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Message from the Editors

We are really happy to announce that we have published TOJDEL third issue. In this issue we have 4 articles from different authors and different countries. I would like to thank all TOJDEL authors for their great effort and supporting our journal.

July 01, 2013
Prof. Dr. Aytekin İŞMAN
Editor in Chief

Dear TOJDEL Readers;

In this issue TOJDEL published 4 aticles. Many thanks to all contributers. We would like to enjoyable reading our third issue.

TOJDEL third issue contain articles related social networks, online material developments,m learning, use of technology in various domains, ICT in foreign language and IT in pedagogical practice...

Also we would like to thank reviewers, editorial board and contributors....

July 01, 2013
Dr. Cengiz Hakan AYDIN & Dr. Mübin KIYICI
Editors

Table Of Contents

A Comparative Study on the Relationship between Meta-Cognitive Thinking and Motivation for Achievement among Gifted and Non-Gifted Secondary School Students in Irbid City, Jordan.

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ABSTRACT

Many educators call for special attention and care to be given to the gifted in order for them to be able to better serve and develop the community. The interest in the gifted increased in mid-21st century as many specific education programs were designed and many studies investigated their characteristics. These were carried out with an aim to cater to their needs and match their lifestyle in a better way so that they are able to play an efficient and pivotal role for the development of their community (Al-Saidi, 2007).

Keywords: *Thinking, Motivation, Secondary School*

INTRODUCTION

Many educators call for special attention and care to be given to the gifted in order for them to be able to better serve and develop the community. The interest in the gifted increased in mid-21st century as many specific education programs were designed and many studies investigated their characteristics. These were carried out with an aim to cater to their needs and match their lifestyle in a better way so that they are able to play an efficient and pivotal role for the development of their community (Al-Saidi, 2007).

The concept of creating a specific educational program for the gifted led to a serious debate among the interest group and the stakeholders in the field of education of many countries. While some countries supported the idea, others went against it. Those who supported the idea argued that the specific program will help the gifted children to develop in a balanced manner; mentally, emotionally and physically. This is because when a gifted child mixes with a similar group of gifted people, he will be able to develop mentally about his identity as well as identify his strengths and weaknesses, which would enable him to grow in all aspects.

This specific program is considered essential towards achieving social growth because the gifted represents an asset and wealth which should be given due attention to enable them to serve their community better in line with the concept of equal opportunities supported by all democratic societies. In such political and educational systems, gifted students are exposed to a suitable environment and given equal chances to explore their full potential and prove their real identities. This is what the defenders of the rights of the gifted children are calling for in order to meet their needs and challenge their abilities (Al Khalidi, 2003, Girjan, 1999).

The Hashimist Kingdom of Jordan is one among many countries that support the idea of creating such a specific program and pays great attention to the gifted students. Therefore, the kingdom has established schools for excellent students called King Abdullah II Schools for Excellence. These schools provide specialized education with the aim of developing practical education and a better school environment for gifted students in order to develop their gifteds and creativity through educational democracy and equal opportunities (Education Ministry, 2003).

The selection process and admission of students in these schools are done in coordination with the educational excellence centre under the Al-Hussein Foundation, where the department of measurement and guidance will conduct a placement test through which the students are selected and nominated to study in any one of the schools (e.g., Al-Yubel School) (Educational Excellence Centre, 2001).

The test follows a selection mechanism and standard and these are described below:

Students who completed primary school education successfully will be selected based on scores of not less than 95% for Science, Mathematics, and English, and an overall score (CGPA) of not less than 95%. There is also a review of students' previous academic record from the past three years to ensure consistent progress in different subjects. Students' IQ will also be measured through an IQ test. They need to score not less than 140 and based on the scores, 100 students are selected every year. A team of teachers and a school principal is formed to study the historical background of each case and students will be then be called for an interview subject to their parents' consent. These students are given bonus marks for their technical, literary and sports gifted.

The definition of gifted differs based on theoretical orientations and practices (Al-Ziibi, 2003). The difference in the definition of gifted is based on several questions such as: Does gifted mean an excellent general mental ability or does it include different skills and gifteds such as technical ability or ability in one specific academic subject, creativity or social skills? However, there are clear agreement and consensus that the gifted have a high IQ compared to the ordinary. In this context, it is said that those who are categorized as gifted are able to absorb concepts, organize and use them appropriately more than the ordinary (Al-Wagfi, 2004).

The contemporary definitions of gifted and gifted have been adopted to change people's perception of high mental ability as the only criterion used to define gifted. Renzuily (1977) mentioned in his definition of gifted that it is composed of three human characteristics and these are general abilities above the median, high level of motivation, and high level of creativity.

Based on this definition, it appears that he has expanded the concept of gifted, where he demonstrated the significant role of motivation in creating gifted, and also the importance of integration between mental ability, creativity, and motivation. A high degree of motivation or a strong drive to acquire knowledge alongwith a high level of creativity usually lead to a high level of abilities (Devis and Rim, 2001).

A study by Gatami (1996), Al-Fahl (1999) and Lindsay and Phillips (2006) indicates a relationship between motivation, mental ability and intelligence. Al-Khalidi (2002) interprets this relationship as motivation that helps to free a person from psychological forces and directs him/her to exercise more control and have perseverance to excel in an action. He believes that action and perseverance are ways to succeed in life and to attain excellence.

The gifted also enjoy a high level of energy when engaged in play or work. They have intrinsic motivation that drives them towards high achievement. Most researches that are based on observation at homes and schools indicate that the gifted excel because of a strong motivation to explore, to be curious, to study, to dig deep for knowledge and to raise questions. Therefore, their aspirations should be fulfilled so that the gifted's abilities are not hindered or suppressed resulting in a lack of concentration and focus (Asiri, 2002).

Motivation and Meta-Cognitive Thinking

Many studies (Landine and Steart, 1998; Riswan and Liu, 1999; Reszven, Ahmadi and Abedu, 2002; and Efklides, 2011) indicate that a high level of meta-cognitive thinking increases academic achievement, and the strategies for acquiring knowledge change due to changes in motivation. Studies by Carretti, Borella, Zavagnin and Debeni (2011), and Baykent and Esme (2006) highlight the importance of meta-cognitive thinking to develop students' interest towards acquiring knowledge. Studies by Tas, Brown, Esen-Danaci, Lysakes and Brune (2012) highlight that meta-cognitive thinking is strongly related to intrinsic motivation which then can lead to self and independent education. Peirce (2004) believes that the relationship between meta-cognitive thinking and motivation is derived from the Attribution-theory

and self-efficacy. When students are given a task, success or failure in the task will push the students to attribute the success or failure to internal causes (ability or effort) or external causes (difficulty of the task). In this context, the attribution a person makes has a significant impact on his success or failure in everything he does. For students who attribute academic difficulty to low ability, there is a possibility that they will have low esteem and will not furnish much effort to succeed. In contrast, students who have higher esteem will choose difficult tasks or furnish more effort and perseverance, and apply appropriate strategies of problem solving to face tasks given (Pierce, 2003). Chan (1996) shows that the gifted consider themselves more intellectually capable and less exposed to failure because they have high self-esteem.

GIFTED AND METACOGNITIVE THINKING

Teaching critical thinking skills has become an essential goal in contemporary educational institutions. Therefore it is vital to focus on developing the mental ability of students and to give them equal opportunities to know how the mind work which would then enable them to explore ways of acquiring knowledge and achieve any tasks of any level (Al-Izah, 2000).

A student's awareness of his/her thinking and feelings enables him/her to know his/her self. Research has found that people with high mental ability are more capable of understanding their own feelings, and are more confident to make their own choices. There are studies that have proven a positive correlation between giftedness and meta-cognitive thinking. They explored meta-cognitive strategies that enable students to choose whatever tasks they ought to complete (Risemberg and Wingenbach, 1982; Zimmerman, 1992; Abullya and Chan 1996; and Martini 2004 and 2003). The teaching of meta-cognitive thinking skills should therefore include helping the gifted to understand the sources of their special thought, their opinions, orientations and values of others. In analyzing a topic, for instance, students can be coaxed into understanding how an analytical process is done, and ask themselves why they are studying a topic or a particular question and what the topic or the question mean to them (Davis, 2001). Costa (1984) emphasized the importance of students' understanding of awareness in solving problems.

Statement of the Problem

In recent years, many schools and centers have started to pay attention to the gifted students and design specific programs to develop these students' mental and emotional abilities. This study aims to measure meta-cognitive thinking skills and motivation for achievement of the gifted students who follow the specific education program created to develop their mental and emotional abilities. Do these abilities of the gifted students differ from those who follow the ordinary education program in other schools?

The questions of the study are as follow:

1. What is the level of metacognitive thinking skills of the gifted and non-gifted students?
2. What is the level of motivation for achievement among gifted and non-gifted students?
3. Is there a statistically significant difference at the level of $\infty \leq 0.05$ between the correlation in the measurement of metacognitive thinking skills as a whole and the measurement of motivation for achievement based on variables: gifted and non-gifted?

Significance of the Study

The significance of the study lies in the discovery of differences between gifted and non-gifted students through correlation between meta-cognitive skills and motivation for achievement as many studies conducted in similar contexts did not look into these.

Definition of Terms

Meta-cognition - a person's awareness of learning practice by knowing what he knows and what he does not know. A person's thinking of how to learn.

Achievement Motivation - a relative permanent readiness that identifies the extent of a person's action and perseverance towards achieving success.

Gifted - the students who are admitted into the King Abdullah II Schools for Excellence through principles and standard set by the Ministry of Education. These schools aim to develop a program for the gifted students to meet their

needs and develop their innate ability.

RESEARCH DESIGN

Participants and sampling

The population of the study includes all students who applied for the test of gifted and excellence from the elementary schools in Irbid city. Some of them were admitted into the King Abdullah's schools for excellence and were classified as gifted students while some of them failed the test and were not given the opportunity to join these schools, and were classified as non-gifted students. The study was limited to the following grades: Grades 10 and 11 of gifted and non-gifted students. The sample collected from the gifted students was around 166 students, distributed as follows: Grade 10 (45 males and 46 females); Grade 11 Science Stream (35 males and 40 females).

The sample of non-gifted students was collected based on convenience from the participants of non-gifted students because of the difficulty in getting access to all students. Through a field research, some 110 students were selected and distributed as follows: Grade 10 (29 males and 25 females), Grade 11 (31 males and 25 females). Table 1 shows the distribution of the study sample according to the type of student.

Table 1 Distribution of the study sample according to the type of student

Variable		Number	Average
Type of student	Gifted	166	55.2%
	Non gifted	110	44.8%
Total		267	100%

The Study Instruments:

The researchers used several instruments such as: gifted measurement, metacognitive questionnaire scale and, motivation for achievement measurement The details are as follow:

Gifted measurement

The researchers chose the students of King Abdullah II Schools of Excellence as sample of gifted students based on their high scores of 95% or above, and also their successful passing of the test of excellence which was approved by the Ministry of Education.

Metacognitive Questionnaire scale

To determine the level of metacognitive thinking skills of the study sample, the researchers used a metacognitive test known as Metacognitive Questionnaire Scale (MQS), which was developed by Khawaldeh (2003), and modified to suit the Jordan Environment. Inappropriate paragraphs were deleted and some adjustments were made so that the test in its final form included 60 items from its original 80 items, and distributed into four areas: Palpable serial, palpable random, abstract serial, and abstract random). These areas are used to measure the level of students' metacognitive thinking skills. There are two types of skills investigated and they are perception (receiving information) which appears in two forms, namely abstract and concrete, and organization of information which appears in two forms as well, namely sequential and random.

Therefore, this test distinguishes between four ways of thinking:

- Abstract: Student receives information as mental concepts.
- Perceived: Student depends on the senses in receiving information.
- Serial: Student deals with information in a logical sequence.
- Random: Student puts the information in a number of ways and uses various means to get a lot of information at one time.

Validity of the measurement

To ensure measurement validity, the researchers referred to a number of arbitrators of various specialties from the Faculty of Education Teaching Board and the Department of Arabic in Jordanian universities. Their views on the appropriateness of the measurements used in the study as well as the language and content are checked. The arbitrators

made some modifications in the paragraphs and wording to bring the final modified measurement as follows:

Items before modification	Items after modification
I think of something that has a clear beginning and ending	I think of subjects that have a clear beginning and ending
I organize subject in a collective manner to make them more fit	I organize subject as a whole to make them fit more
I'm keen to understand myself	I know myself

Reliability of the measurement

The coefficient reliability of the metacognitive thinking skills was calculated through Test-Retest, and the period for extraction of coefficient consistency using equation Cronbach Alpha between the two tests was three weeks. The coefficient reliability of metacognition thinking skills by way of retest ranged between 79%-85% and the abstract random was found to be less reliable while the abstract serial was highly reliable.

The coefficient reliability by way of internal consistency ranged between 70% -89% and the palpable random was found to be less reliable while abstract random was found to be highly reliable. The coefficient reliability by way of retest of metacognition thinking skills as whole was found to be 81% and by way of internal consistency was 83%. See Table 2.

Table 2: The coefficient reliability of Metacognitive Questionnaire Scale

Scale	The coefficient reliability		number
	retest ranged	internal consistency ranged	
Palpable/serial	0.81	0.77	15
Palpable/random	0.83	0.70	15
Abstract/serial	0.85	0.81	15
Abstract/random	0.79	0.89	15
Metacognitive T.S.	0.81	0.83	60

Motivation for achievement measurement:

Through review of previous studies (Kanaan, 2003; Sahloul, 2005; Dlashh, 2006) and with reference to theoretical literature, the researchers developed this measurement which consists of 38 paragraphs. These paragraphs are distributed into five areas: perseverance, competition, self-confidence, realization of the importance of time, and desire to master and enjoy the work. These areas measure the level of students' motivation for achievement.

Validity of the measurement

To ensure validity of the measurement, the researchers referred to a number of arbitrators from the Faculty of Education and Arts Teaching Board from Jordanian universities. Their views on the appropriateness of the measurements used in the study as well as language and content are considered. The arbitrators made some suggestions for modification in some paragraphs. Nevertheless, 80% of them endorsed the paragraphs, providing a clear indication of the validity of its contents. For example:

Items before modification	Items after modification
I keep trying until I master the subject I study	I repeat until I master the subject I study
My aim to win relation is better than my colleagues	My aim to establish relation is better than my colleagues
It border me a possibility of failure in a particular study subject	A possibility of failure in a particular study subject makes me panic

Reliability of the measurement

The coefficient reliability of motivation for achievement areas was calculated through Test-Retest, and extraction of coefficient consistency using equation Cronbach Alpha. The coefficient reliability of motivation for achievement areas by way of retest ranged between 78%-85% where perseverance was found to be less reliable, while competition was highly reliable.

The coefficient reliability by way of internal consistency ranged between 79% - 88% where completion was found to be less reliable while self-confidence was found to be highly reliable. The coefficient reliability by way of retest of

metacognitive thinking as a whole was found to be 79% and by way of internal consistency was 70%. See Table 3.

Table 3: The coefficient reliability of motivation achievement areas

Area	The coefficient reliability		number
	retest ranged	internal consistency ranged	
Perseverance	0.78	0.87	**11**
Competition	0.85	0.79	**5**
Self-confidence	0.84	0.88	**8**
Realization of the importance of time	0.83	0.87	**7**
The desire to master and enjoy work	0.82	0.84	**7**
Motivation for achievement	0.79	0.70	**38**

Procedures for correcting measurements

Student responses were converted from measurement paragraphs of 'Strongly Oppose, Disagree, Not Sure, Agree and Strongly Agree' to the following numerical order: 1, 2, 3, 4, and 5, when their answers are positive. The responses were converted to the following order: 5, 4, 3, 2, and 1 when their answers are negative.

Variables of the study:

Variables of the study consist of the following:

the independent variable:

Students classified as gifted or non-gifted

Dependent variables:

In correlation between:

Performance on the measurement of metacognitive thinking skills and the performance on the measurement of motivation for achievement or its scope.

Statistical treatments:

To answer the first and second questions:

The mean and standard deviations were calculated.

To answer the third question:

A correlation between the areas of epistemological beliefs measurement and the areas of metacognitive thinking was calculated. In addition to the value of Z, an equation was applied to identify the difference between the correlation coefficient of the two independent groups based on the variables: gifted and non-gifted students.

FINDINGS

The study answers the three questions below:

The first question:

What is the level of metacognitive thinking skills of the gifted and non gifted students?

To answer this question, the researchers calculated the means and standard deviations of the study sample responses on metacognitive thinking skills as a whole and the four areas measured. See Table 4.

Table 4: Means and standard deviations scores on the metacognition scale as a whole and its factors

No.	metacognitive factors	Student type					
		Gifted			Non gifted		
		Rank	Average	Standard Deviation	rank	Average	Standard deviation
1	Palpable/serial	3	2.70	0.40	2	2.82	0.43
2	Palpable/random	4	2.34	0.35	4	2.28	0.31
3	Abstract/serial	2	2.76	0.47	3	2.73	0.46
4	Abstract/random	1	2.91	0.44	1	2.91	0.42
	Metacognitive		2.68	0.33		2.69	0.31

It can be seen from Table 4 that the mean scores of gifted and non-gifted students on the metacognitive factors as a whole (serial/palpable, random/palpable, serial/abstract, random/abstract) were 2.68 and 2.69, respectively.

The mean range of the four factors of the gifted students was 2.34-2.91, and the mean range of the non-gifted students was 2.28-2.91.

The second question:

What is the level of achievement motivation among gifted and non-gifted students?

To answer this question, the researchers calculated the mean and standard deviations for the areas of motivation for achievement as whole of the gifted and non-gifted students. See Table 5.

Table 5: Means and standard deviations scores on motivation for achievement scale as a whole and its factors

No	Motivation for achievement factors	Student type					
		Gifted			Non gifted		
		Rank	Average	Standard Deviation	Rank	Average	Standard deviation
1	Perseverance	4	3.38	0.38	5	3.45	0.43
2	Competition	2	3.52	0.51	2	3.75	0.56
3	Self-confidence	5	3.38	0.45	4	3.49	0.45
4	Realization of the importance of time	3	3.43	0.44	3	3.55	0.45
5	The desire to master and enjoy work	1	3.75	.54	1	3.84	.34
	Motivation for achievement		2.48	0.31		3.59	0.28

The previous table shows that the mean of the gifted students in the measurement of their motivation for achievement as a whole is 3.480 and non-gifted students, 3.591.

The calculation of these means ranged within the five areas (perseverance, competition, self-confidence, realization of the importance of time, and the desire to master and enjoy work) with gifted students from 3.384-3.754, while non-gifted students, from 3.455-3.840.

The third question:

Is there a statistically significant difference at the level of $\infty \leq 0.05$ between the correlation in the measurement of metacognitive thinking skills as a whole and the measurement of motivation for achievement based on variables: gifted and non-gifted?

The researchers calculated the two-sided correlation coefficients between metacognitive thinking measurement as a whole and its factors, and motivation for achievement as a whole and its factors. The researchers then converted

calculations to value z to identify the significant difference between gifted and non-gifted students. See Table 6.

Table 6: Linear correlations between metacognition thinking scores and its factors and the motivation for achievement areas and its factors, and the decimal value of z corresponding to them.

First scale	Second scale	Student type	Correlation Coefficient	Indicator	Number	Z Decimal values	Z	Statistically Significance
palpable serial	Perseverance	gifted	0.163	0.051	143	0.165	2.238*	0.013
		Non gifted	-0.118	0.208	116	-0.118		
	Competition	gifted	0.350*	0.000	143	0.365	2.303*	0.011
		Non gifted	0.074	0.429	116	0.074		
	Self-confidence	gifted	0.330*	0.000	143	0.343	2.544*	0.005
		Non gifted	0.021	0.822	116	0.021		
	Realize the importance of time	gifted	0.319*	0.000	143	0.331	1.645*	0.050
		Non gifted	0.122	0.192	116	0.123		
	The desire to master and enjoy work	gifted	0.456*	0.000	143	0.492	3.133*	0.001
		Non gifted	0.096	0.307	116	0.096		
	Motivation for achievement	gifted	0.*458	0.000	143	0.495	3.659*	0.000
		Non gifted	0.032	0.733	116	0.032		
palpable random	Perseverance	gifted	0.096	0.252	143	0.097	0.837	0.201
		Non gifted	-0.009	0.922	116	-0.009		
	Competition	gifted	0.071	0.399	143	0.071	1.313	0.095
		Non gifted	-0.094	0.313	116	-0.095		
	~~Self-confidence~~	gifted	0.200*	0.017	143	0.203	0.544	0.293
		Non gifted	0.133	0.154	116	0.134		
	Realize the	gifted	0.144	0.086	143	0.145	1.065	0.143

First scale	Second scale	Student type	Correlation Coefficient	Indicator	Number	Z Decimal values	Z	Statistically Significance
	importance of time	Non gifted	0.010	0.913	116	0.010		
	The desire to master and enjoy work	gifted	0.306*	0.000	143	0.316	1.458	0.072
		Non gifted	0.131	0.161	116	0.132		
	Motivation for achievement	gifted	0.243*	0.003	143	0.248	1.580	0.057
		Non gifted	0.048	0.608	116	0.048		
Abstract serial	Perseverance	gifted	0.181*	0.030	143	0.183	1.345	0.089
		Non gifted	0.013	0.891	116	0.013		
	Competition	gifted	0.161	0.054	143	0.163	2.701*	0.003
		Non gifted	-0.177	0.057	116	-0.179		
	Self-confidence	gifted	0.248*	0.003	143	0.253	0.672	0.251
		Non gifted	0.167	0.074	116	0.168		
	Realize the importance of time	gifted	0.262*	0.002	143	0.268	2.072*	0.019
		Non gifted	0.006	0.947	116	0.006		
	The desire to master and enjoy work	gifted	0.502*	0.000	143	0.552	2.513*	0.006
		Non gifted	0.230	0.013	116	0.234		
	Motivation for achievement	gifted	0.400*	0.000	143	0.424	2.809*	0.002
		Non gifted	0.068	0.466	116	0.068		
abstract random	Perseverance	gifted	0.123	0.144	143	0.123	1.028	0.152
		Non gifted	-0.007	0.943	116	-0.007		
	Competition	gifted	0.140	0.096	143	0.141	1.667*	0.048
		Non gifted	-0.070	0.454	116	-0.070		

First scale	Second scale	Student type	Correlation Coefficient	Indicator	Number	Z Decimal values	Z	Statistically Significance
	Self-confidence	gifted	0.263*	0.001	143	0.269	1.980*	0.024
		Non gifted	0.019	0.840	116	0.019		
	Realize the importance of time	gifted	0.204*	0.015	143	0.207	0.238	0.406
		Non gifted	0.175	0.060	116	0.177		
	The desire to master and enjoy work	gifted	0.389*	0.000	143	0.411	2.257*	0.012
		Non gifted	0.124	0.183	116	0.125		
	Motivation for achievement	gifted	0.328*	0.000	143	0.341	2.184*	0.014
		Non gifted	0.064	0.493	116	0.064		
Meta-cognitive thinking	Perseverance	gifted	0.183*	0.029	143	0.185	1.773*	0.038
		Non gifted	-0.039	0.677	116	-0.039		
	Competition	gifted	0.237*	0.004	143	0.242	2.586*	0.005
		Non gifted	-0.085	0.363	116	-0.085		
	Self-confidence	gifted	0.336*	0.000	143	0.350	1.907*	0.028
		Non gifted	0.108	0.249	116	0.108		
	Realize the importance of time	gifted	0.302*	0.000	143	0.312	1.605	0.054
		Non gifted	0.108	0.247	116	0.109		
	The desire to master and enjoy work	gifted	0.531*	0.000	143	0.592	3.099*	0.001
		Non gifted	0.197	0.034	116	0.200		
	Motivation for achievement	gifted	0.462*	0.000	143	0.500	3.379*	0.000
		Non gifted	0.072	0.440	116	0.073		

From the table, we can see from the values of z, the existence of statistically significant difference at the level of $\infty \leq 0.05$ in favor of the gifted students. The correlation between the measurement of metacognitive thinking on one hand and measurement of motivation for achievement on the other hand, produces the value of z which stands at

3.379. A statistically significant difference was also found in favor of gifted students in terms of the correlation between palpable/serial and motivation for achievement measurement as a whole and its factors as the values of z ranged between 1.645-3.659.

The results revealed a statistically significant difference for gifted students in terms of the correlation between abstract/serial scale, and motivation for achievement measurement as a whole (e.g., competition, the desire to master and enjoy work, and realization of the importance of time) which presented the values z at 2.809; 2.701; 2.513; and 2.072 respectively. There is also a statistically significant difference for gifted students in terms of the correlation between abstract/random and motivation for achievement measurement. competition, the desire to master and enjoy work, and realization of the importance of time. The values z stand at 2.184; 1.667; 2.257; and 1.980 respectively

With regards to the measurement of metacognitive thinking as a whole there is a statistically significant difference for gifted students based on the correlation with all areas of motivation for achievement except 'realization of the importance of time'. The value z of this correlation ranged between 1.773 - 3.379.

DISCUSSION

Research Question 1:

What is the level of metacognitive thinking skills of the gifted and non-gifted students?

Results showed that the range of mean sores of gifted and non gifted students on the areas of metacognitive thinking as a whole was homogeneous. To discuss these results, the procedural definition of the gifted and non-gifted students is applied here. Those who have applied for tests of excellence, but failed, were not accepted into the King Abdullah II Schools of Excellence. It may be noted that one of the conditions of testing excellence was that student's cumulative average was above 95%, meaning that gifted and non-gifted students were at the same level for the academic GPA.

However, on the basis of the test, they were classified as gifted and non-gifted. In other words, we can draw an inference that there are similar characteristics among these students. In order to examine the differences among them, we have to make a comparison of more than one variable at the same time through correlation. The study is not trying to prove a significant statistically mean, rather the study aims to find a statistically significant difference on correlation between metacognitive thinking and motivation for achievement and in favor of whom (gifted or non-gifted students).

Research Question 2:

What is the level of motivation for achievement among gifted and non-gifted students?

Results showed that the means for answers of the gifted and non-gifted in the areas of motivation for achievement ranged from 3.38-3.84. The level in the areas of motivation for achievement was higher than it was for metacognitive thinking skills. This can be attributed to the fact that the role of motivation in the understanding and awareness of students must be very clear to achieve personal goals. The strategies of knowledge vary based on the motivation. Motivation for achievement is one of the factors that contribute to an individual's high mental performance.

Research Question 3:

Is there a statistically significant difference at the level of $\infty \leq 0.05$ between the correlation in the measurement of metacognitive thinking skills as a whole and the measurement of motivation for achievement based on variables: gifted and non-gifted?

Results indicated the presence of a statistically significant difference at the level of $\infty \leq 0.05$ in favor of gifted students in terms of the correlation between metacognitive thinking measurement as a whole, and the measurement of motivation for achievement as a whole. A statistically significant difference was also found in favor of gifted students with a correlation between abstract/random and the measurement of motivation for achievement as a whole and its fields.

A study by Azah (2000) indicates that the development of mental abilities of learners; and development of the capacity on how to think and how they reach solutions to problems they face, help them to think clearly. These developments also make it easier for them to learn and quickly complete tasks at hand with higher efficiency.

Learner awareness and his ability to understand his feelings are important while lack of awareness will leave him under the control of his feelings. It was found that people with higher mental ability are able to understand their feelings better, and more confident in carrying their lives and making their own decisions. The awareness of thinking means the ability to know what you know and what you do not know and this process is known as

metacognition. Many studies have shown that there is a positive correlation between gift and metacognitive and strategies metacognitive available to gifted to choose what they need to accomplish the tasks (Wingenbach,1982).

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Authentic Learning in Multimedia

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ABSTRACT

In nowadays where rapidly evolving technology especially computer technology has an important role in our lives; the concepts of authentic learning and multimedia stand out. While the concept of multimedia describe the applications of environments which are created by using a combination of different media types, authentic learning characterizes the type of leaning which students learn in their natural environment with the real-world issues and complex problems. In this study, the terms and characteristics of multimedia and authentic learning are explained; reasons and examples of the authentic learning in multimedia are sorted.

Keywords: *Multimedia, Authentic Learning.*

INTRODUCTION

The present fast progress of technology, education takes the shape in accordance with the technology and the concept of multimedia and authentic learning come into prominence. In this study, two important concepts -multimedia and authentic learning- are defined and authentic learning applications in multimedia are exampled.

Multimedia

Technology is steady incremental growth and is used in every environment. With the technology integration, multimedia is used more increasingly. Multimedia is developed with the terms of hypertext and hypermedia.

These terms are defined in many ways by different researchers and specialists. While the term of hypertext as book metaphor is defined as electronic text document or electronic book, hypertext as space metaphor is defined as information networks or spaces (Bromme & Stahl, 2005). The most important feature of hypertext is its non-linear structure. In the light of this feature hypertext is the non-sequential text which is organized for users to access the non-linear information (Son, 1998). The other term of hypermedia not only covers hypertext and also includes diagram, animation, audio and video with the text. Hypermedia is often described as a system of nodes of information through which people can move nonlinearly. In this definition, nodes of information with links between them, suggesting the conceptual model of a graph denotes hypermedia (Parunak, 1991).

Multimedia is defined as the combining of different media types such as sound, animation, text, graphics and video for the presentation of information by making use of computers (Bornman & Solms, 1993). According to Mayer (2001), multimedia is the presentation of materials that text and image are used in. In response to this definition there are some objections caused by insufficient definition. Briefly the definition of multimedia is commonly understood to mean the integration and combination of the components of multimedia or several media types such as sound, animation, text, graphics and video (Tolhurst, 1995, Schwartz & Beichner, 1999, Brooks, 1997, Greenlaw & Hepp, 1999, Maddux, Johnson, & Willis, 2001, Mishra & Sharma, 2004).

Mayer(2001; Akkoyunlu&Yılmaz, 2005; Mann, 2006; Clarck & Mayer, 2003; Mayer, 2005) explain multimedia principles for the effective multimedia. These principles are:

1. *Multimedia Principle:* Students learn better from words and pictures than from words alone.
2. *Spatial Contiguity Principle:* Students learn better when corresponding words and pictures are presented near rather than far from each other on the page or screen.
3. *Temporal Contiguity Principle:* Students learn better when corresponding words and pictures are presented simultaneously rather than successively.
4. *Coherence Principle:* Students learn better when extraneous words, pictures, and sounds are excluded rather than included.
5. *Modality Principle:* Students learn better from animation and narration than from animation and on-screen text.
6. *Redundancy Principle:* Students learn better from animation and narration than from animation, narration, and on on-screen text.
7. *Individual Differences Principle:* Design effects are stronger for low-knowledge students than for high-knowledge learners. Design effects are stronger for high-spatial students than for low-spatial students.

In the light of these principles and features, multimedia applications are used in education as in other environments. There are some reasons of using multimedia applications in education. These reasons are derived from the characteristics and principles of multimedia. Multimedia;

- Provides individual differences.
- Allows students to learn according to their own learning speed for giving students control over the transition between the information.
- Provides personalized instruction. In this tutorial individual differences are stood out. Students have the chance to learn with different cognitive strategies, different teaching styles and different teaching methods.
- Rises the remaining time in memory of what has been learned and this affect the increment of the retention.
- Provides the transfer in two ways: using information in real applications or in different areas.
- Provides students to participate actively in lesson.
- Increases the students' interest and provides motivation. This simplifies and accelerates the learning.
- Gives students the problem-solving and decision-making skills.
- Increases students' ability to focus on.

Authentic Learning

The word of authentic is defined as genuine, original, accurate or reliable, trustworty, real, right, honest in different dictionaries (Oxford, Babylon, WordReference, Cambridge, Longman, Meriam-Webster). Contained meanings of authentic are also included within the definition of authentic learning.

Newmann and Wehlage(1993) use the word authentic to distinguish between learning that is significant and meaningful and that which is trivial and useless and define the authentic learning . In their definitions, when students achieve authentic learning, students construct meaning and produce knowledge, use disciplined inquiry to construct meaning, and aim their work toward production of discourse, products, and performances that have value or meaning beyond success in school.

On the other hand Cholewinski(2009) define authentic learning in two different ways. First definition is commonly used as a synonym for classroom realia that means there are not any material (e.g., newspapers, movies,

song lyrics) specifically designed for instruction. Second definition is made by constructivist with a more complicated meaning, history and use. This definition includes the complex task and real life authentic activities. Lombardi (2007) also expresses that authentic learning typically focuses on real-world, complex problems and their solutions and use role-playing exercises, problem-based activities, case studies, and participation in virtual communities of practice.

Authentic learning has nine basic characteristics (Herrington, 1997; Herrington, 2006; Herrington and Oliver, 1995)

1. *Authentic Context:* Authentic learning provide authentic context that reflect the way the knowledge will be used in real-life.
2. *Authentic Activity:* Authentic learning provides authentic activities.
3. *Expert Performances:* Authentic learning provides access to expert performances and the modeling of processes.
4. *Multiple Perspectives:* Authentic learning provides multiple roles and perspectives.
5. *Collaboration:* Authentic learning supports collaborative construction of knowledge.
6. *Reflection:* Authentic learning promotes reflection to enable abstractions to be formed.
7. *Articulation:* Authentic learning promotes articulation to enable tacit knowledge to be made explicit.
8. *Coaching and Scaffolding:* Authentic learning provides coaching and scaffolding at critical times.
9. *Authentic Assessment:* Authentic learning provides for integrated assessment of learning within the tasks.

Authentic Learning in Multimedia

For the realization of a successful and effective authentic learning, some requirements should be taken into consideration. As a result of studies, it is observed that multimedia environments meet the requirements of authentic learning. Looking at opportunities offered by multimedia, it provides the necessary conditions for authentic learning. In multimedia, the realization of authentic learning is formed with providing close to real-world environments, increasing permanency with using a combination of audiovisual aids, focusing attention on the information by appealing to several senses, creating flexible learning environments (Akkoyunlu and Yılmaz, 2005).

With these features, authentic learning may be applied in multimedia activities. In these activities for design of multimedia there must be three equally fundamental elements: the learner, the implementation and the multimedia program (Herrington and Oliver, 1995, Svensson and Östlund, 2005, Herrington, 2005). Authentic context, authentic activity, expert performance and multiple perspectives provide designing the role of the multimedia program; collaboration, reflection and articulation provide designing for the role of the learner; coaching and scaffolding and authentic assessment provide designing implementation (Svensson and Östlund, 2005).

Authentic multimedia program must have some features like authentic learning characteristics. Herrington (1997) lists these features in the guidelines for use of the interactive multimedia program:

1. Be thoroughly familiar with the program and its possibilities.
2. Introduce the issue of assessment.
3. Provide brief instructions to students on the program elements and how to access them.
4. Model a problem briefly, by asking a question and thinking aloud as you demonstrate how you would go about investigating it.
5. Ensure students are working in groups of 2 or 3.
6. Be available to students at all times when they are using the program.
7. Respond to student's requests for assistance.

8. Initiate assistance by asking students frequently if they need any help, but do not impose.

9. Provide hints and ask questions.

10. Provide assistance to students as they use the program, not by supplying the solution if there is one, but by giving guidance—the 'scaffolding'—to take them to the next stage.

11. If a problem emerges which more than one group needs assistance with (such as a misconception about the required task or a problem with the program's operation), give this advice to the whole class.

Examples of Multimedia Applications

There are lots of multimedia applications in authentic learning. In this section examples of multimedia applications are presented.

Read and Cafolla (1999 cit. Kabakçı, Fırat, İzmirli and Kuzu, 2010) studied about the projects combining authentic assessment and multimedia technologies used in the portfolio for teachers. Projects carried out at Florida Atlantic University. In this university, faculty staff and administrators supported the multimedia portfolios that are authentic assessment tool. The most important problem in the development of multimedia portfolios was expressed that how to manage portfolios in all of the institution. In this study, teachers' multimedia portfolios were stated that innovation of education and technology. As a result of this study, it was indicated that teacher candidates using multimedia portfolios may have knowledge that they need.

Herrington(2005) defined authentic tasks for e-learning environments and gave examples of them. The Project of North American Fiction and Film was presented for learning literature. In this project, students studied about novels or films of famous authors and published summaries of novels or films in an online magazine. This online magazine was a real issued journal at the end of each semester and its' editor was also teacher. An authentic task in this project was writing literary criticism with reaching out the real readers and making arrangements in this online newspaper. Another study also tried to teach research methods. In this study students were working on the data collected by two researchers by going online research rooms. According to their research method, students examined school records, demographic information, interviews with teachers, family, and community members, newspaper interviews and other documents individually. An authentic task in this project was to write a report based on qualitative and quantitative data and analysis, and to decide these information about the school or not.

Tüzün(2006) examined the educational computer games and presented the program of Quest Atlantis(QA) as an example. QA environment offers authentic learning activities to users in a gaming environment. Its design configured dimensions of the principles of education, entertainment and social responsibility. Participants can make contributions with student identification in the parallel with the dimension of education, player identification in the parallel with the dimension of entertainment and identification of a citizen of a virtual community of QA in the parallel with the dimension of social responsibility in the game. QA includes authentic world affairs. Game is carried out on the basis of experience and inquiry -based learning and in the game portfolio assessment is used. The project of Quest Atlantis is designed for primary school children (9-12 years of age) from the beginning. In QA, topics are the fields of science, geography, history, social studies, technology, health, arts, economics and music. In a study on the effects of learning on QA, middle school students following the unit plan about plant and animal cells with three quest showed significant learning with respect to the conceptual understanding of the cells over time. Similarly in the context of QA, students who are learning history of the world have made the big stage about her/his interest in this topic in their own lives (Tüzün, 2006). These data show that as a result of all these efforts a rich meta-gaming environment that is perceived as meaningful and attractive by children participation has emerged. Approximately 5,000 registered users, revised and approved 6000 quest, approximately 1.2 million lines of chat and 50,000 sending messages from various countries around the world show that students are itching to participate this kind of meaningful and attractive learning environments.

Ferry et al.(2006) formed a virtual classroom to support teacher candidates education with creating online classroom simulation. Developing teacher candidates' decision-making skills in students' literary education is the aim of this study. In this online class, there are pre-school students ages 5-6 and teacher candidates play the role of teacher for these students. During the simulation, teacher candidates make decisions belonging to a variety of skills in the teaching processes such as coordinating teaching and learning experiences.

Anderson and Cowan (2006) presented an example of performance evaluation strategy. In this study archived the students' information and recorded studies on the management. Studies were found from the internet; documents

and standard samples were analyzed and assessed. It is also expressed that online discussions prevent distant students feel alone and help them.

Herrington and Kervin (2007) presented 10 key recommendations for authentic learning environments. These are authentic context using real-life data, authentic activities, expert performance, multiple roles and perspectives, reflection, collaboration, articulation, coaching and scaffolding, authentic assessment and professional learning.

Woo, Herrington, Agostinho and Reeves (2007) made some recommendations to the practitioners about the use of authentic tasks in online classes as a result of their research. These recommendations fall under three topics: Consideration in Task Design, The Management Challenge, and Facilitation Tips.

CONCLUSION

Multimedia and authentic learning are two significant factors in education. Nowadays there are applications combining multimedia and authentic learning. Especially simulations and games are used for authentic learning.

Authentic learning may be applied in multimedia activities with some features such as providing close to real-world environments, increasing permanency with using a combination of audiovisual aids, focusing attention on the information by appealing to several senses, creating flexible learning environments.

Authentic learning has nine basic characteristics (Herrington, 1997) and these characteristics are used for designing multimedia programs. Authentic context, authentic activity, expert performance and multiple perspectives provide designing the role of the multimedia program; collaboration, reflection and articulation provide designing for the role of the learner; coaching and scaffolding and authentic assessment provide designing implementation (Svensson and Östlund, 2005).

Consequently, designing authentic learning environment is important for efficient and attractive learning. For making this environment with authentic learning features, multimedia applications are available. In the future with the importance of authentic learning multimedia programs will be designed according to authentic learning more.

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Gender Analysis of the Students Enrolled In Anadolu University Faculty of Economics, Faculty of Business Administration and Open Education Faculty

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ABSTRACT

The purpose of this study is to analyze the undergraduate and associate students enrolled in Anadolu University Faculties of Business Administration, Economics and Open Education, which are providing education through the distance education systems, in terms of gender. For this purpose, a survey consisting of 28 questions was prepared. This survey has been sent to all active students enrolled in these faculties by e-mail. Primarily, the following issues are mentioned in the study; information on distance education system of Anadolu University and faculties providing education through this method, number of students in faculties, the rates of the preferred departments in terms of man and woman. Thereafter, the importance of the distance education for women is mentioned in terms of gender notion, man-woman roles and gender equality. At the findings stage, 1651 surveys received from students have been assessed by being analyzed in SPSS program. The followings have been taken into consideration in the assessment; demographic characteristics of students, participation rate in programs, reasons for preference of the distance education, time allocated for their courses, computer and internet utilization, whether they prefer the distance education in case of different gender especially in terms of woman, the materials from which they benefit at the utmost in the distance education system, and finally the data have been assessed comparatively in terms of gender.

Keywords: *Anadolu University, distance education, woman, gender.*

INTRODUCTION

Distance learning is a dimension of contemporary and new education technologies. The concepts and applications in this field are a result of some necessities and the advances in communication and education technologies. Distance learning applications have some conceptual grounds. These are creating new education and teaching opportunities, establishing job-education integrity, democratization in education, life long education, turning towards individuality, effective use of institutions, technology-education integration, turning towards the needs of individuals and society, grounding on three dimension integrity (printed material, published material, face to face education), reaching masses, individual- massive education integrity, education demand and financial resource balance. (Alkan, 1998, s:24-26).

Distance education, which enables students to learn by making use of communication technologies, is a contemporary application. Being practiced in many developed and developing countries, it is a system in which people

from different ages, income or occupation groups continue their education at their own pace and without loosing their productivities. It includes education models that unite students in different places, instructors and education tools with communication technologies. It is an education philosophy that makes it possible for people to benefit from the technology of the era. Anadolu University Open and Distance Education System is the first institution that provides higher education through distance education model in contemporary terms in our country. Article 5 and 12 of the law no 2547, which came into force on 6th November 1981, and which reorganizes Turkish Higher Education, gave Turkish universities the right to provide " Life long and Open education". Later on, with the decree law no 41 issued on 20th July 1982, this mission was given to Anadolu University, and which- in technological and scientific terms- supplied its deficiencies in a very short time. Thereby, The Open Education Faculty, which arose out of existing Communication Sciences Faculty, was charged with distance education service throughout the country.

Open Education System starting with two distant learning programs in the field of Economics and Business Administration in 1982-1983 education year has broadened its service area since then. In 1993, Open Education System was restructured according to the education needs at the time with the decree no 496 and the programs of Economics and Business Administration became four year license programs. Business Administration Faculty was founded in 1993 when Open Education system was restructured. Business Administration Faculty contributes much to the generalization of higher education among a mass of people. Business Administration Faculty has Management and Organization, Accounting- Financing, Administration, Marketing and Home Economy departments. The Faculty of Economics, founded in 1993, also provides education via distance education system. It has the departments of Economics, Finance, Public Administration, Labor Economics, Industrial Relations and International Relations. Open Education Faculty was charged with open education and managing the things about implementations and associate degree and degree completion and certificate of all kinds. Using advanced technologies such as the Internet, computer aided education and video conferencing in the lessons, in open education system, faculties try to create a technological interaction and make the students adjust to these technologies. Moreover, in particular zones, academic consultancy and face-to-face education services are given. The student numbers in faculties as of 20.11.2012 are shown in Table 1. (www.anadolu.edu.tr. 19.11.2012)

Table 1: Student number

Faculties	Woman	Man	Total
Open education	320.653	258.850	579.503
Economics	113.386	175.087	288.473
Business Administration	163.916	299.878	463,794
Total	**597.955**	**733.815**	**1.331.770**

Education is a fundamental right from which all individuals should benefit equally without gender discrimination. However, when the proportion of literate people and people's getting benefit from education opportunities all around the world are taken into consideration it has been noticed that there is a severe difference between man and woman. This is not different in Turkey. Although the women in Turkey gained the most fundamental right to have an education with the law, which came into force in 1924 and which clustered the education in Turkey under one system, the inequality in practice continues. According to the data in 2009 of Turkish Statistics Institution, the rate of illiterate women is %12.9 while the rate of illiterate man is %3.4 (KGSM, 2010, p: 9). Despite the significant progress in public education opportunities since the foundation of the republic until today, there are still considerable opportunity inequalities between man and woman in terms of making use of these opportunities in addition to the inequalities between different regions and urban-rural areas. Especially when urban and rural areas and age factor are taken into consideration, compared to men, women face remarkable inequalities in terms of taking advantage of education opportunities. However, this unequal opportunity in education is not exclusive to Turkey and it is not the only one inequality area between men and women. It is known that throughout the history there has been an unequal division of labor between man and woman based on sexual role division and this division of labor is the source of gender inequality, which is accepted as one of the most important dimension of social inequalities. In addition to education, gender inequality exists in many other aspects of life such as domestic work, paid work and taking part in political life. (Suğur and Savran, 2006, p.195)

People learn and acquire gender differences throughout their socialization process. Besides, it changes according to individuals and cultures (Dökmen, 2004, p: 11). This notion is a decisive factor in our educational preferences as it is also the case in every other aspect of our lives. Gender roles determine the division of social labor

between genders. In other words, some occupations and positions are defined as women's job and some are defined as men's job. For this reason, gender discrimination is mostly discussed in work life and in education environments where individuals acquire the necessary skills to get a job. Basic areas where gender discrimination in work life arises are categorized as vocational guidance, staffing and attitudes, behaviors and judgments in organizations (Acar, Ayata and Varoğlu, 1999, p: 6-7). Gender equality means equal rights, responsibilities and opportunities in public and private areas as well as being citizens that are equally strong and inequality of education opportunities that stem from gender discrimination. Time and place restrictions, scarcity of resources and more duties at home than men lead distance education facilities to reach the women at their homes and help them further their education (Demiray and Curabay, 2000, p: 41). The purpose of distance education in Turkey is to encourage people who are in a disadvantageous position in terms of social, economic and geographical restraints to continue their higher education actively and to offer auspicious opportunities especially for women. Distance education makes it possible for a good number of women to consider higher education with its reasonable cost and flexible timing for students and it also provides equal opportunity in education by removing some psychological, social, physical obstacles women face (McIsaac and Köymen, 1990, p: 26).

PURPOSE AND METHOD

The purpose of this study is to analyze the undergraduate and associate students enrolled in Anadolu University Faculties of Business Administration, Economics and Open Education, which are providing education through the distance education systems, in terms of gender. For this purpose, a survey consisting of 28 questions was prepared and has been sent to 597.955 female and 733.815 male students enrolled in these faculties by e-mail. 1615 students out of 1.331.770 students have sent the survey back but one survey has been canceled. The evaluations have been made on 1650 surveys. As the variables in the survey are nominal, chi-square method has been employed and cross-charts relationships have been explained. SPSS 20.0 packaged software was used.

Introduction part was allocated to brief information about Anadolu University Open Education system and faculties involved in the system. And also the numbers of the students in the faculties and male-female ratio in the preferred departments was given. Later, the importance of distance education system for women was issued in terms of gender equality, social roles of men and women and the concept of gender. In findings part, 1650 survey results were analyzed on SPSS program. During evaluation, students' demographics, attendance rates, reasons for choosing distance education, time allocated for the lessons, computer and Internet use and the materials that are used the widest were taken into consideration. Female students also evaluated by whether they would still choose distance education if they were different sex. In the end, the results were comparatively evaluated for male and female students.

FINDINGS AND COMMENTS

In this study, aiming at analyzing the undergraduate and associate students enrolled in Anadolu University Faculties of Business Administration, Economics and Open Education, in terms of gender; 27.4% of 1650 participants are women and 72.6% are men. The percentage of students who studies at Faculty of economics is 25%, and that at business administration is 34.1%. Open Education Faculty undergraduate students account for 21.2% of the participants whereas associate degree students at the same faculty account for 19.7%. The women participated in the study are aged between 18-24 with a percentage of 40.7% and 42.3% of the women are between 25-34. The rest 28.8% are aged 35-49. As for the marital status; whilst 60.2% of the women and 51.8% of the men said they are single, 72.1% of the women and 58.4% of the men said they do not have kids. When the number of siblings asked, 27.2% of the women said they have 2 siblings, 26.5% said they have only one and 23.9 said they have 4 or more siblings. Men said they have one sibling with a rate of 27.3%, two siblings with 25.5% and four or more siblings with 23.6%. Considering the income rates, 43.4% of the women and 20.5% of the men said they have no regular income while 25.7% of the women and 26.1% said they have a monthly income of 1000-2000 TL. The region where 45.1% of the women and %39.9 of the men live is Marmara and it is followed by Inner Anatolian region. Metropolitan cities reserve 60.6% of the men and 59.2% of the women and second best choice for accommodation is "cities". When it comes to the parents of the participants; 51.3% of the men and 44.4% of the women has mothers who are primary school graduates. And 39.5% of the men and 38.9% of the women have fathers who are primary school graduates.

After the demographics, students were asked about their opinion on the distance education programs. First, their reasons were questioned and the answers of the female participants were "acquiring a profession" with a

percentage of 30.3% and "getting a degree" with 16.2%. However; men said they for "getting a degree" with a rate of 18.1% and to " get promoted" in their current jobs with a rate of 16.2%. As seen in Table 2, there is a significant correlation between sex and reasons to prefer distance-learning programs (p<0,05). Women chose distance education programs mostly to acquire a profession and that is a meaningful gender related result. It is positive for women to choose the options: no compulsory attendance, marriage and familial reasons and financial restrictions with lower rates similar to those of men. This indicates that social inequalities in our country stemming from gender difference are lessening gradually.

Table 2: The reasons to prefer the program

	X^2= 123,080 ; p = 0,000		Sex		
			Male	Female	Total
The reasons to prefer the program	Other	f	57	22	79
		%	4.8%	4.9%	4.8%
	No compulsory attendance	f	29	9	38
		%	2.4%	2.0%	2.3%
	Getting a degree	f	217	73	290
		%	18.1%	16.2%	17.6%
	Marriage and familial reasons	f	1	3	4
		%	0.1%	0.7%	0.2%
	Acquiring general knowledge	f	60	11	71
		%	5.0%	2.4%	4.3%
	Second university	f	124	44	168
		%	10.4%	9.7%	10.2%
	Promotion at the current job	f	196	38	234
		%	16.4%	8.4%	14.2%
	Completing a license	f	187	59	246
		%	15.6%	13.1%	14.9%
	Financial restrictions	f	17	15	32
		%	1.4%	3.3%	1.9%
	Contribution to the current job	f	184	41	225
		%	15.4%	9.1%	13.6%
	Acquiring a profession	f	126	137	263
		%	10.5%	30.3%	15.9%
	Total	f	1198	452	1650
		%	**100.0%**	**100.0%**	**100.0%**

When the time allocated for the studies is questioned, 27.2% of the women answered " at available times " and 23% said "1 or 2 hours a day". Men answered to the same question as "only before the exams" with a rate of 25% and "at available times" with 24%. While women's answers mostly include studying at available times and 1 or 2 hours a day, men's mostly include studying only before the exams. This shows that women make effort to keep their study time regular. The time allocated for studying shows discrepancy while comparing genders and a meaningful relationship has been found between gender and reasons to study at the program.

The following results were found after inquiring students' time that they spend using computer and on the Internet for distance education purposes. 27.4% of the women and 31.1% of the men said they use computers for less than an hour a day for distance education purposes whereas 47.3% of the women and 44.2% of the men said they do not use computers for that purpose at all. No meaningful relationship was observed between genders and time spent using computers for their studies. In other words, there is no difference between genders in terms of the time they spend in front of computers for distance-learning purposes. The amount of time women and men allocate for using computers is close to each other. The percentage of the women saying they use the Internet for distance learning purposes is 47.6% and the percentage of the men saying the same is 42.9%. 28.8% of the ones saying that they use the Internet for less than an hour a day are men and 33% of them are women. No meaningful relationship was observed between genders and time spent online for their studies. The amount of time women and men allocate for going online is close to each other. Noting no significant difference in making use of distance education technologies goes against the notion that women tend to remain distant to technology compared to men.

To the question" Would you still prefer distance education programs if you were a different sex?" women answered, "yes" with a rate of 76.5% and "no" with a rate of 23.5%. Men answered the sane question as " yes" with a

percentage of 90.9% and as "no" with 9.1%. Within the context of social gender, these figures can be explained as; both women and men think it is suitable for women to prefer distance education to face-to-face education because of the density and prominence of duties at home. Whereas 90.9% of the men states they would still prefer distance learning if they were different sex, only 23.5% of women would still prefer so. And this reveals that men believe distance learning fits more to women (Table 3).

Table 3: Would you still prefer distance education programs if you were a different sex?

X^2= 59,657 ; p = 0,000			Sex		Total
			Male	Female	
Answer	No	f	109	106	215
		%	9.1%	23.5%	13.0%
	Yes	f	1089	346	1435
		%	90.9%	76.5%	87.0%
	Total	f	1198	452	1650
		%	**100.0%**	**100.0%**	**100.0%**

When the preferred material was asked, 62.8% of the women answered as books and 25% of them answered as the Internet. Men answered as books with a percentage of 56.2% and the Internet with a rate of 30.4%. Books turned out to be the most preferred source for both women and men. The first two of the most preferred materials for distance learning are the same for men and women, but the other choices of materials in the list are different for women and men. A meaningful relationship was found between gender and preferred materials of study. ($p < 0,05$) (Table 4)

Table 4: The preferred materials of study in distance learning

X^2= 10,500 ; p = 0,033			Sex		Total
			Male	Female	
Material	Books	f	673	284	957
		%	56.2%	62.8%	58.0%
	TV	f	24	5	29
		%	2.0%	1.1%	1.8%
	Internet	f	364	113	477
		%	30.4%	25.0%	28.9%
	Face to face	f	18	12	30
		%	1.5%	2.7%	1.8%
	All	f	119	38	157
		%	9.9%	8.4%	9.5%
	Total	f	1198	452	1650
		%	**100.0%**	**100.0%**	**100.0%**

The Internet services offered to the students in distance learning e-exam is the most favored one for 44% of the men and 42.5% of the women. E-class Notes comes second.

When asked if the distance education program has any contribution to acquire a profession, 89.6% of the women and 75.5 of the men said yes. And this result corresponds to women's top reason to study at distance education programs, which is to acquire a profession.

Lastly, 54.6% of the women and 39.8% of the men answered "no" to the question: "would you like your kids to study at distance education programs in the future?" while majority of the women want their kids to study at face to face education programs, the rate is relatively small for the men, and this indicates another difference in terms of gender.

RESULTS AND IMPLICATIONS

As a result, the data collected from this study the purpose of which is the gender analysis of the undergraduate and associate students enrolled in Anadolu University Faculties of Business Administration, Economics and Open Education, which are providing education through the distance education systems, has been found positive in terms of gender.

To summarize, the fallowing data stands out in this study. For female students, acquiring a profession while for male students getting a degree tops the other answers when the reason to choose the program is asked. As for the time allocated for their studies, women favored the answer 'at available times' while men chose 'only before the exam' the most. Both men and women stated that they do not use computers and the Internet for distance learning purposes with very close rates. Men would still prefer distance education program if they were a different sex while women said they would not choose distance education with a higher rate compared to man. For both women and men, book comes first in the list of the most commonly used material in distance education and the most preferred online service is e-exam. Students think that the program they study at contributes to acquiring a profession. Most of the female students would prefer their kids to study at programs that implement face-to-face learning, but the percentage of men who would prefer so is lower compared to women.

Distance education is an option particularly for working adults from lower class who mostly live in rural areas and cannot receive formal education. It is also a big opportunity for women, who benefit from educational facilities less then men around the world, to complete their education. However; when women, especially working ones attend distance education programs, they may face some disturbances regarding the duties at home. That is because they cannot spare enough time to study and get help from other family members. A criticism about women attending distance education programs is that these programs lock women down in their homes, alienate them from social life and push them to loneliness. Students cannot get enough interaction while they can receive enough of it in face-to-face education. Nevertheless, distance education system is a worthy opportunity for women to acquire a profession, pursue a career/status and complete unfinished education; and also for lessening the inequalities originating from gender.

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Impact of Perceived Student Leadership Role on the Academic Performance of Distant Education Students in Ghana

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ABSTRACT

The purpose of this study was to determine the extent to which distant education (DE) student leaders perceive their role and establish whether this has significant correlation with their academic performance. Specifically, the study was interested in the influence that the intervening variables of age, level, employment status, and prior leadership experience have on their perceived leadership role. The role of gender in this direction was also considered. Guiding this study was the servant-leader theoretical framework. According to Greenleaf (2003) students consider the building of trust as the central issue for leadership by means of service. It was in line with this problem that most student leaders profess that they want to serve their fellow students instead of lording it over them. A questionnaire based on student leadership role with a Cronbach's alpha reliability coefficient of .855 was used to collect data. Predictive Analysis Software (PASW) was used to analyze the data. Regression and correlation statistical tools were used to test the hypothesis formulated to guide the study. The results of the study revealed that DE students' perception of their leadership role is high. However, this high perception is neither dependent on background of student leaders nor gender. It also showed that high academic performance is not dependent on perceived student leadership role expectation let alone their duties and responsibilities. However, perceived leadership role expectation was found to be the least potent contributor to academic performance of distant education (DE) student leaders. It is, therefore, recommended that DE students should be elected strictly on merit and not on age, level, employment status, and prior leadership experience. DE student leaders should also be given training in the positions they have been elected for. Finally, DE students leaders should strive to combine their studies with the leadership position they occupy.

Keywords: *Student leadership, academic performance, role expectation, duties and responsibilities.*

INTRODUCTION

The administrative structure in educational institutions makes provision for student leadership. In line with this provision, Students' Representative Councils (SRC) are found in most educational institutions. In most cases, the representatives are elected by the students themselves after school administration nominates candidates for various positions. In other cases, students are allowed to nominate and elect their own leaders. Student leaders exhibit some unique characteristics that endear them to the hearts of their colleagues. They are great orators who sound very convincing. They seem to know all the problems of their colleagues and are quick to promise having antidotes to all such problems. A careful analysis of events however reveals that all the characteristics displayed by most student leaders are just for the purposes of winning their confidence which are expected to be translated into votes for them.

The involvement of school administration in the choice of school prefects stems out of the concern about the calibre of students put in leadership positions. Whilst students insist on electing radical and fearless colleagues who would always champion their course, school administrators advocate for brilliant and moderate student leaders who would not embarrass the school. The policy in the University of Cape Coast is that, to qualify for any leadership position one needs a Cumulative Great Point Average (CGPA) of at least 2.5 or better.

The Centre for Continuing Education (CCE), University of Cape Coast (UCC), has helped her students to form the Distance Education Students' Association of Ghana (DESAG). The constitution of the association was modelled on the philosophy behind the Student's Representative Council (SRC) of UCC. Leaders of distant education students have been elected at all the forty eight study centres and every year, these leaders meet in congress to elect their national executives. While some people argue that active participation in student leadership is waste of time, others see it as training grounds for future leaders. In Ghana, there is ample evidence to show that many of the political leaders we have had since independence were student leaders who graduated from SRCs through to National Union of Ghana Students (NUGS) from the various university campuses. The case of distant leaders is even more serious, because all of them are full time workers who gamble with time in order to study and at the same time perform their duties as committed student leaders. While some students shy away from leadership positions, others do everything within their power to assume positions of leadership irrespective of their capabilities and competency levels. The challenges that confront DE students especially with time constrains puts many potential leaders off even if colleagues persuade them to take up such positions. Some student leaders, who are not able to perform very well academically, are quick to accuse school authorities of victimization. On the other hand, some student leaders are always seen performing their leadership duties and yet end up with very good grades. One, therefore, wonders if the performance of leadership duties impacts distant students' academic performance.

Student leaders are generally expected to compliment the efforts of faculty in the effective running of their institutions. They also serve as the mouthpiece of students in the promotion of cordial relationship between students and faculty. Research has provided sufficient information about the key characteristics of student leaders. However, there is a growing need for continued improvement and reflective practice on the continuous development of leadership skills. It has been observed that much time is expended by student leaders in the performance of their role to the detriment of their academic work. Since its inception, no research have been conducted to assess the activities of the Distant Education Students Association of Ghana (DESAG). The purpose of this study, therefore, is to determine the extent to which distant student leaders perceive their duties and establish whether this has significant correlation with their academic performance. Specifically, the study is interested in the influence the intervening variables of age, level, employment status, size of study centre, and prior leadership experience have on their perceived leadership role.

Theoretical Framework and Literature Review

The field of educational leadership is washed with many concepts. Leithwood and Duke (1999) identified instructional leadership, transformational leadership, contingent leadership, moral leadership, managerial leadership, and participative leadership as being the six frequently used concepts with different meanings. Similarly, there are as many theories regarding leadership as there are definitions. Rubenstein (2005) identified eight of them after examining the work of Peter Northouse in 2004. They are: situational approach, contingency theory, path-goal theory (also known as the motivational theory), the leader-member exchange theory, transformational leadership, team leadership, leader of leaders approach, and value-based leadership.

For this study, the focus is on Greenleaf's (2003) servant-leader theory. The theory says that "students consider the building of trust as the central issue for leadership by means of service" (Greenleaf, 2003, p. 36). Servant leadership (Biblical leadership) says "man is here for the sake of other men" (Albert Einstein). The leader and every other individual is here to serve the rest. The theory begins with the natural feeling one has to serve. One therefore, consciously decides to aspire to lead. This brings to mind the hierarchical principle of organizational leadership which Greenleaf reports began with Jethro, Moses' father-in-law. Greenleaf noted that this hierarchical system "still dominates everything that is organized – armies, churches, governments, universities, businesses" (p. 43). He asserted further that this is still the environment that today's college students will find themselves in as they move from being a student to citizen. According to Greenleaf, the success of a servant-leader depends on a number of attributes. They include: individual initiative and goal setting; trust; acceptance and empathy for their followers; art of intuition; ability to move forward and make decisions without all of the information; ability to bridge the gap between what is known and what is needed; foresight or the ability to predict future patterns, ability to meet the stress of life; be persuasive and able to get things done (Greenleaf, 2003).

Beaudoin (2002) argued for research and examination of the specific type of leadership needed in distance education leadership. He stated that "a reasonable amount of attention has been given to the planning and administration of distance education for quite some time." (p. 138). Beaudoin (2002) went on, however, to state that this might be considered adequate enough without discussing the more esoteric domain of leadership (p.138). According to Case and Scanlan (2001), there are specific attributes of administrators in a university in relation to distance education. Dede (1993) also strongly supported the idea that leadership in distance education is different from traditional education leadership. Care and Scanlan (2001) added their voice by saying, "there is a general lack of understanding regarding the experiences of administrators, faculty, and staff from other departments in the development of distant education courses." (p. 140). However, the distance education leader also needs, according to Beaudoin (2002), to be a situational leader, one who can diagnose the organization at a specific moment and determine the readiness of the organization or its stakeholders for change.

Students are very important when we talk about stakeholders in distant education. As stakeholders, students need to be involved in the administration and smooth management of distant education programmes. Astin (1985) stated that the more students are involved in student activities, including leadership activities, the greater their success in learning and personal development will be. On student leadership position and academic performance, Cress et al. (2001) concluded that all students have leadership potential and that institutions of higher education can uncover and develop this potential with targeted programs that will also increase the student's educational success. They also asserted that educational institutions will be successful in developing tomorrow's leaders when they provide connections between academic programs and community activities and express a strong desire, through their stated mission, to create a "legacy of leaders in businesses, organizations, governments, schools, and neighborhoods" (p. 23).

Wielkiewicz (2000) agreed with Posner that college students are important participants in leadership development because it is college students who will be in future leadership roles or opportunities, and how they learn to practice leadership will steer the course of future societal development. Hence, Allen et al. (1998) have a keen interest in seeing that students develop a systemic approach to leadership instead of a hierarchal approach. Astin (1993) also cited research that links student educational attainment to involvement in leadership activities, and stresses the importance of developing the leadership ability of students during their college years. Boatman (1999) stated that student leadership development would be more effective if it were approached from a relational viewpoint instead of through formal courses or degrees.

According to the Enrolment Management & Student Affairs unit of University Pointe (2012), student leaders are looked to as model students at Portland State. As such, it is important that student leaders exemplify a balance between academics and leadership. As citizens who are or are going to be leaders in the community, it is important to be prepared academically. Being a model student leader, one requires over a 3.5 GPA to be considered for the position.

Research has shown that participation in student organizations and other co-curricular activities on campus can help students stay engaged with school, get good grades, and graduate. However, students often have many competing obligations (family, work, student leadership, health) which cause academic performance to suffer. Student leadership is important, but we need to emphasize that you must be a student first. Letting academics suffer at the expense of student leadership responsibilities is counter-productive.

A study carried out by the Office of Institutional Research (2011) demonstrated that serving as a club leader, no matter how many terms served, had lasting impact and was a positive contributing factor in relation to student academic performance, especially with regard to facilitating graduation. This study revealed that remedial students who served as club leaders outperformed non-club leader remedial students in terms of retention rate, GPA and Good Standing rate at the second year. Remedial student club leaders continued to maintain a significantly higher 3-year retention rate than non-club leader remedial students while maintaining levels of GPA and Good Standing that were similar to that of non-club leader remedial students at the third year.

In summary, the question of what a distance education leader is, their characteristics, requirements, and the actions of an effective distance education leader still have not been adequately addressed by research. There is still a long way to go before an adequate definition of these aspects of an effective distance education leader will be reached. It is hoped, through this study, to bring the insights of various researchers together into one place to help future distant education leaders to best fulfil the still unstated requirements of their positions.

Statement of The Problem

Many studies have been carried out on the management of distance education. The International Centre for Distance Learning (ICDL), Distance Education Library (DEL) and the Educational Resources Information Centre (ERIC) alone contain hundreds of such papers. Most of these studies, however, focussed only on distant education policy, institution management, student support systems and student administration. Surprisingly, only a few studies have been carried out on the academic management and administration of distant education delivery. The role of student leaders in distant education is an area not researched much.

To be a leader, one needs to be convinced about the characteristics and attributes one possesses. Some people take leadership positions without knowing what is expected of them. Such people lord it over their colleagues and most often abuse their positions for personal gains. There are widespread allegations of misapplication and embezzlement of funds levelled against student leaders. There is also the argument that leaders are born and not made. Some others however say the reverse is true. For a DE student to be effective, he/she should be aware of his/her roles. It is, therefore, important to find out what DE student leaders perceive their roles to be in relation to their age, level, employment status, and prior leadership experience. Equally important is the need to find out the impact that student leadership characteristics, role expectations, duties and responsibilities have on their academic performance.

Research Question

This study addressed one major question; that is: How do DE student leaders perceive their leadership role?

Research Hypotheses

The following research hypotheses were formulated and tested:

1. There is a statistically significant relationship between DE student leader's background and their perception of leadership role.
2. Gender plays a role in DESAG leadership role perception.
3. There is a statistically significant relationship between each of the independent variables (characteristics, role expectations, and duties and responsibilities) and academic performance.
4. The independent variables have a statistically significant effect on academic performance of DE students.

MATERIALS AND METHODS

Descriptive survey design was used for the study. CCE has a student population of about 25,000 spread in 47 study centres in Ghana. The total number of DESAG leaders is 375 across the country. Purposive and quota sampling techniques were used to select 91 respondents to reflect DESAG leaders in all the 10 regions. A questionnaire originally designed by Wielkiewicz (2000) for evaluating college students' thinking about leadership and organizations was adopted and modified to reflect issues bothering on students' leadership in distant education and used to collect data for the study. The variables covered were: characteristics of student leaders, role expectation, duties and responsibilities. The instrument had Cronbach's alpha reliability coefficient of .855. Respondents also indicated their best and worst grades since they started the programme. Predictive Analysis Software (PASW) version 18 was used to analyse the data. Correlation and regression were used to establish relationship and predict DE student leader's perception of leadership role and their academic performance respectively.

RESULTS

The main research question posed for this study was how do DE student leaders perceive their leadership role?

Table 1: Final rating of DE student's perception of their leadership roles

Sn	Aspect of leadership role	Very high	High	Low	Very Low	M	S D	Rank
1	Leadership Charac.	45 (49.5%)	43 (47.3%)	3 (3.3%)	-	3.46	.563	1st
2	Leadership Role expec.	-	40 (44.0%)	39 (42.9%)	12 (13.2%)	2.69	.694	3rd
3	Leadership duties & res	1(1.1%)	30 (33.0%)	49 (53.8%)	11 (12.1%)	2.76	..667	2nd
4	Total leadership role	10 (11.0%)	77 (84.6%)	4 (4.4%)	-			

The analysis presented in Table 1 reveals that 45 (49.5%) and 43 (47.3%) respondents perceived their leadership characteristics to be very high and high respectively. Table 1 further shows an almost split perception of leadership duties and responsibilities. While 31 (34.1%) respondents rated their perception of leadership duties and responsibilities to be positive, the rest 60 (65.9%) perceived them to be negative. Forty (44.0%) respondents perceived their student leadership role expectation to be high, while the rest 51 (56.1%) thought otherwise. On the whole however, 10 (11.0%) and 77 (84.6%) respondents rated their perception of student leadership role to be very high and high respectively. Only 4 (4.4%) respondents perceived their role to be low. Finally, the analysis revealed that DE student leaders ranked their perception of leadership characteristics first and their duties and responsibilities second. Leadership role expectation was the least aspect of leadership role perceived by DE student leaders.

Hypothesis 1

There is a statistically significant relationship between DE student leader's background and their perception of leadership role.

To measure the degree of relationship between DE student leader's background and their perception of leadership role, Pearson's correlation was used to statistically test to find out whether background of student leaders influenced their perception of leadership roles. Table 2 gives a summary of the test.

Table 2: Correlation Values of Background Information of DE Student Leaders with Their Perception of Leadership Role

Sn	Variables	1	2	3	4	5	6	7
1	Age	1.000						
2	Level	.437**	1.000					
3	Employment Status	- .203	.074	1.000				
4	Prior leadership experience.	-.342**	-.861**	-.139	1.000			
5	Leadership characteristics.	.079	-.096	-.152	.092	1.000		
6	Expectation	-.106	.070	.021	.028	-.059	1.000	
7	Duties and Resp.	-.109	.105	-.150	.013	-.039	.540	1.000

* Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (1-tailed)

The analysis shown in Table 2 reveals that DE student leaders employment status correlated negatively with leadership characteristics ($r = -.152$; $p<0.05$) and duties and responsibilities ($r = -.150$; $p<0.05$). In the same vein, age of DE student leaders correlated negatively with leadership role expectation ($r = -.106$; $p<0.05$) and duties and responsibilities ($r = -.109$; $p<0.05$). The negative relationship connotes that DE student's perception of their leadership position is not dependent on their background. The null hypothesis is therefore accepted.

Hypothesis 2

Gender plays a role in DESAG leadership role perception.

Table 3: Means, Standard Deviation, and Intercorrelation for Gender and Perception of DE Leadership Roles (N = 91)

				Intercorrelations		
Variable	**M**	**SD**	**Gender**	**Characteristics**	**Role Exp.**	Duties & Resp.
Gender	**1.27**	**.44**	**--**	**-.199**	**-.154**	-.194
Leadership Characteristics	**3.46**	**.56**	**-.199**	**--**	**-.059**	-.039
Role Expectation	**2.69**	**.69**	**-.154**	**-.059**	**--**	.540**
Duties & Resp.	2.76	.66	-.194	-.039	.540**	--

* Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (1-tailed)

Table 3 shows that only role expectation correlated positively with duties and responsibilities (r = .540; p<0.01), though the relationship is only medium. This is because, going by Nwana's (1992) guidelines for interpreting correlation coefficient, the value .540 falls within 0.40 and 0.60 which is interpreted as medium. The rest of the predictors showed negative correlation with gender. This indicates that the combination of all the DE students perception of their leadership roles do not significantly correlate with respondents' gender. The research hypothesis that gender plays a role in DESAG leadership role perception is rejected.

Hypothesis 3

There is a statistically significant relationship between each of the independent variables (characteristics, role expectations, and duties and responsibilities) and academic performance

Table 4: Inter-correlation matrix table of relationship between Academic Performance and Perception of DE Student Leadership Roles

Variables	M	SD	1	2	3	4
Academic performance	2.08	.53	1.000			
Characteristics	3.46	.56	.086	1.000		
Role Expectation	2.69	.69	.014	-.059	1.000	
Duties & Responsibilities	2.77	.67	-.036	-.039	.540**	1.000

** Correlation is significant at the 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

The analysis in Table 4 shows that DE student leadership role expectation was significantly associated with their duties and responsibilities, (r=.540; P<0.01). On the contrary, academic performance correlated negatively with DE leadership duties and responsibilities (r=-.036; P<0.01). In the same vein, DE student leadership characteristics correlated negatively with role expectation (r= -.059; P<0.01) and duties and responsibilities (r = -.039; P<0.05). This negative relationship implies that high academic performance is not dependent on DE student's role expectation let alone their duties and responsibilities. The findings of this study therefore failed to accept the hypothesis that there is a statistically significant relationship between each of the independent variables (characteristics, role expectations, and duties and responsibilities) and academic performance.

Hypothesis 4

The independent variables have a statistically significant effect on academic performance of DE students.

Table 5: Summary of Multiple Regression Analysis of the relationship between Perception of Student Leadership Role and Academic Performance

Multiple R	.102a				
R 2	.010				
Adjusted R 2	-.024				
Standard Error	.536				
F	.303				
Variables	B	Std. Error	Beta	t	Sig.
(Constant)	1.834	.448		4.088	.000
Characteristics	.081	.100	.086	.809	.420
Role expectation	.040	.097	.052	.409	.683
Duties & Responsibilities	-.048	.101	-.061	-.481	.632

a. Predictors: (Constant), Characteristics, role expectation, duties & responsibilities
b. Dependent Variable: Academic performance

The analysis in Table 5 reveals that 10.0 percent of variance in perception of DE student leadership role is accounted for by joint contribution of leadership factors. This implies that other factors other than the ones used in this study accounted for 90.0 percent of the variation in leadership role performance. Table 5 further reveals that F calculated value.303 is greater than F at 0.05 level of significance. This means that student leadership factors did not significantly contribute to their academic performance. The three types of leadership attributes (characteristics, role expectation, and duties and responsibilities) did not have any joint prediction on academic performance ($R^{2} = .010$; F (3, 90) = .303; P > .05). The breakdown of the assessment showed that the three types of leadership attributes had joint influence of 0.10 percent on academic performance. Individually, leadership characteristics had no significant effect on academic performance (β = .086; t = .809; P > .05). Role expectation had no significant effect on academic performance (β = .052; t = .409; P > .05). Lastly, duties and responsibilities had no significant effect on academic performance (β = .061; t = .481; P > .05)

DISCUSSIONS

This study has shown that DE student leaders rate their perception of leadership role high. However, this high perception is not dependent on background characteristics such as age, level, employment status, and prior leadership experience. This finding is quite interesting because it is generally accepted that age brings a lot to bear on leadership. Similarly, the number of years one spent on the programme was expected to give the DE student some level of experience in terms of how to handle issues as they arise. Time management is another crucial area when it comes to leadership role performance. The demands of one's job are considered to impact on the discharge of leadership roles. It is also said that experience is the best teacher. It is, therefore, asserted that those who have ever been student leaders before would bring that experience to bear on the performance of their leadership role. The reverse is true in this study and it also contradicts Beaudoin (2002) assertion that Information Technology (IT) leadership requires many of the characteristics common to all leaders. We agree with the assertion that there are certain common characteristics that every leader is supposed to have. In an earlier study, Hutchison (1988) noted that the degree of one's background in leadership role is directly related to the acquisition and development of skills critical to effective school leadership. This means that the common characteristics notwithstanding, to be an effective school leader, one needs some specific skills that would be relevant in the school environment.

The findings of this study also portrayed that gender plays no role in the perception of DE student leadership role. In Ghana, only few female students put themselves up for election into DE student leadership positions and therefore dare rub shoulders with their male counterparts. This finding confirms Bardou, et al (2003) study which stated that men and women did not significantly differ on their self-efficacy for leadership. On the other hand, the findings on gender runs contrary to Mayo and Christenfeld (1999) study which found that women tend to have lower self-efficacy than men in their ability to perform specific leadership tasks. From our discussions sofar, it is clear that the debate on gender disparity and mainstreaming is still inconclusive. More females need to be given the opportunity to take up leadership positions while still students, because it would surely provide them the necessary exposure for greater opportunities in real life situations in the society in which they will find themselves after school.

It was further established by this study that there is no statistically significant relationship between perceived DE student leadership role and academic performance. This result contravenes the findings of Leithwood et al (2004) which indicated that evidence exists to the effect that there is small but significant effect of leadership actions on student learning across the spectrum of schools. Competent student leaders strive to keep their heads above water because they feel it is very embarrassing for them to be writing referral papers with colleagues who hold them in high esteem. The embarrassment is as a result of the leadership position they occupy since it commands a lot of respect. In another study, Waters, Marzanno, and McNulty (2003) reported that leadership behaviours significantly correlated with student achievement. It is, therefore important that DE student leaders do everything within their means to perform creditably in their academic endeavours.

CONCLUSIONS

The results of the study revealed that DE students' perception of their leadership role is high. This high perception however has no relationship with age, level, employment status, prior leadership experience or gender. It is also concluded that high academic performance is not dependent on perceived student leadership characteristics, role expectations, and duties and responsibilities. However, perceived leadership role expectation was found to be the least potent contributor to academic performance of distant education (DE) students.

Recommendations

The results obtained from this study provide sufficient grounds to recommend that DE students should be elected strictly on merit and not on background characteristics such as age, level, employment status, and prior leadership experience . Student leaders should show genuine commitment in the discharge of their duties. Female DE students should be encouraged to take up leadership positions in order to prepare them for the future. DE student leaders should also be given training in the positions they have been elected for. Finally, DE students should strive to manage their time very well in order to combine their studies with the position they occupy as leaders.

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