

Examining the Decision-making Levels of Glider Pilot Trainers and Glider Pilot Candidates in Terms of Socio-demographic Variables

Oktay Kizar¹, Mehmet Dalkilic², Fikret Ramazanoglu³ and Hasan Ulukan⁴

¹*Bingöl University, School of Physical Education and Sports, Bingöl*
²*Kilis December 7 University, School of Physical Education and Sports, Kilis*
³*Sakarya University, School of Physical Education and Sports, Sakarya*
⁴*Adnan Menderes University, Aydin Vocational School Turkey*

KEYWORDS Aeronautics. Pilot. Glider. Trainer. Decision-making Styles

ABSTRACT The purpose of the present research is to examine the decision-making levels of glider pilot trainers and glider pilot candidates who serve in the field of Aeronautics in terms of certain socio-demographic variables. The universe of the present research comprises of all the pilot candidates and pilot trainers who performed gliding sports at the Turkish Aeronautical Association in 2013. In the present research, 71 pilot candidates and 21 trainer pilots that is, a total of 92 individuals participated. Obtained data was analyzed using SPSS 18 Statistics Software Package, and the significance levels was taken as $p < 0.05$. Frequency analysis was used for personal features, one-way variance analysis (ANOVA) was used to analyze variation by age, and independent t-test analysis was used for license status and profession. Consequently, decision-making styles of glider pilot trainers were higher than glider pilot candidates. Self-respect, avoidant decision-making, suspensive decision-making, and panic decision-making styles were similar.

INTRODUCTION

Human beings have tried to go up into the air wearing wings since the ancient ages. Ahmet Celebi from Turkish history, and from ancient Greek mythology, Besnier, Bris, and Lilienthal were the volunteer aviators who performed the first tests. Lilienthal is considered as the father of modern gliding. Gliding is a well-loved branch of sports today (nkfu.com 2014). Instant decision-making is of great importance in gliding. According to Dunham and Pierce (1989), individual differences in decision-making process result from decision speed, and the quantity of gathered and evaluated information. Individual and motivational loadings affect the decision-making styles. Individuals with high-risk tendency are apt to make fast decisions. They spend less time on gathering and evaluating information in the decision-making process (Tasdelen 2001; Tekin and Tasgin 2009). There are three conditions required for the decision-making be-

havior: the existence of a problem that creates the decision-making need, and this need being felt by the individual, the existence of more than one option that will solve the problem, and the individual having the freedom to choose one of the options (Tekin and Tasgin 2009). There are two processes in the administration activities: decision-making and implementation. The first of these is forming opinions and judgments, and second is implementation. Moreover, it can be easily observed that each step of these processes is an act of choices. The environment in which the decision is made divides in to two as, uncertainty environment and risk environment (Yaralioglu 2004). The greatness of the decision to be made, or the environment it is related to forms the extent of the decision. Decision-making occurs at every level of an organization. The first level where the decision-making occurs is at the individual decision-making level. At this level, individuals act within the frame of psychological satisfaction. Decision-making levels include group, organizational, and global decision-making (Tekin and Tasgin 2009).

A decision refers to choosing the most appropriate of the possible acting ways in accordance to the present possibilities and conditions. Decision-making is the whole of the cognitive and behavioral efforts related to choosing in

Address for correspondence:
Dr. Mehmet Dalkilic
Kilis 7 Aralik University, School of
Physical Education and Sports.
Kilis, Turkey
Telephone: +905325821375
E-mail: m.dalkilic@hotmail.com

various cases and events (Kuzgun 1992; Yigit 2005; Gacar 2011). Decision-making is adjusting to a certain type of action. No matter how small the extent is it means making a rational and emotional commitment (Cimen 1999; Gacar 2011). It is not only defining alternatives, but also aiming the most appropriate, realizing it with desires, lifestyle and values, and making a choice, while choosing the alternatives considered in various events and developments (Harris 1998; Gacar 2011).

Decision-making can be defined as a problem-solving orientation wherein there are more than one ways of obtaining an object that is considered to satisfy a need. When the decision needs to be made in important circumstances, projecting the results beforehand, and leaning to the more possible one to attain the goal, gains more importance (Larson et al. 1994; Gacar 2011). It is observed that most individuals do not make full use of their capacities and prefer short cuts while making decisions (Kökdemir 2003). The decision-making process starts when the individual feels the need to make a decision. Then, they set an objective and gather information on the options in accordance with this objective. They deliberate on the possibility obtaining the desired results in the future and their own values (Firat Ünü 1994). The studies on decision-making are usually based on decision-making styles and strategies of the individuals. Individual features in decision-making process are resulted from decision speed, and quantity of gathered and evaluated data. Individual features and loading forms affect decision-making styles of individuals (Phillips et al. 1984; Gacar 2011). Researchers who claim that social factors may be effective in determining decision-making styles state that individuals feel responsible for the family members, friends and their immediate environments, and that kind of responsibility affects how decisions are made (Norfolk 1989; Gacar 2011). Researchers who define decision-making styles as learnt habits think that defining the options and the quantity of time used to think about the information while making the decisions are the key to the differences between the decision-making styles.

Self-respect in Decision-making: It refers to the gathered information and various alternatives considered.

Besides this, researchers mention four decision-making styles (Shiloh et al. 2001; Sinangil 1993; Gacar 2011). These are:

Careful Decision-making: Individuals choose the most appropriate alternative by researching the situation about which they need to make a decision. Individuals with careful decision-making style present a more careful attitude while making decisions.

Avoidant Decision-making: Individuals who need to make a decision avoid the decision in order not to make the decision. Individuals with avoidant decision-making style are prone to avoid the responsibility of decision-making.

Suspensive Decision-making: Individuals suspend the problem, and prefer to delay thinking about the problem, and acting on it.

Panic Decision-making: Individuals make the decision with their internal feelings and instincts. Individuals with panic decision-making style are faster than the others and make use of their instincts. It is generally not possible to evaluate all alternatives and their possible consequences synchronously. For this reason, these procedures are carried in accordance with a certain order. Ordering of the procedures may cause great affects (Norfolk 1989; Gacar 2011). Sportive talent requires the processing of much information within a short time. Therefore, sportsmen are constantly face a decision-making case (Gacar 2011). Referees and sportsmen who must have a strong condition, intensive concentration, healthy body, strong personality to struggle with in and out field difficulties, bear tremendous responsibility. First, they have to be leaders carrying the values of the societies they live in, feeling the pleasure of being useful to their societies, and presenting the features of a leader (Evans and Bellion 2000; Gacar 2011). Referees and sportsmen who are able to bear all these responsibilities contribute a lot to the society together with the supporters and managers carrying the same features. During decision-making process, the case the referees and sportsmen are in may be of importance. For instance, a previous research on penalty decisions in ice hockey, found that referees pay more attention to the moment the incident occurred more than trainers and sportsmen. It was claimed that, both the score and the time left affected the penalty decisions of the referees (Macmahon 1999; Gacar 2011). Kuzgun (1992) developed the Decision Strategies Scale in order to measure the strategies used during the decision-making process. Decision strategy scores of males and females, 16-18 year old students and 25-40 year old adults, and some

profession groups were compared to test the validity and reliability of the scale. Research findings revealed that rational and dependent decision sub-scale and indecision sub-scale scores of female students were higher than male students, while internal-reactive sub-scale score of male students were higher than female students. Comparison of students and adults presented no significant differences in terms of decision-making strategies. For the analysis of the professional groups, decision-making strategies of doctors, lawyers, military officers, and thespians were compared and it was found that a rational decision-making strategy was the most frequently used strategy, which was followed by dependent, and internal-reactive decision-making strategies. Indecision had the lowest score average within the group. Additionally, doctors were found to adopt internal-reactive decision-making strategy more than military officers (Kuzgun 1992; Gacar 2011). Yigit (2005) stated that students with high-level academic achievement used rational decision-making strategy while making decisions more than students with medium and low-level academic achievement (Yarmali 2000; Gacar 2011). Deniz (2004), studies the correlations between self-esteem, decision-making styles and problem-solving skills of university students. For the first step of the research, an adaptation study for the Melbourne Decision Making Questionnaire I-II was conducted. In the second step, correlations between self-esteem, decision-making styles and problem-solving skills of university students were examined. Research findings suggested that there was a significant negative correlation between the problem-solving inventory subscale and total scores of students with high-level self-esteem, which referred to their perceiving to be incompetent in terms of problem-solving skills. It was found that the more self-esteem the students feel during the decision-making process, the more they believe in themselves for solving the problem (Deniz 2004; Gacar 2011). Burnett et al. (1989) examined the correlations between career decisions and decision-making styles of first- and second-year university students. According to their findings, decision-making styles and self-esteem of students were affective in determining the decision-making behavior. In addition, they found a positive correlation between careful decision-making and career selection and field selection. They stated that, students with high self-esteem adopt-

ed a careful decision-making style, and there was a positive correlation between their decision-making style and career selection, while there were no correlations between career selection and other decision-making styles (Burnett et al. 1989; Gacar 2011). Mann et al. (1989) examined the development of decision-making skills among adolescents. They sought answers to the questions, "What needs to be done to be good decision maker?" and "At which ages, best decisions are made?" According to their findings, fourteen percent of the participants at the age of 13, and twenty-four percent of the participants at the age of 15 could produce ideas, and participants at the age of 15 could produce problem-solving ideas in two difficult cases. They stated that adolescents who encounter problems while making decisions, developed unwanted behaviors. For instance, they presented behaviors such as being full of themselves, or over-using defense mechanisms. Additionally, thirty percent of the participants at the age of 13, and fifty-one percent of the participants at the age 15 could evaluate the consequences on their own and naturally. Consistency is an indicator of the decision-making skill, and decision-makers should be consistent during the selection process. As a result of rapid changes in the moods of adolescents, they may be indecisive. However, individuals in late adolescence are more consistent during the decision-making process. Resolution is another indicator of the decision-making skill, and indecisive individuals generally lack this feature (Mann et al. 1998; Gacar 2011). Ormand et al. (1991) conducted a research on university students and compared 43 young adolescents with 41 late adolescents in terms of three categories of "decision-making". These categories are personal knowledge, professional knowledge, and strategy formulation knowledge. Research findings suggested that older adolescents had more knowledge than young adolescents, and made more satisfying decisions (Osipow and Reed 1985; Gacar 2011). Larson et al. (1994) studied the correlations between deciding profession problems and gender. According to their findings, there were no significant differences between male and female participants in terms of their decision anxiety sub-scale scores. Life objective awareness scores of female participants were higher than male participants. There were no significant differences in terms of tendency to luck and faith. Secondary gain subscale scores

of male participants were higher than female participants. There were no significant differences across genders in terms of total scores (Macmahon 1999; Gacar 2011). Gacar (2011) found that there were no significant difference between self-esteem and decision-making styles of instructors at sports departments at universities by educational degree.

METHODOLOGY

This section presents information on the model, universe, sample, data collection tools, data collection, and data analysis methods of the present research.

A "survey" method was adopted in order to examine the self-esteem and decision-making styles of glider pilot trainers and candidate trainers in terms of some variables.

Universe and Sample Selection

The universe of the present research is all the candidate pilots and pilot trainers who performed gliding sports at the Eskisehir Turkish Aeronautical Association in 2013. Data for the present research was collected from 71 candidate trainers and 21 trainer pilots.

Data Collection Tools

In addition to the "Personal Information Form" conducted on glider pilot trainers and candidate trainers in order to collect data on the independent variables, the "Melbourne Decision-making Questionnaire" was used to determine decision-making styles of the participants (Deniz 2004; Sanders 2008; Gacar 2011).

Personal Information Form

The Personal Information Form used in the present research consisted of 9 items related to the personal features (age, gender, marital status, profession, sports branch, training certificate on any other sport branches interested, license status, educational status, and period of doing sports).

Decision-making Styles

The decision-making styles of the participants were determined with the "Melbourne Decision-making Questionnaire".

Melbourne Decision-making Questionnaire

The original form of the scale was developed by Mann et al. (1998), and adapted to Turkish with validity and reliability studies by Deniz (2004). Validity and reliability studies of the Melbourne Decision-making Questionnaire I-II (MDMQ) were conducted on 154 second grade students of Selcuk University, Faculty of Technical Training, Departments of Computer Systems Teaching and Automotive Teaching in 2003 (Deniz 2004; Gacar 2011).

The Melbourne Decision-making Questionnaire consists of two parts. The first part aims at determining *self-esteem in decision-making*. This part involves 6 items, three of which are scored directly, and three are scored inversely. Scoring is as follows: 2 points for "True", 1 point for "Sometimes true", and 0 point for "Not True". The highest score is 12. Higher scores indicate higher self-esteem. The second part consists of 22 items and measures *Decision-making styles*. There are four sub-factors. These are (Deniz 2004; Gacar 2011):

Careful Decision-making: Individuals choose the most appropriate alternative by researching the situation about which they need to make a decision. Individuals with a careful decision-making style present a more careful attitude while making decisions. This factor is measured using six items (Cimen 1999; Evans and Bellion 2000; Gacar 2011; Kao 2005; Macmahon 1999; Nas 2006).

Avoidant Decision-making: Individuals who need to make a decision avoid the decision in order to not make the decision. Individuals with an avoidant decision-making style are prone to avoid the responsibility of decision-making. This factor is measured with six items (Deniz 2004; Kökdemir 2003; Larson et al. 1994; M.E.B 1996; Osipow et al. 1985; Phillips et al. 1984).

Suspensive Decision-making: Individuals suspend the problem, and prefer to delay thinking about the problem, and acting on it. This factor is measured with five items (Firat Ünü 1994; Harris 1998; Kuzgun 1992; Özkan 1999; Saruhan 1996).

Panic Decision-making: Individuals make the decision with their internal feelings and instincts. Individuals with a panic decision-making style are faster than the others and make use of their instincts. This factor is measured with five items (Burnett et al. 1989; M.E.B. 1996; Nas 2006; Sanders 2008; Shiloh et al. 2001).

Reliability of Melbourne Decision-making Questionnaire

The reliability of the Melbourne Decision-making Questionnaire (MDMQ I-II) was tested with the test-retest and internal consistency methods (28). In test-retest method, MDMQ I-II were conducted twice on 56 university students with a three-week interval, and reliability coefficients obtained from sub-scales ranged between $r=.68$ and $r=.87$. In internal consistency calculations, an item analysis was conducted and total correlations of 26 items out of 28 items in total were found to be over .33, and item total correlations of the other two items were calculated as .26 and .27. Internal consistency coefficients on MDMQ I-II conducted on 154 university students were calculated as, .72 for self-esteem in decision-making, .80 for careful decision-making, .78 for avoidant decision-making, .65 for suspensive decision-making, and .71 for panic decision-making (Deniz 2004; Gacar 2011).

Validity of Melbourne Decision-making Questionnaire

Validity studies of MDMQ I-II were conducted with content validity and convergent validity methods, and expert opinions were taken for content validity (25, 01). Convergent validity was tested with the decision-making Strategies Scale and two scales were conducted on students together (56, 01). The correlation coefficients between MDMQ I-II subscales and DMSS subscales ranged between .15 and .71.

Statistical Analyses

Data obtained from the questionnaires was analyzed using the SPSS 18.0 statistics software package, and percentages, distributions, arithmetic averages, and standard deviations were calculated. After statistical analyses, expert opinions were taken. Independent samples t-test was conducted for comparing two groups, and an ANOVA test was used for testing differences between groups and comparing more than two groups. Tukey Test was conducted in order to determine the source of the significant differences found with one-way variance analyses. The findings were presented in tables. Significance level was taken as $p<0.05$.

FINDINGS

The findings of the present research are presented in this part. Independent t-test analyses revealed decision-making styles of glider pilot trainers and candidate trainers varied by license status and profession at a significant level (<0.05). There were also significant differences between age groups (<0.05). The Tukey HSD test was conducted in order to determine from which group the difference resulted, and 19-25, and 31-35 age groups were found to be the source of the difference.

Distributions related to “age, gender, marital status, profession, other sport branches, training certificate for other sport branches, license, and educational status” of the glider pilot trainers and glider pilot candidates are presented in tables.

Table 1: Distribution of participants by age

Age	N	%
18 and younger	4	4.3
19-25	39	42.4
26-30	17	18.5
31-35	10	10.9
36-40	11	12.0
41 and older	11	12.0
Total	92	100.0

As can be seen in Table 1, 42.4 percent of the participants of the present research are in the 19-25 age range, and 18.5 percent of them are in the 26-30 range.

Table 2: Distribution of participants by gender

Gender	N	%
Male	73	79.3
Female	19	20.7
Total	92	100.0

Table 2 shows that, 79.3 percent of the participants are male, and 20.7 percent of them are female.

Table 3: Distribution of participants by marital status

Marital status	N	%
Married	23	25.0
Single	69	75.0
Total	92	100.0

Table 3 shows that 25 percent of the participants are married and 75 percent of them are single.

Table 4: Distribution of participants by profession

Profession	N	%
Pilot Candidate	71	77.2
Pilot Trainer	21	22.8
Total	92	100.0

Table 4 presents that 77.2 percent of the participants are pilot candidates and 22.8 percent of them are pilot trainers.

Table 5: Distribution of participants by educational background

	N	%
Primary School	1	1.1
High School	30	32.6
Bachelor Degree	53	57.6
Master Degree	8	8.7
Total	92	100.0

It can be observed in Table 5 that 1.1 percent of the participants are primary school graduates, 32.6 percent of them are high school graduates, 57.6 percent of them have bachelor degrees, and 8.7 percent of them have master degrees.

Table 6: Distribution of participants by having training certificate for other sports branch status

	N	%
Yes	4	4.3
No	88	95.7
Total	92	100.0

Table 6 shows that 4.3 percent of the participants have training certificates for other sports branches, while 95.7 percent of them have no other certificates.

Table 7: Distribution of participants by training certificate branches

	N	%
Tennis	1	1.1
Water Sports	2	2.2
Parachute	1	1.1
No Certificate	88	95.7
Total	92	100.0

Table 7 shows that 1.1 percent of the participants have certificates for tennis, 2.2 percent of them have a certificate for water sports, 1.1 percent of them have a certificate for parachute, and 95.7 percent of them have no certificates.

Table 8: Distribution of participants by license status

	N	%
Yes	39	42.4
No	53	57.6
Total	92	100.0

Table 8 shows that 42.4 percent of the participants are certified sportsmen, and 57.6 percent are not.

According to the ANOVA test results, there are significant differences between participants in terms of decision-making styles. Tukey HSD test was conducted in order to determine from which group the difference was resulted, and 19-25, and 31-35 age groups were found to be source of the difference. There are no significant differences between other groups.

According to independent t-test results, there is a significant difference between participants in favour of certified participants in terms of decision-making styles. There are no significant differences between other groups.

According to the independent t-test results, there is a significant difference between trainers and candidates in terms of decision-making styles in favour of trainers. There are no significant differences between groups for other variables.

DISCUSSION

This section examines whether self-esteem in decision-making, and decision-making styles of trainer pilots and pilot candidates who form the sample of the universe, vary in terms of socio-demographic variables.

A significant difference was found between age groups in terms of decision-making styles (<0.05). Tukey HSD test was conducted in order to determine from which group the difference was resulted, and 19-25, and 31-35 age groups were found to be source of the difference.

Gacar (2011) found that there were no significant differences between self-esteem, and careful decision-making, avoidant decision-making,

Table 9: Variance analysis results for self-esteem in decision-making, and decision-making styles distribution by age

	Age	N	Arithmetic average	Standard deviation	F	p
<i>Self-esteem</i>	18 and younger	4	6.00	0.81	1.74	0.13>0.05
	19-25	39	6.76	1.20		
	26-30	17	6.05	1.19		
	31-35	10	5.80	1.54		
	36-40	11	6.72	1.10		
	41 and older	11	6.27	1.10		
<i>Decision Decision- making</i>	18 and younger	4	10.50	1.73	3.64	0.00<0.05
	19-25	39	10.10	1.71		
	26-30	17	8.23	3.71		
	31-35	10	7.00	2.90		
	36-40	11	9.81	3.06		
	41 and older	11	10.36	2.01		
<i>Avoidant Decision- making</i>	18 and younger	4	1.75	1.25	0.85	0.51>0.05
	19-25	39	3.46	1.88		
	26-30	17	3.70	1.35		
	31-35	10	3.40	1.34		
	36-40	11	3.54	2.01		
	41 and older	11	3.63	1.96		
<i>Suspensive Decision- making</i>	18 and younger	4	2.50	2.08	0.39	0.85>0.05
	19-25	39	2.87	1.70		
	26-30	17	3.35	1.65		
	31-35	10	2.90	1.52		
	36-40	11	3.45	2.06		
	41 and older	11	2.90	1.92		
<i>Panic Decision- making</i>	18 and younger	4	2.00	2.16	0.25	0.93>0.05
	19-25	39	2.43	1.94		
	26-30	17	2.52	2.29		
	31-35	10	1.90	1.19		
	36-40	11	2.45	1.96		
	41 and older	11	2.72	1.67		

Table 10: Independent t-test results for self-esteem in decision-making, and decision-making styles distribution by license status

	Certified	N	Arithmetic Average	Standard Deviation	t	p
<i>Self-esteem</i>	Yes	39	6.71	1.14	1.94	0.05
	No	53	6.22	1.26		
<i>Decision-making Styles</i>	Yes	39	10.12	1.93	2.29	0.03
	No	53	8.92	3.08		
<i>Avoidant Decision- making</i>	Yes	39	3.12	1.92	-1.51	0.12
	No	53	3.69	1.58		
<i>Suspensive Decision- making</i>	Yes	39	2.82	1.62	-0.97	0.34
	No	53	3.16	1.81		
<i>Panic Decision- making</i>	Yes	39	2.53	2.16	0.52	0.58
	No	53	2.32	1.68		

and suspensive decision-making styles of instructors at sports departments at universities by age. Demisbas (1992) stated that decision-making skill develops with older age. Ozcan (1999) conducted a research on the decision-making styles of high school managers, and found that managers in the 36-40 age group can evaluate options in a more rational manner than managers in the 25-30 age group, and managers in the 41-

45 age group are more rational in their decision-making process than managers in the 20-25 age group (6). Alver (2003) did not find any differences between age groups in terms of decision-making styles. Arin (2006) implemented the decision-making Strategies Scale developed by Kuzgun (1992) on high school managers, and found that only the dependent decision-making style varied by age, while there were no significant

Table 11: Independent t-test results for self-esteem in decision-making, and decision-making styles distribution by profession

Profession		N	Arithmetic average	Standard deviation	t	p
Self-esteem	Candidate	71	6.56	1.20	1.81	0.07
	Pilot	21	6.00	1.26		
Decision-making Styles	Candidate	71	8.19	3.28	2.09	0.04
	Pilot	21	9.80	2.42		
Avoidant Decision- making	Candidate	71	3.54	1.79	0.99	0.32
	Pilot	21	3.14	1.59		
Suspensive Decision- making	Candidate	71	3.14	1.80	1.37	0.17
	Pilot	21	2.61	1.43		
Panic Decision- making	Candidate	71	2.53	1.83	1.06	0.25
	Pilot	21	2.00	2.07		

differences in terms of other styles. Hulderman (2003) and Sanders (2008) found in their doctoral dissertations that decision-making styles did not vary by age at a significant level.

Independent t-test analyses conducted in the present research revealed that there were significant differences between certified and not certified sportsmen, and pilot trainers and candidate pilots in terms of decision-making styles (<0.05). Gacar (2011) found that there were no significant differences between self-esteem, and decision-making styles of instructors at sports departments at universities by educational degree. Uzunoglu (2008) conducted a research on Turkish football referees, and found significant differences between referees by educational background in terms of avoidant decision-making style, and the differences were between high-school graduate referees, and referees with master degrees, graduates of schools of physical education and sports. Yigit (2005) stated that students with high-level academic achievement used a rational decision-making strategy while making decisions more than students with medium- and low-level academic achievement. Sanders (2008) found that decision-making styles did not vary at a significant level by educational level (Kao 2005; Özkan 1999; Saruhan 1996; Vatansever 2002; Gacar 2011). Hulderman (2003) and Kao (2005) found in their doctoral dissertations that decision-making styles do not vary by experience at a significant level. Tekin and Tasgin 2009, found significant correlations between decision-making styles and seniority in profession (See Tables 9, 10 and 11).

CONCLUSION

According to the findings of the present research, there were significant differences be-

tween certified and not certified sportsmen, and pilot trainers and candidate pilots in terms of decision-making styles. In addition, there were significant differences between age groups and the 19-25 and 31-35 age groups were the source of the difference. Consequently, glider pilot trainers had higher decision-making style scores than candidate glider pilots.

RECOMMENDATIONS

Further research on required qualifications of glider pilots and trainers can be conducted using new techniques in education.

A great importance should be placed on determining the criteria for glider pilot selection, and these criteria should meet the changing conditions and developments.

Aviation is a branch of sports that requires immediate and critical decision-making all the time. Therefore, glider pilots and candidates should be provided with training programs on decision-making skills, and on technological developments.

The researchers think that the present research can contribute to the literature on glider pilots and trainer, and also self-esteem in decision-making and decision-making styles.

REFERENCES

- Burnett PC, Mann L, Beswick G 1989. Validation of the Flinders decision- making questionnaire on course decision making by students. *Australian Psychologist*, 24: 285- 292.
- Cimen A 1999. *Karar Verme*. Istanbul: Timsah Yayinlari.
- Deniz ME 2004. Üniversite öğrencilerinin karar verme özsaygı, karar verme stilleri ve problem çözme becerileri arasındaki ilişkinin incelenmesi üzerine bir araştırma. *Eğitim Araştırmaları Dergisi*, 15: 23-35.

- Evans R, Bellion E 2000. *For the Good of the Game*. California, USA: Youth Sports International.
- Firat Üniversitesi 1994. *Nasıl Bir Öğretmen İstiyoruz? Paneli*, 23 Kasım 1992, Elazığ.
- Gaçar A 2011. *Türkiye’de Beden Eğitimi ve Spor Öğretim Elemanlarının Karar Verme ve Atılabilirlik Düzeylerinin Bazı Değişkenler Açısından İncelenmesi*. Doktora Tezi. Elazığ: Firat Üniversitesi Sağlık Bilimleri Enstitüsü Beden Eğitimi ve Spor Anabilim Dalı.
- Harris R 1998. Introduction to Decision Making. California: Vanguard University of Southern California. From <<https://www.nkfu.com/planor-nedir-ne-zaman-icat-edildi/>> (Retrieved on 18 Aralık 2014).
- Kao HP 2005. *Taiwanese Executive’s Leadership Styles and Their Preferred Decision-Making Models Used in Mainland China*. Doctorate Thesis. Texas: The University of the Incarnate Word, The School of the Graduate Studies of The University of the Incarnate Word.
- Kökdemir D 2003. *Belirsizlik Durumlarında Karar verme ve Problem Çözme*. Yayınlanmamış Doktora Tezi. Ankara: Ankara Üniversitesi Sosyal Bilimler Enstitüsü.
- Kuzgun, Y 1992. Karar Stratejileri Ölçeği: Geliştirilmesi ve Standardizasyonu. *VII Ulusal Psikoloji Kongresi Bilimsel Çalışmaları*. Türk Psikologlar Derneği, Ankara, September 1992, pp. 161-170.
- Kuzgun Y 2000. *Meslek Danışmanlığı*. Ankara: Nobel Yayın Dağıtım.
- Larson J, Butler M, Wilson S, Medora N, Allgood S 1994. The effects of career decision problems in young adults. *Journal of Counseling and Development*, 73: 79-84.
- Macmahon C 1999. *Making Sense of Chaos: Decision Making By High and Low Experienced Rugby Referees*. Master of Arts in Human Kinetics. Ottawa: University of Ottawa.
- Mann L, Radford M, Burnett P, Ford S, Bond M, Leung K, Nakamura H, Vaughan G, Yang KS 1998. Cross-cultural differences in self-reported decision-making style and confidence. *International Journal of Psychology*, 33: 325-335.
- M.E.B 1996. *Öğretmen Yetistirme Koordinasyon ve İşbirliği Toplantısı*. Ankara: Öğretmen Yetistirme ve Eğitimi Genel Müdürlüğü.
- Nas S 2006. *Gemi Operasyonlarının Yönetiminde Kaptanın Bireysel Karar Verme Süreci Analizi ve Bütünlük Bir Model Uygulaması*. Yayınlanmamış Doktora Tezi, Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü. İzmir: Denizcilik İşletmeleri Yönetimi Anabilim Dalı.
- Norfolk D 1989. *İs Hayatında Stress*. (Cev: Leyla, Serdaroglu) İstanbul: Form Yayınları.
- Osipow SH, Reed R 1985. Decision-making styles and career indecision in college students. *Journal of Vocational Behavior*, 27: 368-373.
- Özkan H 1999. *Türkiye’de Beden Eğitimi ve Spor Öğretmeni Yetistirmek İçin Bir Model*. Doktora Tezi. Dokuz Eylül Üniversitesi Eğitim Bilimleri Enstitüsü. İzmir: Eğitim Bilimleri Anabilim Dalı.
- Phillips SD, Pazienza NJ, Walsh D 1984. Decision-making styles and progress in occupational decision making. *Journal of Vocational Behavior*, 25: 96-105.
- Sanders RP 2008. *The Decision-making Styles, Ways of Knowing, and Learning Strategy Preferences of Clients at a One-Stop Career Center*. Doctorate Thesis. Faculty of the Graduate College of the Oklahoma State University. Stillwater, Oklahoma: Southern Oklahoma State University.
- Saruhan N 1996. *Ankara İl Merkezinde Lise Son Sınıfı Devam Eden Öğrencilerin Atılabilirlikleri ile Ana ve Baba Tutumları Arasındaki İlişkinin Bazı Değişkenlere Göre İncelenmesi*. Yayınlanmamış Yüksek Lisans Tezi. Ankara: Ankara Üniversitesi.
- Shiloh S, Koren S, Zakay D 2001. *Individual differences in compensatory decision making style hit2 and need for closure as correlates of subjective decision complexity and difficulty, Personality and Individual Differences*. 30(4): 699-710.
- Sinangil KH 1993. Yönetici Adaylarında Karar Verme ile Kaygı İlişkileri. *VII Ulusal Psikoloji Kongresi Bilimsel Çalışmaları*. Türk Psikologlar Derneği Yayınları, Ankara, September 1992.
- Tasdelen A 2001. Öğretmen adaylarının bazı psikososyal değişkenlere göre karar verme stilleri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 2001(10): 40.
- Tekin M, Tasgin Ö 2009. Kick boks antrenörlerinin karar verme ve düşünme stillerinin incelenmesi. *Türkiye Kick Boks Federasyonu Spor Bilimleri Dergisi*, 2(1): 27.
- Topukcu H 1982. *Atılabilirlik Eğitiminin İlkokul Çocuklarının Atılabilirlik Düzeyine Etkisi*. Yayınlanmamış Yüksek Lisans Tezi. Eğitim Bilimleri Enstitüsü. Ankara: Ankara Üniversitesi.
- Vatansever M 2002. *Farklı Liselerde Öğrenim Gören Öğrencilerin Okullara Giriste ve Bitirirken Sahip Oldukları İletişim Becerilerinin Belirlenip Kıyaslanması*. Yayınlanmamış Yüksek Lisans Tezi. Eğitim Bilimleri Enstitüsü, Eğitimde Psikolojik Hizmetler Anabilim Dalı. İzmir: Dokuz Eylül Üniversitesi.
- Yarmali ES 2000. *30 Dakikada Doğru Karar Verme*. İstanbul: Damla Yayınevi.
- YigitA 2005. *Lise Öğrencilerinin Karar Verme Davranışlarının Bazı Değişkenlere Göre Yordanması*. İzmir: Ege Üniversitesi Sosyal Bilimler Enstitüsü Rehberlik ve Psikolojik Danışmanlık Bilim Dalı, Yüksek Lisans Tezi.