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Evaluating and Understanding Greek Students' Perceptions toward Entrepreneurship, Mathematics, Statistics, Economics' Subject

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Abstract

The objective of present research paper is to evaluate Greek students' attitudes towards Entrepreneurship, Mathematics, Statistics, Economics' subject through multidimensional statistical analysis. A sample of 160 Greek students participated in the study. The study used multiply instruments named SATSubject – Scale (SATE for Entrepreneurship, SATM for Mathematics, SATS for Statistics, SATEc for Economics) that are a five-point Likert scale. The scales consisted of four conceptual constructs named Affective, Cognitive Competence, Value and Difficulty. *Reliability in terms of Internal consistency estimates were greaten than 0.70 for total scores and greater than 0.70 for subscales scores for the four instruments.*

The results demonstrated that Greek students' attitudes are positive as far as the Affective parameter concerns, neutral or positive as far as the Cognitive Competence and Value parameters and negative or neutral as far as the Difficulty parameter concerns. There was no differentiation in relation to gender and students' attitudes.

Keywords: Students, Attitudes, Affect, Cognitive Competence, Value, Difficulty, Entrepreneurship, Mathematics, Statistics, Economics

1.Introduction

Attitudes toward a subject play an important role on learning and deep understanding of a subject (Petridis et al., 2017; Nicolaou, et al., 2017; Anastasiadou, 2004a, 2004b, 2004c, 2004d;, Anastasiadou & Chadjipantelis, 2008; Anastasiadou 2002; Chadjipadelis & Kofou 2013; Chadjipantelis & Anastasiadou, 2010). Students' affection toward a subject influences their achievement (Anastasiadou, 2005a, 2005b, 2005c; Anastasiadou & Gagatsis, 2005a, 2005b; Anastasiadou, Elia, Gagatsis, 2007; Anastasiadou & Gagatsis, 2007; Anastasiadou, Gagatsis, Elia, 2005). Positive attitudes permit jigger achievements (Nicolaou et al., 2017; Petridou et al., 2017; Christodoulou, et al., 2017; Anastasiadou, 2004c, Anastasiadis & Zirinoglou, 2022a; Anastasiadou & Kouvatsi, 2008, Anastasiadou et al., 2007; Anastasiadou & Gagatsis 2005a,2005b,2007; Anastasiadou et al., 2005; Chadjipantelis & Anastasiadou, 2010). Students' negative perceptions create major difficulties in students' achievement and trouble the majority of learners (Anastasiadou, 2002,2004a,2004b,2004d,2005a; Anastasiadou, & Papadimitriou, 2001,2003). Consequently, attitudes toward the value, cognitive competence as was as difficulty of a subject influence the willing and effort of learning the subject (Anastasiadou, 2007b; Anastasiadou, 2008a, 2008b, 2008c; Anastasiadou, 2012a). Emotions toward the subject also have an effect on studying a subject (Anastasiadou, 2007a). Students' insights regarding the value, usefulness and necessity of a subject, its importance both in professional life and everyday life influence their willing for deeper understanding (Anastasiadou & Papadimitriou, 2001, 2003; Anastasiadou, 2005b,2005c,2005d,2006). Statistical abilities are a key component for success in business studies (Opstad, 2020; Opstad & Årethun, 2020). Importance of statistics in business courses plays an important role in learning the subject (Peters et al. 2013). In a line Gal and Garfield (1997) argued that students' attitudes towards statistics are especially significant given that statistical reasoning and application are valuable tools in many scientific fields.

Moreover mathematics application of the fourth Industrial revolution of the modern digital age are the basis for a successful carrier. Mathematics is advanced students' capabilities and cognitive competence in mane significant domain like robotics (Valsamidis et. al, 2021; Florou et al., 2021), programming (Margaris, 2007), big data applications (Tantalaki et al., 2019a,2019b) artificial intelligence and cloud computing (Souravlas, 2019; Souravlas & Katsavounis, 2019; Souravlas et al., 2020a,2020b,2022; Souravlas, et al., 2021; Tantalaki et al., 2020a,2020b, Florou et al., 2021), algorithms (Souravlas, & Roumeliotis, 2008a,2008b,2014c), STEM and computing (Souravlas & Anastasiadou, 2020a; Souravlas, S. & Roumeliotis, 2014a,2014b,2015a,2015b).

Many scientific articles have been made about attitudes towards mathematics, (Nicolaou et al., 2017; Petridou et al., 2017; Christodoulou, et al., 2017)-toward emotional representations as well as statistical representations (Anastasiadou, 2006, 2007a,2007b,2008a,2008b,2008c, 2009a,2009b,2009c; Anastasiadou, S. & Loukas, 2009) towards big data(Anastasiadis & Zirinoglou, 2022b), towards Data Envelopment Analysis (DEA) (Mavris et al., 2019), towards STEM education, (Anastasiadis & Zirinoglou, 2022c) etc.

Many scientific articles have been made about attitudes towards entrepreneurship (Anastasiadou & Zirinoglou, 2020a,2020b; Iqbal et al., 2012; Kassean et al., 2015; Kaseorg & Raudsaar, 2013; Mentoor & Friedrich, 2007; Robinson, et al., 1991; Schmidt et al., 2018; Sonitaris et al., 2007; Zirinoglou, 2020; Wei et al., 2019). Tertiary education institutions have to construct the practices and paths in order to respond to social and economic necessities of society seeking for quality, entrepreneurship and innovation (Zirinoglou, 2020). In a line Kassean et al. (2015) argued that entrepreneurship education can possibly transfer theoretical knowledge and be the foundations of entrepreneurial professional skills' development.

There are many studies that examined the significance and the impact of attitudes toward a subject, but there is any aiming to analyze the impact of attitudes toward many disciples like Entrepreneurship, Mathematics, Statistics, Economics. Thus, the present study tries to fulfill this gap.

2. Purpose of the study-Research Hypotheses

The goal of current study is to evaluate Greek Students' perceptions toward Entrepreneurship, Mathematics, Statistics, Economics' subject. These students are study Economics or Business Administration in many Universities department. Supplement, the current document explores the following research hypotheses.

Ho1: Affective parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject
Ho2: Cognitive Competence parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject
Ho3: Value parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject
Ho4: Difficulty parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject
Ho5: Gender influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject.

3. The instruments

The study used a 5-point response scales, higher scores then correspond to more positive attitudes, whereas 1 corresponding to strongly disagree to 5 strongly agree. The scales were adapted from Schau et al. (1995) and Dauphinee et al. (1997) instrument named SATS scale exploring attitudes toward a subject from affective, cognitive, value and difficulty point of view regarding the purpose of the current study**.** In SATS scale the subject of Statistics was replaced for the three other disciplines Entrepreneurship, Mathematics, and Economics. For Entrepreneurship discipline the scale was named SATE, for Mathematics the scale was named SATM and for Economics the scale was named SATEc. The SATSubject – Scale is represented the four disciplines, Entrepreneurship, Mathematics, Statistics and Economics (Table 1).

Table 1: SATSubject – Scale

	SATSubject – Scale
Conceptual Construct	**Item**
Affective	
	I like subject
	I feel insecure when I have to do subject problems*
	I get frustrated going over subject test in class*
	I am under stress during subject class*
	I enjoy taking subject courses
	I am scared by subject*
Cognitive Competence	
	I can learn the subject
	I have a problem in understanding subjects because of how I think*
	I have no idea of what's going on in this statistics course*
	I make a lot of errors in subject
	I understand subject notions
	I find it difficult to understand subject concepts*
Value	
	Subject is worthless*****
	Subject should be a required part of my professional training
	Subject skills will make me more employable
	Subject is not useful to the typical professional*
	Subject thinking in not applicable in my future profession*
	I use subject in my everyday life
	Subject conclusions are rarely presented in everyday life*
	I will have no applications for subject in my profession*
	Subject is irrelevant in my life*
Difficulty	
	Subject formulae are easy to understand
	Subject is a complicated subject*
	Subject is a subject quickly learned by most people
	Learning subject requires a great deal of discipline*
	Subject involve massive computations*
	Subject is highly technical*
	Most people have to learn a new way of thinking to do subject*

all items with * were reversed

4. Profiles of the respondents

The demographic profiles include the following characteristics of the despondences' gender, age and year of education. The demographic profiles shown in Table 2 is based on frequency and relative frequency distributions. Regarding 160 respondents' gender, 123 are women, (76.9%) and 37 men (23.1%).

Table 2: Demographics

	Classes	Frequency	Relative Frequency %
Gender	Female	123	76.9
	Male	37	23.1

5. Results

Students Attitudes Toward Subject (Entrepreneurship) (SATE) Scale: Below (Table 3) the findings associated with reliability of the instruments in terms of internal consistency of the instruments and its conceptual constructs used in the present study are illustrated. The reliability of the Students Attitudes Toward Subject (Entrepreneurship) (SATE) Scale was related to items 1 to 28 was estimated by Cronbach alpha coefficient (*a*) (Cronbach, 1984).

The Cronbach' alpha coefficient is calculated to measure the reliability of the four conceptual constructs, i.e. Affective, Cognitive Competence, Value and Difficulty of the SATE Scale, and it is also for the whole scale named of the SATE Scale. Cronbach' alpha coefficient equals to 0.837 verified the reliability of the SATE Scale. In additions Cronbach' alpha coefficient was above the cutoff point of 0.70 for all the dimensions of SATE Scale (Croanbach, 1984; Anastasiadou, et al., 2014b; Anastasiadou et al., 2016a; Anastasiadou et al., 2016b; Anastasiadou & Giossi, 2014; 2018a, 2018b; Anastasiadou & Karakos, 2011;) (Table 3).

The value of Cronbach's α coefficient for this instrument was equal to 0.837 and it is a very high value in terms of internal consistency (Anastasiadis, 2020; Anastasiadis & Christoforidis, 2019; Anastasiadou, 2006) (Table 3).

The value of Cronbach's α coefficient for Affective conceptual construct of SATE Scale was equal to 0.821 and it is a very high value in terms of internal consistency (Anastasiadou & Anastasiadis, 2011; Anastasiadou & Anastasiadis, 2019; Anastasiadou, et al., 2010a; Anastasiadou, et al., 2010b; Anastasiadou, et al., 2013; Gkolia et al., 2007; Kofou & Anastasiadou, 2013) (Table 3).

The value of Cronbach's α coefficient for Cognitive Competence of SATE Scale conceptual construct was equal to 0.783 and it is a very high value in terms of internal consistency (Anastasiadou, 2012g; Anastasiadou & Pappa, 2009; Anastasiadou & Pappa, 2019; Anastasiadou & Taraza, 2020a,2020b; Anastasiadou et al., 2016c; Draganis et al., 2013) (Table 3).

The value of Cronbach's α coefficient for Value of SATE Scale conceptual construct was equal to 0.880 and it is a very high value in terms of internal consistency (Anastasiadis, & Christoforidis, 2019; Panistides & Anastasiadou, 2015; Patrali et al., 2012) (Table 3).

The value of Cronbach's α coefficient for Difficulty of SATE Scale conceptual construct was equal to 0.714 and it is a very high value in terms of internal consistency (Anastasiadou et al., 2013; Alevriadou et al, 2014; Cohen, et al., 1988; Florou, et al., 2015; Fotiadis & Anastasiadou, 2018a,2018b; Florou & Anastasiadou 2013; Kapetanopoulou et al., 2021) (Table 3).

Students Attitudes Toward Subject (Mathematics) (SATM) Scale: Below (Table 3) the findings associated with reliability of the instruments in terms of internal consistency of the instruments and its conceptual constructs used in the present study are illustrated. The reliability of the Students Attitudes Toward Subject (Mathematics) (SATM) Scale was related to items 1 to 28 was estimated by Cronbach alpha coefficient (*a*) (Cronbach, 1984).

The Cronbach' alpha coefficient is calculated to measure the reliability of the four conceptual constructs, i.e. Affective, Cognitive Competence, Value and Difficulty of the SATM Scale, and it is also for the whole scale named of the SATM Scale. Cronbach' alpha coefficient equals to 0.727 verified the reliability of the SATM Scale. In additions Cronbach' alpha coefficient was above the cutoff point of 0.70 for all the dimensions of SATM Scale (Croanbach, 1984; Anastasiadou et al., 2014,2013,2016a,2016b; Anastasiadou, 2014; Anastasiadou, 2016; Anastasiadou & Draganis, 2014; Anastasiadou & Panitsides 2014) (Table 3).

The value of Cronbach's α coefficient for this instrument was equal to 0.727 and it is a very high value in terms of internal consistency (Anastasiadou, 2007c; Anastasiadou, 2008d; Anastasiadou, 2009c; Anastasiadou et al., 2010b; Anastasiadou, 2011; Anastasiadou, 2012a, 2012b, 2012c, 2012d, 2012e, 2012f; Papademitriou et al., 2022) (Table 3).

The value of Cronbach's α coefficient for Affective conceptual construct of SATE Scale was equal to 0.822 and it is a very high value in terms of internal consistency (Anastasiadou & Anastasiadis, 2011; Anastasiadou & Anastasiadis, 2019; Anastasiadou, et al., 2010a) (Table 3).

The value of Cronbach's α coefficient for Cognitive Competence of SATE Scale conceptual construct was equal to 0.769 and it is a very high value in terms of internal consistency (Anastasiadou, 2012g; Anastasiadou & Taraza, 2019a,2019b,2019c; Anastasiadou & Tiliakou, 2014, 2015, 2016a, 2016b; Anastasiadou, & Zirinoglou, 2014,2015a,2015b,2020a,2020b; Anastasiadou et al., 2016c) (Table 3).

The value of Cronbach's α coefficient for Value of SATE Scale conceptual construct was equal to 0.774 and it is a very high value in terms of internal consistency (Souravlas & Anastasiadou, 2020a,2020b; Souravlas, et al., 2020; Thapa et al., 2016; Theodoridou, et al., 2014; Anastasiadis, 2020) (Table 3).

The value of Cronbach's α coefficient for Difficulty of SATE Scale conceptual construct was equal to 0.745 and it is a very high value in terms of internal consistency (Anastasiadou et al., 2013; Kofou, & Anastasiadou, 2013; Anastasiadou & Pappa, 2009,2019; Anastasiadou et al., 2007; Anastasiadou et al., 2007, Anastasiadou et al., 2014) (Table 3).

Students Attitudes Toward Subject (Statistics)*(*SATS) Scale: Below (Table 3) the findings associated with reliability of the instruments in terms of internal consistency of the instruments and its conceptual constructs used in the present study are illustrated. The reliability of the Students Attitudes Toward Subject (Statistics) (SATS) Scale was related to items 1 to 28 was estimated by Cronbach alpha coefficient (*a*) (Cronbach, 1984).

The Cronbach' alpha coefficient is calculated to measure the reliability of the four conceptual constructs, i.e. Affective, Cognitive Competence, Value and Difficulty of the SATS Scale, and it is also for the whole scale named of the SATS Scale. Cronbach' alpha coefficient equals to 0.808 verified the reliability of the SATS Scale. In additions Cronbach' alpha coefficient was above the cutoff point of 0.70 for all the dimensions of SATS Scale (Croanbach, 1984; Anastasiadou, et al., 2014b; Anastasiadou, & Kofou, 2013a,2013b; Anastasiadou, 2018a, 2018b, 2018c, 2018d; Draganis et .al, 2013; Papadaki, & Anastsasiadou, 2019; Patrali, et al., 2012; Nunnally, 1978; Panitsides & Anastasiadou, 2015) (Table 3).

The value of Cronbach's α coefficient for this instrument was equal to 0.808 and it is a very high value in terms of internal consistency (Anastasiadis, 2020; Anastasiadis & Christoforidis, 2019; Anastasiadou, 2007c,2008d; Anastasiadou et al., 2014,2013,2016a,2016b; Giossi et al., 2019; Kapetanopoulou et al., 2021) (Table 3).

The value of Cronbach's α coefficient for Affective conceptual construct of SATS Scale was equal to 0.839 and it is a very high value in terms of internal consistency (Anastasiadou, et al., 2010a; Anastasiadou, et al., 2010b; Anastasiadou, et al., 2013) (Table 3).

The value of Cronbach's α coefficient for Cognitive Competence of SATS Scale conceptual construct was equal to 0.744 and it is a very high value in terms of internal consistency (Anastasiadou & Tiliakou, 2014, 2015, 2016a, 2016b; Anastasiadou, S. & Zirinoglou, P. (2014,2015am2015b,2020a,2020b; Anastasiadou et al., 2016c) (Table 3). The value of Cronbach's α coefficient for Value of SATS Scale conceptual construct was equal to 0.778 and it is a very high value in terms of internal consistency (Souravlas & Anastasiadou, 2020a,2020b; Souravlas, et al., 2020; Thapa et al., 2016; Theodoridou, et al., 2014; Anastasiadis, 2020; Anastasiadis et al., 2016) (Table 3).

The value of Cronbach's α coefficient for Difficulty of SATS Scale conceptual construct was equal to 0.734 and it is a very high value in terms of internal consistency (Anastasiadou et al., 2014; Anastasiadou & Draganis, 2014; Anastasiadou, et al., 2014a; Anastasiadou & Kofou, 2013a, 2013b; Anastasiadou & Loukas, 2009; Anastasiadou & Panitsides, 2014) (Table 3).

Students Attitudes Toward Subject (Economics)*(*SATEc) Scale: Below (Table 3) the findings associated with reliability of the instruments in terms of internal consistency of the instruments and its conceptual constructs used in the present study are illustrated. The reliability of the Students Attitudes Toward Subject (Statistics) (SATS) Scale was related to items 1 to 28 was estimated by Cronbach alpha coefficient (*a*) (Cronbach, 1984).

The Cronbach' alpha coefficient is calculated to measure the reliability of the four conceptual constructs, i.e. Affective, Cognitive Competence, Value and Difficulty of the SATS Scale, and it is also for the whole scale named of the SATS Scale. Cronbach' alpha coefficient equals to 0.783 verified the reliability of the SATS Scale. In additions Cronbach' alpha coefficient was above the cutoff point of 0.70 for all the dimensions of SATS Scale (Croanbach, 1984; Anastasiadou, et al., 2014b; Anastasiadou et al., 2016a; Anastasiadou et al., 2016b; Anastasiadou & Giossi, 2014; 2018a, 2018b; Anastasiadou & Karakos, 2011; Papadaki, & Anastsasiadou, 2019; Patrali, et al., 2012; Nunnally, 1978) (Table 3).

The value of Cronbach's α coefficient for this instrument was equal to 0.783 and it is a very high value in terms of internal consistency (Anastasiadou, 2006; Anastasiadou, 2007c; Anastasiadou, 2008d; Anastasiadou, 2009c; Anastasiadou et al., 2010b; Anastasiadou, 2011; Papademitriou et al., 2022; Kapetanopoulou et al., 2021) (Table 3).

The value of Cronbach's α coefficient for Affective conceptual construct of SATS Scale was equal to 0.919 and it is a very high value in terms of internal consistency (Anastasiadou, et al., 2010a; Anastasiadou, et al., 2010b; Anastasiadou, et al., 2013; Gkolia et al., 2007; Kofou & Anastasiadou, 2013) (Table 3).

The value of Cronbach's α coefficient for Cognitive Competence of SATS Scale conceptual construct was equal to 0.768 and it is a very high value in terms of internal consistency (Anastasiadou, 2012g; Anastasiadou & Pappa, 2009; Anastasiadou & Pappa, 2019; Anastasiadou & Taraza, 2020a,2020b; Anastasiadou & Taraza, 2019a,2019b,2019c; Anastasiadou & Tiliakou, 2014, 2015, 2016a, 2016b; Anastasiadou, S. & Zirinoglou, P. (2014,2015am2015b,2020a,2020b; Anastasiadou et al., 2016c; Nunnally, 1978) (Table 3).

The value of Cronbach's α coefficient for Value of SATS Scale conceptual construct was equal to 0.783 and it is a very high value in terms of internal consistency (Anastasiadis, 2020; Anastasiadis et al., 2016; Anastasiadis, & Christoforidis, 2019) (Table 3).

The value of Cronbach's α coefficient for Difficulty of SATS Scale conceptual construct was equal to 0.777 and it is a very high value in terms of internal consistency (Anastasiadou et al., 2013; Alevriadou et al, 2014; Anastasiadou et al., 2015; Gkolia et al., 2007; Papademetriou et al., 2022; Anastasiadou, & Douma, 2014) (Anastasiadou, 2013a,2013b,2013c, 2013d; 2014; Anastasiadou & Florou, 2013; Batiou & Anastasiadou, 2015) (Table 3).

Table 3: Cronbach's Students Attitudes Toward Subject (Entrepreneurship, Mathematics, Statistics, Economics) conceptual Constructs Scale

Scale SATSubject	**Conceptual Constructs**	**Cronbach's Alpha**
SATE (Entrepreneurship)		0.837
	Affective	0.821
	Cognitive Competence	0.783
	Value	0.880
	Difficulty	0.714
SATM(Mathematics)		0.727
	Affective	0.822
	Cognitive Competence	0.769
	Value	0.774
	Difficulty	0.745
SATS (Statistics)		0.808
	Affective	0.839
	Cognitive Competence	0.744
	Value	0.778
	Difficulty	0.734
SATEc (Economics)		0.783
	Affective	0.919
	Cognitive Competence	0.768
	Value	0.783
	Difficulty	0.777

all items with * were reversed

The following table, Table 4, presents the mean value (M) and the standard Deviation (SD) of each item and each conceptual construct of Subjects scale (Table 4). Among the dimension named Affective related to four subjects, the highest mean level of perceptions (for more positive one) was M=4.47 (SD=0.752) for the item regarding whether the examinees get frustrated going over subject test in class regarding the subject of Entrepreneurship as well as whether the examinees get frustrated going over subject test in class regarding the subject M=4.25 (SD=1.064), whether the examinee is scared by Mathematics M=4.45 (0.759),whether the examinees likes Statistics M=3.94 (SD=1.029) (Table 4).

Among the dimension named Cognitive Competence related to four subjects, the highest mean level of perceptions (for more positive one) was the item regarding whether the examinees can learn Entrepreneurship M=4.34, (SD=0.869), Mathematics M=4.24, (SD=0.961), Statistics M=4.31 (SD=0.926) and Economics M=4.15 (SD=0.992) (Table 4).

Among the dimension named Value related to three subjects Entrepreneurship, Mathematics and Economics the highest mean level of perceptions (for more positive one) was the item regarding whether the examinees find Entrepreneurship useful to the typical professional M=4.06, (SD=1.042) and Mathematics M=3.89 (SD=0.915) as well as Economics M=4.20 (SD=0.923). As far as the Statistics subject concerns the most positive attitude was related to item regarding to the value of Statistics M=4.16 (SD=0.836) (Table 4).

Among the dimension named Difficulty related to three subjects Entrepreneurship, Mathematics and Statistics the highest score level of perceptions reveals neutral regarding the item that examines whether the examinees find most people have to learn a new way of thinking to do Entrepreneurship M=2.80 (SD=1.196), Mathematics M=2.84 (SD=1.181), and Statistics M=2.83 (SD=1.206). As far as the Economics subject concerns the highest score level of attitude was related to item regarding whether Economics is a subject quickly learned by most people 2.83 (1.206) (Table 4).

Table 4: SATSubject Scale

Subject	Item	MEAN(SD) Entrepreneurship	MEAN(SD) Mathematics	MEAN(SD) Statistics	MEAN(SD) Economics
Affective					
	I like subject	4.42 (0.773)	4.38 (0.807)	3.94 (1.029)	4.08 (1.264)
	I feel insecure when I have to do subject problems*	4.42 (0.756)	4.34 (0.793)	3.84 (0.977)	4.03 (1.276)
	I get frustrated going over subject test in class*	4.47 (0.752)	4.13 (1.008)	3.49 (1.058)	4.25 (1.064)
	I am under stress during subject class*	4.21 (0.761)	4.05 (0.889)	3.72 (0.966)	3.89 (1.121)
	I enjoy taking subject courses	3.96 (0.938)	3.79 (0.999)	3.40 (1.029)	3.53 (1.331)
	I am scared by subject*	4.45 (0.759)	4.45 (0.759)	3.80 (0.853)	4.10 (1.270)
Cognitive Competence					
	I can learn the subject	4.34 (0.869)	4.24 (0.961)	4.31 (0.926)	4.15 (0.992)
	I have a problem in understanding subjects because of how I think*	3.21 (1.111)	3.54 (1.192)	3.59 (1.162)	3.23 (1.064)
	I have no idea of what's going on in this statistics course*	2.81 (1.362)	3.01 (1.408)	3.34 (1.308)	2.44 (1.382)
	I make a lot of errors in subject	2.95 (1.120)	3.20 (1.164)	3.37 (1.136)	2.68 (1.178)
	I understand subject notions	3.57 (0.994)	3,56 (1.032)	3.61 (1.009)	3.46 (1.033)
	I find it difficult to understand subject concepts*	3.22 (1.062)	3.23 (1.083)	3.34 (1.063)	2.93 (1.174)
Value					
	Subject is worthless*	3.14 (1.073)	3.25 (1.155)	4.16 (0.836)	3.54 (1.170)
	Subject should be a required part of my professional training	3.54 (1.086)	3.57 (1.147)	3.94 (0.844)	3.84 (1.033)
	Subject skills will make me more employable	3.19 (0.994)	3.37 (1.147)	3.96 (0.961)	3.68 (1.037)
	Subject is not useful to the typical professional*	4.06 (1,042)	3.92 (1.064)	3.89 (0.915)	4.20 (0.923)

	Subject thinking in not applicable in my future profession*	3.99 (0.883)	3.73 (1.075)	3.84 (0.792)	4.08 (0.828)
	I use subject in my everyday life	3.41 (1.090)	3.47 (1.115)	2.66 (1.010)	3.58 (1.119)
	Subject conclusions are rarely presented in everyday life*	3.70 (0.917)	3.59 (1.054)	3.90 (1,035)	3.74 (0.920)
	I will have no applications for subject in my profession*	3.53 (0.997)	3.62 (0.964)	4.11 (0.894)	3.61 (0.972)
	Subject is irrelevant in my life*	3.51 (1.082)	3.51 (0.925)	3.12 (1.124)	3.71 (1.062)
Difficulty					
	Subject formulae are easy to understand	2.04 (1.317)	1.76 (1.174)	2.00 (1.303)	2.51 (1.405)
	Subject is a complicated subject*	1.94 (1.156)	1.85 (1.117)	2.01 (1.168)	2.21 (1.249)
	Subject is a subject quickly learned by most people	2.79 (1.300)	2.77 (1.260)	2.99 (1.200)	2.89 (1.277)
	Learning subject requires a great deal of discipline*	1.82 (1.115)	1.93 (1.065)	2.01 (1,192)	2.44 (1.306)
	Subject involve massive computations*	1.90 (1.094)	1.78 (1.040)	1.90 (1.117)	2.51 (1.254)
	Subject is highly technical*	1.54 (1,015)	1.48 (0.931)	1.69 (1.187)	2.33 (1.386)
	Most people have to learn a new way of thinking to do subject*	2.80 (1.196)	2.84 (1.181)	3.03 (1.116)	2.83 (1.206)

6. Conclusions

The present paper views to access students' attitudes in relation to opinions towards Entrepreneurship, Mathematics, Statistics, Economics' subject through multidimensional statistical analysis. The results demonstrated that Greek students' attitudes are positive as far as the Affective conceptual construct concerns, neutral or positive as far as the Cognitive Competence and Value conceptual constructs and negative or neutral as far as the Difficulty conceptual construct concerns. Consequently, the hull hypothesis Ho1 claiming that Affective parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject is accepted. Still, the hull hypothesis Ho2 claiming that Cognitive Competence parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject is accepted. In addition, the hull hypothesis Ho3 stating that Value parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject is accepted. Moreover, the hull hypothesis Ho4 asserting that Difficulty parameter influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject is accepted.

Finally, there was no differentiation in relation to gender and students' attitudes. This, the hull hypothesis Ho5 stating that Gender influences Greek students' attitude towards Entrepreneurship, Mathematics, Statistics, Economics' subject is not supported.

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