguistic intelligence

This is the capability of using words or the basic transactions

of a language explicitly. The individuals who have high verbal language intelligence are the people who learn well by hearing, speaking, reading, discussing and communicating with each other (Saban, 2002). A person with high verbal language intelligence is the one who has the characteristics of thinking abstractly and symbolically, conception, grammar, poem, storytelling, reading, writing, speaking, joking, discussing and creating literary works (Demirel, 1999; Gardner, 1999; Ozden, 1998; Ulgen, 1997). The activities appealing to the students who have this kind of intelligence are: note-taking, story and legend telling, drama, article and letter writing, linking a story or a novel with other issues, making a presentation, radio programming, tape-recording, finding a slogan, meeting, discussing, using technology to write something, writing with the letters on toothpaste and detergent packets (Demirel, 1999; Offut, 1997).

Logical-mathematical intelligence

People with a high logical-mathematical intelligence learn by making a logical relation between the things by separating the objects into categories, digitizing the specific features of the objects and calculating them and thinking about the abstract relations between the things (Saban, 2004). A person with a high logical-mathematical intelligence asks a lot of questions about the formation and the function of the things. He/she likes working with numbers, calculating, solving logical puzzles, playing strategic games such as the chess or the draughts, separating the things into categories or arranging the things within a specific logical relation (Saban, 2002; Basaran, 2004).

Visual-spatial intelligence

This is the intelligence of picture and image or is the capacity of perceiving the visual world properly and creating one's own visual experiences again. This intelligence feature begins with the sharpening of emotional motor perception. While intelligence increases, eye hand coordination enables the principle of movement control to produce the perceived shapes and colors in various environments again. Architects, sculptors, painters, designers, landscapers use their spatial intelligence preeminently (Demirel, 2000; Muftuler, 2009).

Musical-rhythmic intelligence

This is the capability of using the music as a means in perceiving and presenting the music during the emotional transference. That is, it is the capability of being sensitive to rhythm, melody and tone (Demirel, 1999).

Bodily intelligence

This is ability to use some parts or all over the body to solve a problem, put forward a product and express feelings or emotions (Gardner, 2004). It enables one to control and interpret bodily movements and to form a harmony between the body and the mind. People with this kind of intelligence play one or more than one sports. They cannot sit without moving for a long time. They have abilities in the fields such as role playing, athleticism, dancing and needlecraft (Mitchell and Kernodle, 2004; Muftuler, 2009). According to the Gürel and Tat (2010) people who have higher bodily intelligence have tendency to succeed in sport, dance and arts.

Social intelligence

This is the capacity of a person to understand, distinguish and meet the emotions, desires and needs of the people around him/her such as a teacher, a therapist or a marketer (Saban, 2002). Social intelligence can be defined as ability to understand others, expressing feelings easily, empathy with others and showing sensibility to others differentiations (Shepard, 2004). It is argued that empathizing others' emotions, fears, wonders and beliefs, listening without judging and the desire to help others keep their performance at the highest level are among the characteristics of the people with a high social intelligence. This intelligence, in some ways, is shown as the most comprehensible one of all kinds (Basaran, 2004).

A person with a high social intelligence is good at bringing and maintaining synergy. He/she establishes good relationships in the group and notices the differences among the people. His/her facial expression is sensitive to voice and gesticulation and has a well-improved empathy skill (Ozden, 2003; Saban, 2002).

Intrapersonal intelligence

According to Gardner, intelligence is the most important kind of intelligence in daily life. It is the intelligence which indicates that a person has a self-knowledge and takes responsibility for his/her life and learning. The individuals with this kind of intelligence are fond of their freedom. They like working individually and being alone. They need working individually, need self-evaluation and self-awareness while learning (Demirel, 2000).

Naturalistic intelligence

This is the last kind of intelligence explained by Gardner. It is about understanding and knowing the natural

Table 1. Data related to participants' gender.

Gender	N	%
Female	541	45.1
Male	658	54.9
Total	1199	100

Table 2. Data related to age distribution of participants.

Age	N	%
18-21	531	44.3
22-25	571	47.6
26-29	84	7.0
30 and over	13	1.1
Total	1199	100

Table 3. Data related to participants' department.

Department	N	%
Physical Education Teaching	525	43.8
Sports Management	375	31.3
Coaching Training	202	16.8
Recreation	97	8.1
Total	1199	100

environment. It comes out when someone notices the plant and animal species around him/her and can create the classification principles of the subspecies. People with a high naturalistic intelligence like making research and analyzing living beings. They are interested in the lives of each living being. They like also travelling, watching documentaries and reading nature and travel magazines. They arrange special out-door activities for themselves (Asci and Demircioglu, 2004; Deady, 2003; Muftuler, 2009).

In line with these intelligence kinds, it is seen that sports has an active place between creativeness and intelligence areas with the aim of contributing to the physical, kinesthetic, affective and mental development of the students, teachers and trainers and that a person has the capacity to put forward one or more than one works which have cultural value. It is understood that students' ability to find affective and efficient solutions to the problems they face with during the real life and their skill to discover the problems which are complex-structured and for which solutions must be found are important (Demirci, 2002).

Naturalistic intelligence concerned with natural patterns like color, smell, connecting with nature, interested in creatures, environmental consciousness and so on. For these reasons; naturalistic intelligence is closely related

to biology, zoology, agriculture, botany and outdoor sports (Gürel and Tat, 2010).

METHODS

This research is aimed at analyzing the multiple intelligence levels of academy of physical education and sports students according to some demographic factors.

While the research universe is composed of students in academy of physical education and sports, the sample group is composed of total 1.199 students, of which 541 are girls and 658 are boys from physical education and sports academies of 15 different universities.

For evaluating multiple intelligence fields of students, multiple intelligences inventory improved by Ozden (2003) was applied. This inventory consists of 10 parts and every part includes 8 items which address to 8 different intelligence fields. These items are graduated from 1 (not appropriate) to 5 (completely appropriate) according to 5- point Likert type.

In obtained data analysis, significant level utilized from SPSS 16.0 statistical software package has been taken ($P < 0.05$).

In research, frequency analysis was applied to define demographic characteristics, t-test was applied to define differences of gender in independent groups, one-way ANOVA analysis was applied to compare multiple intelligences related to department, age, school type they graduated from, and Scheffe-F test was applied to find which group caused the difference.

FINDINGS

Considering gender distribution of participants, it is seen that 45.1% of them are female with a number of 541 people and 54.9% are male with a number of 658 people (Table 1).

Considering age distribution of participants, it is seen that 44.3% are between 18-21 years, 47.6% are between 22-25 years, 7% are between 26-29 years and 1.1% are 30 years and over (Table 2).

Considering department distribution of participants, 43.8% are from physical education teaching, 31.3% are from sports management, 16.8% are from coaching training and 8.1% are from recreation department (Table 3).

Considering the distribution of universities at which participants study, it is seen that 10.1% are at Adnan Menderes University, 7.9% are at Celal Bayar University, 7.1% are at Fırat University, 4.1% are at Niğde University, 10.9% are at Erciyes University, 6.9% are at Dumlupınar University, 1.8% are at Ahi Evran University, 4.4% are at Balıkesir, 6.8% are at Karamanoğlu Mehmetbey University, 3.7% are at Kafkas University, 6.3% are at Kırıkkale University, 2.4% are at Erzincan University, 8.2% are at Pamukkale University, 7.6% are at Gazi University, 4.8% are at Ege University and 7% are at Muğla University (Table 4).

Considering the distribution of high school kinds from which participants graduated, it is seen that a large majority of them (86.7%) are graduated from regular high school (Table 5).

In comparison of multiple intelligence levels of

Table 4. Data related to universities at which participants study.

University	N	%
Adnan Menderes	121	10.1
Celal Bayar	95	7.9
Fırat	85	7.1
Niğde	49	4.1
Erciyes	131	10.9
Dumlupınar	83	6.9
Ahi Evran	22	1.8
Balıkesir	53	4.4
Karamanoğlu Mehmetbey	82	6.8
Kafkas	44	3.7
Kırıkkale	75	6.3
Erzincan	29	2.4
Ege	57	4.8
Pamukkale	98	8.2
Gazi	91	7.6
Muğla	84	7.0
Total	1199	100

Table 5. Data related to high school kinds from which participants graduated.

Kind of High School	N	%
Regular High School	1039	86.7
Vocational High School	68	5.6
Foreign Language High School	92	7.7
Total	1199	100

participants according to their gender, while there are significant differences in visual-spatial intelligence ($p=0.000$) and rhythmic intelligence ($p=0.000$); it does not found significant differences in ($p<0.05$) verbal-linguistic ($p=0.084$), logical-mathematical ($p=0.801$), bodily ($p=0.338$), social ($p=0.577$), intrapersonal ($p=0.521$) and naturalistic intelligence ($p=0.736$), ($p>0.05$) (Table 6).

According to these results, it seems that in visual-spatial intelligence sub-dimension female students ($\bar{X}=3.56\pm 582$) has more average than male students ($\bar{X}=3.38\pm 650$).

As for rhythmic intelligence sub-dimension, it seems that female students ($\bar{X}=3.41\pm 730$) has also more average than male students ($\bar{X}=3.19\pm 762$).

As a result of comparison of participants' multiple intelligence levels according to the high school they graduated from, significant differences were not encountered in the sub-dimensions of visual-spatial intelligence ($p=0.988$), rhythmic intelligence ($p=0.053$), linguistic intelligence ($p=0.739$), logical-mathematical intelligence ($p=0.512$), bodily intelligence ($p=0.435$), social intelligence ($p=0.441$), intrapersonal intelligence ($p=0.394$), and naturalistic intelligence ($p=0.700$), ($p>0.05$)

(Table 7).

As a result of comparison of participants' multiple intelligence levels according to their departments, significant differences were not encountered in the sub-dimensions of visual-spatial intelligence ($p=0.205$), rhythmic intelligence ($p=0.698$), linguistic intelligence ($p=0.079$), logical-mathematical intelligence ($p=0.110$), bodily intelligence ($p=0.095$), social intelligence ($p=0.422$), intrapersonal intelligence ($p=0.596$), and naturalistic intelligence ($p=0.846$), ($p>0.05$) (Table 8).

As a result of comparison of participants' levels of multiple intelligences according to their age distributions, significant differences was encountered in logical-mathematical intelligence ($p=0.036$), ($p<0.05$); meanwhile significant differences were not encountered in the sub-dimensions of visual-spatial intelligence ($p=0.205$), musical intelligence ($p=0.698$), linguistic intelligence ($p=0.079$), bodily intelligence ($p=0.095$), social intelligence ($p=0.422$), intrapersonal intelligence ($p=0.596$), and naturalistic intelligence ($p=0.846$), ($p>0.05$) (Table 9).

The results of the multiple comparisons which were done for explaining which groups caused the differences can be seen in Table 10.

Although in comparison of participants' multiple intelligence levels according to their ages significant differences was encountered in the sub-dimension Logical-Mathematical intelligence; significant differences was not encountered in the multiple comparisons ($p<0.05$).

DISCUSSION

In comparison of participants' multiple intelligence levels according to their sex, significant differences were found in the visual-spatial intelligence field ($p < 0.05$). Accordingly, it was concluded that female students' ($\bar{X}=3.56\pm 582$) average, who are studying at physical education department, is higher compared to male students ($\bar{X}=3.38\pm 650$). As a result of the comparison of participants' multiple intelligence levels according to their sex, significant differences were found in rhythmic intelligence field ($p<0.05$). Accordingly, it was concluded that female students' ($\bar{X}=3.41\pm 730$) average, who are studying at Physical Education Department, is higher compared to male students ($\bar{X}=3.19\pm 762$). In the study, which was made by Dogan and Alkis in 2007, named "Class Teacher's Opinion on their ability to use the Multiple Intelligence Fields in Social Studies", significant differences were not encountered in visual-spatial and rhythmic intelligence fields. These findings are inconsistent with the earlier ones.

In consideration of individuals whose visual-spatial intelligence field is developed, visual communication requires 3-D models and graphical presentations. As for individuals whose musical-rhythmic intelligence field is

Table 6. Comparison of multiple intelligence levels of participants according to their gender.

Sub-dimension	Gender	N	Average	Standard deviation	t	p
Verbal-Linguistic intelligence	Female	541	3.38	0.591	1.729	0.084
	Male	658	3.32	0.599		
Logical-Mathematical intelligence	Female	541	3.37	0.610	-0.252	0.801
	Male	658	3.38	0.614		
Visual-Spatial intelligence	Female	541	3.56	0.582	4.928	0.000*
	Male	658	3.38	0.650		
Rhythmic intelligence	Female	541	3.41	0.730	5.098	0.000*
	Male	658	3.19	0.762		
Bodily intelligence	Female	541	3.79	0.613	0.958	0.338
	Male	658	3.75	0.624		
Social intelligence	Female	541	3.66	0.576	-0.558	0.577
	Male	658	3.68	0.647		
Intrapersonal intelligence	Female	541	3.59	0.574	0.642	0.521
	Male	658	3.57	0.585		
Naturalistic intelligence	Female	541	3.69	0.703	0.338	0.736
	Male	658	3.67	0.701		

*p<0.05.

developed, characteristics such as use of rhythm and music and listening to music are seen. There were also artistic activities in these areas of intelligence. (Muftuler, 2008). When taking into account these findings, female students' higher average in two mentioned fields than the males can be the result of their predisposition to artistic activities.

In some studies, it was found that there occurred a significant, positive relationship between creativity levels visual spatial intelligence fields (Wicket and Vernon, 1994; Fryer and Collings, 1991). It can also be concluded that female students are more creative than the males according to these findings. In other words, it can be said that visual-spatial and rhythmic intelligences affect creativity positively. It can be mentioned that people with high level of visual spatial intelligence and rhythmic intelligence also have a high level of creativity.

As a result of comparison of participants' multiple intelligence levels according to their age, it was found that participants aged between 26-29 have a higher average compared to participants aged between 18-21 in logical-mathematical intelligence field. It can be the result of conventional education system, which places emphasis on verbal-linguistic and logical-mathematical intelligences, imposed on students when they are in developmental age. This case may be the result of the student's effort to overcome this obstacle and with his

own willingness to head for this area of intelligence through years.

In academy of physical education and sports, teachers, coaches, recreational events experts and executive candidates of future are being trained. In education of these students better, it will be more useful to benefit from the field of multiple intelligences. It can be achieved on the following ways.

Although a person do not have to be an expert in all eight intelligence fields, it is important to know the sources of various intelligence activities and how to get benefit from them (Saban, 2002). It is very unlikely for all these areas of intelligences which belong to an individual to be at the same level. However, as many investigations show, it is possible to improve the areas of intelligences with the use of right education techniques (Gok and Harmandar, 2002). By combining all eight intelligence ways and learning opportunities, students get higher academic success, recognize their own learning styles and have a better self-esteem (Dogan and Alkis, 2007). Therefore, they may be coaches, educators, specialists or administrators who can easily be more efficient for their addresses by using these techniques.

According to Gürel and Tat (2010), it is not scientific to make relation with lower scores IQ and success. Because every person have a definite individual intellectual potential. This potential is used for interaction with

Table 7. Comparison of multiple intelligence levels of participants according to the high school they graduated from.

Sub-dimension	High School	N	Average	Standard deviation	f	p
Verbal-Linguistic intelligence	General High School	1039	3.35	0.601	0.303	0.739
	Vocational High School	68	3.34	0.545		
	Foreign Language Intensive High School	92	3.30	0.584		
Logical-Mathematical intelligence	General High School	1039	3.37	0.599	0.670	0.512
	Vocational High School	68	3.37	0.704		
	Foreign Language Intensive High School	92	3.44	0.682		
Visual-Spatial intelligence	General High School	1039	3.46	0.620	0.012	0.988
	Vocational High School	68	3.47	0.672		
	Foreign Language Intensive High School	92	3.46	0.664		
Rhythmic intelligence	General High School	1039	3.31	0.748	2.953	0.053
	Vocational High School	68	3.10	0.853		
	Foreign Language Intensive High School	92	3.20	0.752		
Bodily intelligence	General High School	1039	3.78	0.619	0.833	0.435
	Vocational High School	68	3.68	0.590		
	Foreign Language Intensive High School	92	3.75	0.647		
Social intelligence	General High School	1039	3.68	0.622	0.819	0.441
	Vocational High School	68	3.61	0.554		
	Foreign Language Intensive High School	92	3.62	0.592		
Intrapersonal intelligence	General High School	1039	3.58	0.580	0.931	0.394
	Vocational High School	68	3.58	0.586		
	Foreign Language Intensive High School	92	3.50	0.578		
Naturalistic intelligence	General High School	1039	3.69	0.697	0.357	0.700
	Vocational High School	68	3.66	0.713		
	Foreign Language Intensive High School	92	3.63	0.748		

*p<0.05.

environment and various competencies. With this point of view, it is important to accept that every individual who have tendency to use natural capacity to provide output related to art, sport and communication is a successful person.

RECOMMENDATIONS

The multiple intelligences activities which can be used in

graduate program and classroom should be emphasized. There should be activities for the areas of intelligences which needs to be improved by identifying the areas of intelligences. There should also be opportunities for coaches, experts, managers and trainers of future to express themselves in all areas of intelligences through graduate program. They should be given some special homework and presentations to improve their own abilities. Because of the fact that there may be some mixed ability students in classrooms, there should be

Table 8. Comparison of participants' levels of multiple intelligences according to their departments.

Sub-dimension	Department	N	Average	Standard deviation	f	p
Verbal-Linguistic intelligence	Physical Education (Gym)Teaching	525	3.38	0.598	2.269	0.079
	Sports Administration	375	3.36	0.590		
	Coaching	202	3.27	0.601		
	Recreation	97	3.27	0.586		
Logical-Mathematical intelligence	Physical Education (Gym)Teaching	525	3.42	0.615	2.015	0.110
	Sports Administration	375	3.35	0.604		
	Coaching	202	3.34	0.624		
	Recreation	97	3.29	0.588		
Visual-Spatial intelligence	Physical Education (Gym)Teaching	525	3.50	0.613	1.528	0.205
	Sports Administration	375	3.42	0.625		
	Coaching	202	3.47	0.619		
	Recreation	97	3.40	0.705		
Rhythmic intelligence	Physical Education (Gym)Teaching	525	3.31	0.753	.478	0.698
	Sports Administration	375	3.25	0.760		
	Coaching	202	3.30	0.729		
	Recreation	97	3.31	0.809		
Bodily intelligence	Physical Education (Gym)Teaching	525	3.82	0.623	2.128	0.095
	Sports Administration	375	3.73	0.585		
	Coaching	202	3.75	0.621		
	Recreation	97	3.69	0.709		
Social intelligence	Physical Education (Gym)Teaching	525	3.67	0.604	0.937	0.422
	Sports Administration	375	3.71	0.602		
	Coaching	202	3.62	0.641		
	Recreation	97	3.68	0.677		
Intrapersonal intelligence	Physical Education (Gym)Teaching	525	3.56	0.601	0.629	0.596
	Sports Administration	375	3.60	0.531		
	Coaching	202	3.59	0.602		
	Recreation	97	3.52	0.602		
Naturalistic intelligence	Physical Education (Gym)Teaching	525	3.69	0.714	0.271	0.846
	Sports Administration	375	3.69	0.677		
	Coaching	202	3.67	0.716		
	Recreation	97	3.62	0.700		

*p<0.05.

Table 9. Comparison of participants' levels of multiple intelligences according to their ages.

Sub-dimension	Age	N	Average	Standard deviation	f	p
Verbal-Linguistic intelligence	18-21 years old	531	3.32	0.605	1.239	0.294
	22-25 years old	571	3.35	0.586		
	26-29 years old	84	3.45	0.628		
	30 years old and older	13	3.43	0.392		
Logical-Mathematical intelligence	18-21 years old	531	3.32	0.616	2.858	0.036*
	22-25 years old	571	3.40	0.603		
	26-29 years old	84	3.49	0.646		
	30 years old and older	13	3.39	0.455		

Table 9. Contd.

Visual-Spatial intelligence	18-21 years old	531	3.49	0.619	1.133	0.335
	22-25 years old	571	3.44	0.620		
	26-29 years old	84	3.39	0.718		
	30 years old and older	13	3.47	0.540		
Rhythmic intelligence	18-21 years old	531	3.32	0.717	1.828	0.140
	22-25 years old	571	3.28	0.777		
	26-29 years old	84	3.16	0.850		
	30 years old and older	13	3.01	0.559		
Bodily intelligence	18-21 years old	531	3.79	0.642	,605	0.612
	22-25 years old	571	3.75	0.592		
	26-29 years old	84	3.72	0.669		
	30 years old and older	13	3.74	0.553		
Social intelligence	18-21 years old	531	3.69	0.633	,937	0.466
	22-25 years old	571	3.65	0.591		
	26-29 years old	84	3.74	0.687		
	30 years old and older	13	3.66	0.482		
Intrapersonal intelligence	18-21 years old	531	3.54	0.603	1.540	0.202
	22-25 years old	571	3.59	0.547		
	26-29 years old	84	3.67	0.640		
	30 years old and older	13	3.47	0.575		
Naturalistic intelligence	18-21 years old	531	3.66	0.699	,601	0.614
	22-25 years old	571	3.71	0.694		
	26-29 years old	84	3.66	0.770		
	30 years old and older	13	3.59	0.698		

*p<0.05.

Table 10. Comparison of participants' levels of multiple intelligences according to their ages.

Sub-dimension	Post Hoc (Scheffe Test)		
	Comparison	Difference between average	Relevance
Logical-Mathematical intelligence	18-21 years old 22-25 years old	-0.082	0.171
	26-29 years old	-0.172	0.122
	aged 30 and over	-0.067	0.984
	22-25 years old 18-21 years old	0.082	0.171
	26-29 years old	-0.090	0.658
	aged 30 and over	0.014	1.000
	26-29 years old 18-21 years old	0.172	0.122
	22-25 years old	0.090	0.658
	aged 30 and over	0.105	0.953
	aged 30 and over 18-21 years old	0.067	0.984
	22-25 years old	-0.014	1.000
	26-29 years old	-0.105	0.953

*p<0.05.

activities which can appeal to all areas of intelligences for students through their undergraduate courses. By planning activities which appeal to all intelligence fields

and taking advantage of multiple intelligence theory, it is thought that lessons could be more useful (Dogan and Alkis, 2007).

As a result concerned with their employment area, school of physical education and sports graduates should not be evaluated with single intelligence levels.

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