

A Comparison of the Reading Motivation and Reading Attitude of Students with Dyslexia and Students without Dyslexia in the Elementary Schools in Ilam, Iran

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Abstract

The purpose of this research is to compare reading motivation and reading attitude of students with dyslexia and students without dyslexia. The population of the study included 138 students with dyslexia studying in elementary schools in Ilam, Iran. Within this population, the researcher randomly selected 30 students for the pilot study. The remaining 108 dyslexic students were selected as the sample size but only 80 students with dyslexia participated in this study as the parents of the other and 28 parents' of students with dyslexia did not allowed their children to participate. The researcher also selected 80 normal students who had been homogenized and compared using the attitude and motivation scales. The reliability of the reading motivation and reading attitude scales was confirmed. The content validity of the scales was investigated using the judgment of 10 psychology experts. The analysis of the findings through independent t-test showed a significant difference between the students with dyslexia and the students without dyslexia at $p < 0.000$.

Keywords: Motivation, Attitude, Dyslexia, Without dyslexia, Elementary school

1. Introduction

The majority of students with learning disability encounter problems in one or several basic skills. Dyslexia is one of the most common disability among students with learning disabilities (Lerner, 2006; 2003). These dyslexic students' failure of results in them to be less motivated (Chapman, Tunmer, & Prochnow, 2000). Many

of these dyslexic students feel helpless (Valas, 1999), and avoid reading activities (Salonen, Lepola, & Niemi, 1998) more frequently than their peers. Students need to have a strong desire to learn in school as academic learning requires persistence and hard work over a long period of time. Students with dyslexia may appear to be unmotivated; however, their lack of motivation may actually result from chronic academic failure (McGrady, Lerner, & Boscardin, 2001). Bender and Wall (1994) reported that elementary students with learning disability have lower motivation than their peers without disability, given the repeated academic failure that many students with learning disability experience. Therefore, it is not surprising that these students with dyslexia are less motivated. When early attempts to succeed in school meet with failure, it is common for the students to believe that success is beyond their ability and effort. Consequently, they develop a learned helplessness and lose their intrinsic motivation to prove their competence (Smith, 1994). Many special education and general education teachers have commented that students with learning disability are not motivated to learn, and research suggests that this is a common characteristic (Fulk, Brigham, & Lohman, 1998).

1.1 Motivation for reading

Basic theory defining motivation are believed to be the created that drive students to choose whether they will engage in an persist with the reading process (Eccles, Wigfield, & Schiefele, 1998). Current motivational researchers have started to incorporate the more traditional motivation constructs with cognitive theory and social theory. With this newly constructed explanation motivation for reading is no longer limited; it now includes the individual's personal goals, values, beliefs, cognitive processes, and academic abilities, as well as the interactions occurring within the culture and situation (Schunk & Zimmerman, 1997; Wigfield, 1997). Therefore, motivation for reading is a crucial entity for successfully engaging in the reading process because it is the element that what activates and maintains students' engagement throughout the entire reading process.

As research has demonstrated, students who are motivated to read are engaged in the reading process for a variety of personal reasons (Guthrie, McGough, Bennett, & Rice, 1996). They have social goals in that they share their thoughts and feelings related to their interpretations of the text with their peers and their families. They have strategic goals in that they use a variety of comprehension strategies during the reading process that enable them to obtain their knowledge goals. That is, they are able to successfully use an array of strategies to help them assimilate and accommodate their understanding of new knowledge. Successful readers also have personal goals in that they read a variety of genres, in various settings, and across time. In contrast, readers who are disconnected with the reading process avoid reading. They rarely enjoy reading. They do not have a purpose for reading, they do not have goals, nor are they able to seek understanding of the text by using strategic, personal goals (Cambourne, 1995).

Motivation for reading is viewed as one link between engagement in reading and reading achievement. Some researchers believe that by increasing the student's competence in reading and by increasing the belief in reading abilities, the motivation to read will also increase. By increasing this motivation, it can increase reading activity and in turn, increase knowledge and academic success (Guthrie, Wigfield, Metsala, & Cox, 1999). Students with and without learning disability are consistently found to differ in their motivational and behavioral profiles. For example, students with and without learning disability differ in their achievement motivation (Olivier & Steenkamp, 2004), and helplessness (Valas, 2001).

Motivated readers spend more time reading than other students and as a result attain higher levels of achievement and perform better on standardized reading tests. For students with dyslexia, it is especially challenging to motivate them to want to read for pleasure and for lifelong learning. Burden and Burdett (2005), in their study focused upon the "affective" aspects of dyslexia such as self image or the risk of reduced motivation or a learned helplessness: and according to Morgan, Fuchs, Compton, Cordray and Fuchs (2008), some existing findings even suggested that the experience of dyslexia may lead to a major challenge to the self-esteem of some students with dyslexia or even to a negative impact upon their general self-development. In their study, Burden and Burdett (2005), sought to fill a perceived gap in the evidence concerning dyslexia by focusing upon the information and attitudes expressed by the people themselves when reporting upon their dyslexia and their school experiences.

1.2 Reading attitude

Attitudes are relatively stable evaluations of persons, objects, situations, or issues, along a continuum ranging from positive to negative (Wood, Wood, & Boyd, 2007). Most attitudes have three components: 1) a cognitive component, consisting of thoughts and beliefs about the attitudinal object; 2) an emotional component, made up of feelings toward the attitudinal object; and 3) a behavioral component, composed of predispositions concerning actions toward the object (Wood, et al., 2007). Some attitudes are acquired through firsthand experiences with

people, objects, situations, and issues. Others are acquired when children hear parents, family, friends, and teachers express positive or negative attitudes toward certain issues or people (Wood, et al., 2007). Study by Makas, Finnerty-Fried, Sugafoos, and Reiss (1988), show that non disability students have positive attitude. According to Richek, List, and Lerner (1989), reading attitude is an important factor for achievement in reading skills. Makas, Finnerty-Fried, Sugafoos, and Reiss (1988), in their study found that non disability students have positive attitude in reading. In other studies by Beck (1977), and Mullis and Jenkins (1990), respectively, they discovered that attitude affect motivation and reading achievement by increasing or decreasing the quantity of time that learners engage in reading. Students with poor attitude toward reading may not read when other choices such as video viewing exists (Martin, 1984). In their study Polychroni, Koukoura and Anagnostou (2006), found that students with dyslexia considered reading as something of a lower task-value as compared to the average or low group. Additionally these students with dyslexia did not implication reading for its giving to school success and for their own satisfaction.

Students with dyslexia have negative attitude toward reading (Mihandoost, Elias, Nor, & Mahmud, 2010; Polychroni, et al., 2006). Nevertheless studies have documented that students with dyslexia who received reading instruction in special education and resource rooms expressed attitudes to academic and recreational reading that equaled or exceeded those expressed by low and average non-dyslexic students, implying that perceptions of ability are very important (Mihandoost, et al., 2010; Polychroni, et al., 2006). Furthermore, when individuals with dyslexia get involved in voluntary reading in areas of personal interest, they improve their reading ability (Fink, 1995).

Determining whether poor reading ability undermines students' motivation and attitude is especially important to better help students with dyslexia. Most students with dyslexia are poor readers (Barton, 2000; Davis, 1994). Students with dyslexia also tend to have much less attitude and motivation to connect in academic activities than their non dyslexic counterparts (Mihandoost, et al., 2010; National Assessment of Educational Progress, 2005; Polychroni, et al., 2006). In this study we focused on motivation and attitude because earlier work (Mihandoost, et al., 2010; Polychroni, et al., 2006) has suggested that deficits in each may be more common in students with dyslexia.

1.3 Research Questions

As McGrady, Lerner, & Boscardin (2001) commented, students with dyslexia may appear to be unmotivated, but their lack of motivation may actually result from chronic academic failure. The process of losing motivation begins when students first doubt their intellectual abilities. They then start to view their efforts at attaining success as futile, eventually asking themselves the question: "Why try if you know you are going to fail?" After encountering repeated failure in the classroom, these students develop negative and defeatist attitudes toward school learning. As a consequence, they have fewer opportunities to experience personal control over the learning outcomes and eventually begin to doubt that they are in control of their academic destinies (McGrady et al., 2001). Poor motivation is important because of its link to reading practice. Students who avoid frequent reading practice rarely become skilled readers (Guthrie, Schafer, & Huang, 2001). Students with dyslexia tend to be less motivated to engage in academic activities than their non disabled peers (Fulk et al., 1998).

The aim of this study was to compare reading motivation and reading attitude between students with dyslexia and students without dyslexia in the elementary schools in Ilam, Iran. The research questions are as follows:

- 1) Is there a statistically significant difference in reading motivating between students with dyslexia and students without dyslexia?
- 2) Is there a statistically significant difference in reading motivation between students with dyslexia and students without dyslexia?

The following hypotheses guided the study:

- 1) There is a statistically significant difference in the reading motivation of students with dyslexia and students without dyslexia in the elementary schools.
- 2) There is a statistically significant difference in the reading attitude of students with dyslexia and students without dyslexia in the elementary schools.

2. Research Method

2.1 Participants

In this study, fourth and fifth grade students with dyslexia were first identified using a questionnaire called the "Dyslexia Screening Instrument" or DSI. Two 100-word passages with 10 comprehension questions from the

students' textbooks were selected and were assigned to the students to read. Their marks were also scrutinized in the first semester and it was found that their marks in the reading skills were lower than the students without dyslexia. To examine their IQ, Raven's test was performed, and the students with the average IQ higher than 90 made up the population of this research. Finally, 138 students with dyslexia in the fourth and fifth grades in the elementary schools in Ilam, Iran were identified for this study. From this population we selected randomly 30 students for the pilot study. For the study, 108 dyslexic students were selected as the sample size (the sample size of this study equal to the population). However, in the end only 80 students with dyslexia participated in this study as the remaining 28 students with dyslexia were not allowed them to participate in the research by their parents. We also selected 80 normal students who had been homogenized according to gender, IQ, parental education level and the socioeconomic status of their family and they were also compared using the reading attitude and reading motivation scales.

The Reading Motivation Scale (Wigfield & Guthrie, 1997), and Reading Attitude (McKenna & Kear, 1990), were conducted on both groups of dyslexic and non dyslexic students. The students were given verbal information on how to complete the Reading Motivation Scale (Wigfield & Guthrie, 1997), and Reading Attitude Scale (McKenna & Kear, 1990), after that the items in the scales were read aloud for the students with dyslexia and the students' understanding of the instrument was observed. Assistance was provided when necessary while their peers without dyslexia carried out the reading and completed the scales on their own. Upon completion of the questionnaire (approximately 50 minutes for students with dyslexia and 25 minutes for students without dyslexia), the students were asked to return to their respective classrooms.

2.2 Pilot study

The purpose of carrying out the pilot study was to evaluate the suitability and appropriateness of the use of the instruments. For the pilot study, 30 students with dyslexia from Ilam with similar characteristics to be the participants in this study were selected randomly. This study was carried out from 1st March to 5th March, 2010. Then, the data was entered into SPSS version 17 software to determine the reliability of the scales. The reliability test was applied by calculating the Cronbach's alpha on the variables to measure the inter-item reliability. There was consistency in the following variables: Reading Attitude and Reading Motivation. Internal consistency is measured with Cronbach's alpha, a statistic calculated from the pair-wise correlation between items. Internal consistency ranges between zero and one. Cronbach's alpha coefficient of reliability and alpha of 0.70 is usually measured to indicate a reliable set of items (De vau, 2002). Cronbach's alpha reliabilities of the Reading Attitude and Reading Motivation were 0.79 and 0.86 respectively. The results of the reliability coefficient showed that there is a high reliability for these instruments, so these instruments were considered appropriate to be employed in this study. In addition, the content validity of the scales was investigated using the judgments of 10 psychology experts, whose expert knowledge also confirmed the scales.

2.3 Measures

In this study all measures are translated from the English language into Persian language. First of all the measures were translated based on the Iranian culture and then the pilot study was used together with the opinion of the 10 psychology experts to evaluate the reliability and validity of the scales.

2.3.1 Motivation Scale

The Motivation for Reading Scale was developed by Wigfield and Guthrie (1997) to assess 11 dimensions of reading motivation. This scale has 54-items designed to assess the 11 different aspects of reading motivation. Student answered each item on a 1 to 4 scale, with 1=never, 2=seldom, 3=often and 4= always. The Motivation Scale was designed to assess the reading motivation of students in grades 3 to 6. Validity evidence includes an accumulation of research results that support hypotheses consistent with the construct being measured (Messick, 1995). Test-retest reliability for the Motivation Reading Scale ranged from .69 to .97. For this study, the Cronbach's alpha reliability for the Reading Motivation Scale ranged from .76 to .88 and the test-retest reliability ranged from .76 to .90 respectively.

2.3.2 Reading Attitude

McKenna and Kear (1990) defined the Elementary Reading Attitude Survey (ERAS) as a 20-item survey that requests students to rate their own attitude towards reading; each item presents a brief, simply worded statement about reading followed by four pictures of the comic strip character, Garfield the Cat, in varying pictorial poses. Percentile ranks can be obtained for two subscales: recreational reading attitude and academic reading attitude. Recreational items focus on reading for fun outside the school setting while the academic subscale examines the school environment and the reading of schoolbooks. A total reading attitude percentile rank can also be

computed as an additive composite of the recreational and academic scores (McKenna & Kear, 1990). The Cronbach's alpha, a statistic developed to measure the internal consistency of attitude scales (Cronbach, 1951) was calculated at each grade level for both subscales and for the composite score. These coefficients ranged from .74 to .89 (McKenna & Kear, 1990). The validity of the academic subscale was tested by examining the relationship of scores to reading ability. Teachers categorized norm-group student as having low, average, or high overall reading ability. Mean subscale scores of the high ability readers ($M=27.7$) significantly exceeded the mean of the low ability readers ($M=27 < .001$); evidence that scores were reflective of how the students truly felt about reading for academic purposes. In this research, scores on the scale have acceptable reliability (Attitude = .75).

2.3.3 Dyslexia Screening Instrument (DSI)

Dyslexia Screening Instrument (DSI) consists of checklists of basic neuropsychological skills designed by Coon, Waguespack, and Polk (1994). This instrument is a rating scale designed to describe the cluster characteristics associated with dyslexia and to discriminate between students who display the cluster characteristics and students who do not. It is designed to measure "entire populations of students who exhibit reading, spelling, writing, or language-processing difficulties" (Coon, et al., 1994). The DSI is designed to be used with students in grade 1 through 12 (age 6 to 21). Internal consistency reliability coefficient is .99 for elementary students which was determined by using Cronbach's coefficient alpha; and inter rater reliability for elementary students is .86 of the DSI that was assessed by determining the homogeneity of the statements and the consistency of ratings across examiners. Coon et al. (1994), stated that "content was based on an extensive review of relevant literature and on experts in the field of dyslexia" (p. 20). Construct validity is supported by the discriminant analysis classifications which placed elementary and secondary students accurately (98.2% and 98.6% respectively).

The DSI Scale should be completed by a classroom teacher who has worked directly with the students for at least four months. This will result in a rating that will be more accurate because the teacher has observed the students over a lengthy period of time and can compare the students' performance with other classmates. For an elementary student, the preferred rater is the teacher who instructs the student in a variety of subjects. The teacher completes the DSI form based on the questionnaire answers: Never exhibits, Seldom exhibits, Sometimes exhibits, Often exhibits and Always exhibits. For this study Cronbach's alpha reliability of the scale is .89.

2.3.4 Raven's Standard Progressive Matrices Test

Raven's Standard Progressive Matrices (RSPM) test was constructed to measure the educative component of g (general IQ) as defined in Spearman's theory of cognitive ability (Raven, Raven, & Court, 1998). Kaplan and Saccuzzo (1997), stated that "research supports the RSPM as a measure of general intelligence". The Raven's advanced form contains 48 items, presented as one set of 12 (set I), and another of 36 (set II). The items again are existed in black ink on a white background, and become increasingly difficult as progress is made through each set. These items are appropriate for those aged 5 to 65. Lynn and Vanhanen (2002), summarized a considerable number of studies based on normative data for the test which has been collected in 61 countries. The internal consistency reliability estimate for the Raven Progressive Matrices total raw score is .85 in the standardization sample of 929 individuals. This reliability estimate for the revised RSPM indicates that the total raw score on the RSPM possesses "good" internal consistency reliability as provided in the guidelines of the U.S. Department of Education (2002), for interpreting a reliability coefficient. The RSPM has been widely used for decades as a measure of educative ability or "the ability to evolve high level constructs which make it easier to think about complex situations and events" (Raven, et al., 1998). In an extensive analysis of the cognitive processes that distinguishes between higher scoring and lower scoring examinees on the Standard Progressive Matrices and Advanced Progressive Matrices, Carpenter, Just, and Shell (1990), described the Raven's test "a classic test of analytic intelligence". For this study, the Cronbach Alpha value for the scale is .83.

2.3.5 Reading text

The reading texts were developed based on the content of the fourth and fifth grade texts. As during the administration of the research only 80 percent of the text book had been taught, the developed test was also based on 80 percent of the Persian text books. The tests were evaluated by the fourth and fifth grade teachers and after 3 times revisiting they evaluated it as convenient. The test included a story of one-hundred related words understandable to each education level and this is followed by 10 questions which indicated the students' level of understanding. The students were required to read out the tests aloud and answer the questions. For determining reliability, Cronbach's coefficient was employed. The reliability coefficients for the fourth and fifth grades' reading tests are .87 and .90 respectively.

3. Findings

SPSS (version 17) was utilized for the analysis of the data. The findings of the study are presented in two parts: descriptive findings and findings related to the hypotheses. Table 1 presents the demographic for both groups of students. Table 1 shows the gender, grade and age for the students with dyslexia and those without dyslexia in the elementary schools. In Table 2 and Table 3 respectively, the means, standard deviations, the t-value, df, and significance of the study for reading attitude and reading attitude subscale as well as reading motivation and its subscale are shown for both groups. Table 2 also shows that the mean for reading attitude and its subscale in the non-students with dyslexia is higher than that of the students with dyslexia. From Table 2, it can be seen that there is a statistically significant difference in reading attitude and its subscale for the students with dyslexia and those without dyslexia. The findings related to the research hypothesis also are shown in Table 2.

Figure 1 shows that the mean score for reading attitude of the students with dyslexia and those without dyslexia in the elementary schools. A question was asked to determine whether there is any difference in the mean score for the reading attitude of the dyslexic and non- dyslexic students. A quick check of the box-plot shown in Figure 1 indicates that the mean score for reading attitude of the non- dyslexic students is higher than that of the dyslexic.

Table 3 shows the mean and standard deviation for reading motivation and its subscale of the students with dyslexia and those without dyslexia. Table 3 also shows that the mean for reading motivation and reading motivation subscale of the non- dyslexic students is higher than that of the dyslexic students. Table 3 displays the independent t-test for dyslexic and non- dyslexic students. Table 3, it reveals that there is a statistically significant difference in reading motivation and its subscale for the dyslexic and non-students with dyslexia except for work-avoidance. The findings related to the research hypothesis are also shown in Table 3.

4. Discussion

In this research, we found that reading attitude and motivation to read in students without dyslexia is higher than that of the students with dyslexia. The first hypothesis that states there is a statistically significant difference in reading motivation of students with dyslexia and students without dyslexia in the elementary schools was investigated. The first research hypothesis was confirmed at $p < .000$. The result showed that there is a significant difference in the reading motivation and reading motivation subscale of the non- dyslexic students and the dyslexic students. Apparently, the results were in line with several studies done in this area. Chapman and Prochnow (2000), showed that failure of students with dyslexia leads them to be less motivated in reading tasks. Bender and Wall (1994), reported that elementary students with learning disability have lower motivation. Additionally, Burden and Burdett (2005), findings revealed that the experience of dyslexia may lead to a major challenge to the self-esteem of some students with dyslexia or even to a negative impact upon their general self-development.

The current study by Morgan et al. (2008), suggests marked differences in motivation between skilled and unskilled readers. Students' motivation to read is an important factor for the success of reading interventions because lack of motivation adversely affects the students' ability to read (Roberts, Torgesen, Boardman, & Scammacca, 2008). Due to the serious problem with processing of information and consequently leading to frustration, students with learning disability often exhibit low motivation to read (National Joint Committee on Learning, 2008). Students' motivation to read predicts reading achievement; in fact, motivation to read requires mental readiness and dedication to acquire knowledge through reading, and eventually, enlarge perception and appreciation.

The second hypothesis: There is a statistically significant difference in reading attitude of students with dyslexia and students without dyslexia in the elementary schools was also investigated. The second research hypothesis was confirmed at $p < .000$. The results of the study showed differences between the reading attitude of students with dyslexia and the students without dyslexia. The students with dyslexia did not consider reading for its connection to school achievement and for their own pleasure. These attitudes have been shown to result in low levels of voluntary reading (Cox & Guthrie, 2001). In spite of the relative lack of confirmation as regards to reading attitudes of student with dyslexia, these findings are in agreement with a number of studies demonstrating that task-value in learning to read has been shown to be associated with several components of reading performance (Wigfield & Guthrie, 1997). Some evidence linking high motivation and positive attitudes to higher reading achievement and more frequent reading also exists (Cox & Guthrie, 2001; McKenna, Kear, & Ellsworth, 1995).

In this study, the students with dyslexia have lower attitude to reading than the students without dyslexia. According to Gage and Berliner (1998), success is influenced by attitude as well as ability. Alexander and Filler

(1980) identified several variables that seem to be associated with attitudes toward reading. Some of these variables are achievement, the teacher and classroom, and special programs. As teachers attempt to improve the students' attitudes toward reading, they should keep these ideas in mind. In other words, teachers need to have a positive feeling toward their students, and students need to be commended for their effort. The teacher's awareness of the student's reading attitude is essential. A student's attitude toward the reading materials affects comprehension of those materials. Teachers should be well-informed that students' attitudes toward reading are formed by parents and their home environment. According to Johnson (1981), attitudes toward reading are arguably formed as a result of achievement of success or failure with the task of reading. Students with good reading ability may have positive attitudes toward reading, while students who are poor readers often have to overcome negative attitudes toward reading in order to improve their reading skills. The study reported here is limited in at least one way; the samples in the study only involved elementary students in grades four and five in Ilam, Iran. This means that our results cannot be generalized to other students with dyslexia. However, it can be said that this result is likely to apply to other student who experience academic failure.

5. Future Directions

Using the Reading Motivation and Reading Attitude scales enabled the gathering of valuable data on student's beliefs about themselves as readers in terms of difficulty, skill, motivation and attitude. A useful addition to this data would be the use of interviews to gather qualitative information pertaining to the habits of students with dyslexia such as time spent on reading, perceptions of early reading knowledge and family reading habits.

6. Conclusion

The aim of this study was to compare reading motivation and reading attitude of dyslexic and non- dyslexic students of grades 4 and 5 in the elementary schools in Ilam, Iran. In this study, the Reading Motivation Scale by Wigfield and Guthrie (1997), and the Reading Attitude Scale by McKenna and Kear (1990), were employed to obtain data. Statistical analysis revealed significant differences in reading motivation and reading attitude of the students without dyslexia and those with dyslexia. This result is consistent with other findings in the area of reading motivation and reading attitude.

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Table 1. Demographic Characteristics of the Sample by Group

Variables	Students with dyslexia	Non-Students with dyslexia
Gender		
Male	50	50
Female	30	30
Total	80	80
Grade		
Four	38	38
Five	42	42
Age	10-12	10-12
Total	80	80

Table 2. Mean and t-test on reading attitude and subscales

Scale	<u>Groups</u>		t	p
	<u>Dyslexia</u>	<u>Non-Dyslexia</u>		
	M (SD)	M (SD)		
Attitude	47.65 (7.64)	69.95 (8.9)	-16.99	.000
Recreational reading	24.86 (3.89)	34.96 (4.67)	-14.85	.000
Academic reading	22.78 (4.59)	34.98 (5)	-16.05	.000

Table 3. Mean and t-test on reading motivation and subscale motivation

Scale	<u>Group</u>		t	p
	<u>Dyslexia</u>	<u>Non-Dyslexia</u>		
	Mean (SD)	Mean (SD)		
Motivation	122.2 (16.48)	168 (21.13)	-15.28	.000
Work avoidance	9.01 (2.09)	8.66 (3.46)	.77	.44
Grades	9.02 (2.52)	13.92 (2.32)	-12.77	.000
Social	15.6 (3.63)	20.21 (4.19)	-7.43	.000
Self-efficacy	9.48 (2.04)	12.46 (2.58)	-8.07	.000
Challenge	11.98 (2.37)	15.58 (3.31)	-7.89	.000
Importance	4.27 (1.44)	6.41 (2.56)	-6.49	.000
Involvement	11.21 (1.69)	20.37 (3.37)	-20.04	.000
Curiosity	15.43 (2.79)	19.87 (3.37)	-9.06	.000
Competition	13.57 (2.84)	19.43 (4.01)	-10.64	.000
Compliance	11.72 (2.63)	14.66 (3.09)	-7.94	.000
Recognition	10.86 (3.05)	16.38 (3.53)	-6.45	0.00

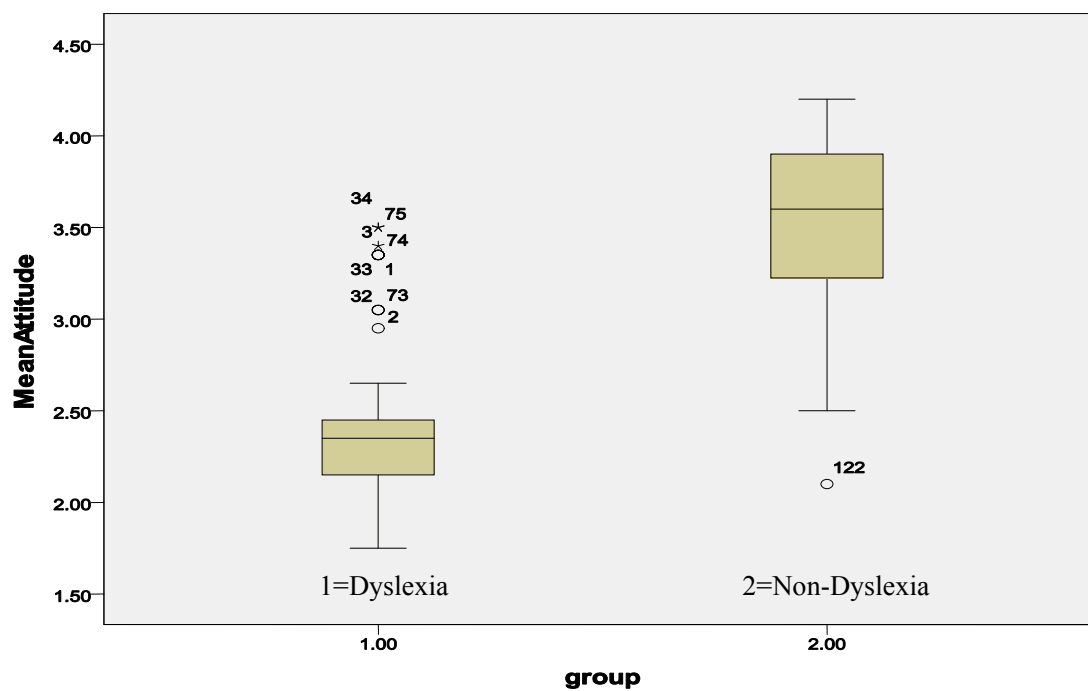


Figure 1. Mean score for attitude of the dyslexic and non-students with dyslexia