

## A Meta-Analysis Review: Reading Attitude in Students with Learning Disability

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### ABSTRACT

As researches of measured reading attitude in learning disability students, techniques for systematically and quantitatively summarizing effects attitude studies in learning disability are needed. Meta-analyses of attitude findings are critical for evaluating the overall statistical and theoretical significance of attitude based on cumulative and systematically combined knowledge. However meta-analytic techniques for the combination of research findings supported on effect measures such as odds ratios and mean differences are well established. I conducted a systematic review and meta-analysis between 2000 and 2011. Standardized methods of searching were used. Combination effect sizes were determined using random effects models. Four researches were identified. Meta-analysis show that (odds ratio [OR]: 1.74; 95%, confidence interval [CI]: .138, 2.19) was statistically significant ( $p < .000$ ).

**KEY WORDS:** meta-analysis, Attitude, Learning disability, non learning disabilities, students, elementary schools.

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### INTRODUCTION

Attitude plays an especially important role, for they influence how much students read which, in turn, affects their proficiency in reading. In 1976, Alexander and Filler defined attitudes as “a system of feelings related to reading which causes the learner to approach or avoid a reading situation”. They claimed that a positive attitude was essential to be successful in school (Alexander & Filler, 1976). Moreover, teachers in the primary grades generally acknowledge that a positive attitude toward reading is extremely important (Heathington & Alexander, 1984). McKenna and Kear (1990), asserted that when students view reading as a positive activity, they are more likely to engage in literacy activities and to read for longer periods of time. Reading attitude is typically viewed as a multidimensional concept related to the functions of reading (Mathewson, 1994). Students with learning disability have negative attitudes toward reading (van Kraayenoord & Schneider, 1999).

#### Attitude

People hold attitudes about all sorts of things-politics, food, children, movies, sports heroes, you name it. An attitude is a belief about people, groups, ideas, or activities. Some attitudes are explicit: we are aware of them, they shape our conscious decisions and actions, and they can be measured on self-report questionnaires. Others are implicit: we are unaware of them, they may influence our behavior in ways we do not recognize (Rudman, 2004). Some of your attitudes change when you have new experiences, and on occasion they change because you rationally decide you were wrong about something. Nevertheless, attitudes also change because of the psychological need for consistency and the mind's normal biases in processing information.

Attitudes are moderately constant assessments of individuals, matter, states, or topics, along a continuum ranging from positive to negative (Petty, Wegener, & Fabrigar, 1997). 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, Wood, & Boyd, 2007). Attitudes enable us to appraise people, objects, and situations, and provide structure and consistency in the social environment. Attitudes also help us process social information, guide our behavior and influence our social judgments and decisions (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. The mass media, including advertising, influence people's attitudes and reap billions of dollars annually

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for their efforts. As you might expect, however, the attitudes that people acquire from through their own direct experience are stronger than those they acquire vicariously and are also more resistant to change. Despite ageist stereotypes, many studies have found that older adults are more likely to change their attitudes than are middle-aged adults (Wood, et al., 2007).

Attitude is not just a ‘good feeling’ or a ‘bad feeling’, but a feeling that something really is good or bad or whatever. Attitudes are crucial to our everyday lives. They help us to interpret our surrounding, guide our behavior in social situations and organize our experiences into a personally meaningful whole. Without attitudes the world would be a much less predictable place and we would function in it much less effectively. As an example, it would be impossible to establish and maintain any sort of relationship with another person without the involvement of attitudes. Attitude is common use in everyday life. In everyday life we may speak of someone as having an attitude. In reality we all have an attitude. One of the earliest definitions of attitudes by Thomas and Znaniecki (1918) is “a state of mind of the individual toward an object”.

Attitudes are referred psychological processes that are nearby in all people and are given expression or form when evoked by specific referents (Antonak & Livneh, 2000). Attitudes are obtained during experience over time and are socially constructed. They can be measured a learned disposition or internal biasing system that focuses a person’s attention and provide a structure within which he or she encodes experience and the guiding parameters for his or her behavior (Berry & Dalal, 1996). Additionally, Yuker (1988), emphasized that attitudes are composed of positive and negative reactions toward an object, accompanied by beliefs that impel individuals to behave in a particular way. Makas, Finnerty-Fried, Sugafoos and Reiss (1988), recommended that for a nondisabled person, a positive attitude is generally conceptualized as being “nice” and “helpful,” whereas for a person with a disability, the term positive attitude means dispensing with the category of disability entirely.

### **Reading attitude**

The students’ attitude toward reading is a central factor affecting reading performance. Positive attitudes can compensate for relatively weak skills, and negative attitudes can prevent a student from applying existing knowledge or from acquiring new information (Paris, Olson, & Stevenson, 1993). Researchers have argued more recently that attitude is distinct from motivation, since students frequently report doing well on academic tasks (including reading) at the same time that they report disliking the activity (Mckenna, Kear, & Ellsworth, 1995).

Attitude toward reading fulfills an essential role in the development and use of lifelong reading skills. Richeck, List and Learner, (1989), stated that “the ultimate success of instruction is strongly affected by the reader’s attitude”. Lipson and Wixon (1992), concluded that “the student’s attitude toward reading is a central factor affecting reading performance”. Several researchers have postulated that attitudes affect reading achievement by increasing or decreasing the amount of time that learners engage in reading (Mullis & Jenkins, 1990; Richek, Caldwell, Jennings, & Lerner, 1996). Reading deficits remain a commonly reported characteristic of students diagnosed with learning disabilities (Kavale & Reese, 1992); most studies of students with disability and school-based attitudes have attempted to relate the students’ educational placement with their attitudes (Budoff & Gottlieb, 1976) and ignored subject areas, types of tasks, and developmental changes.

The result of a study by Lazarus and Callahan (2000) and Polychroni, Koukoura and Anagnostou, (2006), show that students diagnosed with learning disability in reading have negative attitudes towards reading. Attitudes can also consist of one’s affinity for a particular activity. The importance of the affective characteristics of learning disability students has long been noted, and these children are often attributed with negative affective characteristics. Despite this somewhat general acceptance in the field (Rogers & Saklofske, 1985), it has not been definitively ascertained whether the negative affective variables cause the learning disability, are a consequence of it, are related in origin to the actual disability, or are simply behaviors which happen to occur concurrently with the difficulty in learning. There seems to be general agreement, however, that the prolonged failure experiences of learning disabled children have a profound and lasting effect (Bryan & Pearl, 1979).

## **METHODOLOGY**

### **Data collection**

In this research I used full text electronic databases were searched for articles in February 2011 using the terms “Intervention program and attitude” and “attitude in learning disability and non-learning disability students”. The next steps were used to compare articles in order to find data usable for the present meta-analysis: 1. The study involved

children in grades one to six. 2. The interventions were described with detail. 3. The study was published 4. The study presented quantitative data. 5. The study was written in English.

After identifying articles appropriate for the review from the electronic studies, the references of identified articles were reviewed to identify potential other articles. Finally, the first authors of some identified articles who have e-mail address in the article was contacted and asked if any other relevant articles were in press or otherwise missed by the procedures. In total, four articles were found.

**Description**

In this research I examined the effectiveness of interventions program predictable at enhancing the attitude of students with learning disability. In that study, I examined intervention outcomes were related to the kind of intervention that was applied, the elementary level of the students involved, and the dimension of attitude that was measured. A total of four researches published in 2000, 2006, 2010, and 2011 met the students with learning disability who received an intervention program were compared to similar students who did not receive an intervention program and also compared between students with learning disability and students without learning disability. The data reported in the research were enough for the computation of an effect size. The three studies included a total of four independent comparisons of treatment and no-treatment groups. The students participating in the research was coded as elementary range.

**Meta-analysis**

I transformed effect size estimates to the ordinary metric of an odds ratio since all studies compared two groups and describe dichotomous results. I used standard meta-analytic methods to obtain standardized effect size estimates (Cooper & Hedges, 1994), and employed the software Comprehensive Meta-Analysis, Version 2 to conduct statistical analyses. For each result, I entered the odds ratio straightly into the program or calculated the odds ratios from the percentages describe in the article. Odds ratios were pooled using random effects models.

**RESULTS**

This study I employed four appropriate articles discovered in the internet. The qualities of each study are detailed in Table 1

Table 1. Number of studies

Studies	Sample size	Instrument	Treatment	Age	Result
<b>1. Attitudes toward reading expressed by elementary school students diagnosed with learning disabilities (Lazarus, 2000).</b>	522	Elementary Reading Attitude (McKenna & Kear, 1990).	Reading instruction	6- 12	The results illustrate that LD students who received intervention program expressed reading attitudes that equaled or exceeded those expressed by low and average non-disabled students in a nationwide study conducted.
<b>2. Academic self-concept, reading attitudes and approaches to learning of children with dyslexia: do they differ from their peers? (Polychroni, 2006).</b>	342	Reading Attitude Scale (Teale, 1980).	Reading programmes outside school.	10- 12	As regards reading attitudes, NOVA revealed significant differences between the groups in the utilitarian attitude to reading
<b>3. The effectiveness of the intervention program on the attitude and self-concept of students with dyslexia (Mihandoost, 2010).</b>	64	Elementary Reading Attitude (McKenna & Kear, 1990).	Barton Intervention Program	10 -12	The results shows that a statistically significant difference in self-concept between the dyslexic students in control and experimental groups.
<b>4. A comparison of the reading motivation and reading attitude of students with dyslexia and students without dyslexia in the elementary schools (2011).</b>	160	Elementary Reading Attitude (McKenna & Kear, 1990).		10-12	The result shows that significant differences between the LD and non LD in terms of all the subscales of attitude.

Of these four researchs, they are conducted respectively in the United States, Greece, and Iran. Three studies (Lazarus & Callahan, 2000; Mihandoost, Elias, Nor, & Mahmud, 2010; Polychroni, et al., 2006), were experimental and another study (Mihandoost & Elias, In press), was comparison. The meta-analysis of these four studies (see table 2), showed a statistically significant, OR: 1.74; 95% CI: .139, 2.19 was statistically significant ( $p < .000$ ) and the Q statistic for heterogeneity of 4.27 was not statistically significant ( $p < .23$ ). In this study the Q statistic for heterogeneity of 4.27 was not statistically significant ( $p < .23$ ). In this study the sensitivity of the Q statistic is low because a few studies (e.g.,  $n < 20$ ) are

included in the meta-analysis, so that the test could fail to detect even a moderate degree of heterogeneity. Also table 3 shows that Std difference in means, based this table Std difference in means was .304 and 95% [CI] was .177, .431.

Table 2. Summary of Meta-Analysis Odds ratio for Attitude

Study name	Statistics for each study					Odds ratio and 95% CI				Std Residual
	Odds ratio	Lower limit	Upper limit	Z-Value	p-Value					
Lazarus (2000)	1.639	1.196	2.246	3.075	0.002					-0.52
Polychroni (2006)	1.472	0.927	2.338	1.639	0.101					-0.81
Mihandoost (2010)	4.422	1.653	11.828	2.962	0.003					1.92
Mihandoost (2011)	1.970	1.106	3.510	2.303	0.021					0.47
	1.736	1.378	2.186	4.684	0.000					

Table3. Summary of Meta-Analysis Std difference in means for Attitude

Study name	Statistics for each study							Std diff in means and 95% CI				Std Residual
	Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value					
Lazarus (2000)	0.272	0.089	0.008	0.099	0.446	3.075	0.002					-0.52
Polychroni (2006)	0.213	0.130	0.017	-0.042	0.468	1.639	0.101					-0.81
Mihandoost (2010)	0.820	0.277	0.077	0.277	1.362	2.962	0.003					1.92
Mihandoost (2011)	0.374	0.162	0.026	0.056	0.692	2.303	0.021					0.47
	0.304	0.065	0.004	0.177	0.431	4.684	0.000					

Table 3 shows that Std difference in means: .304, 95% confidence interval for Std diff in means [CI]: .177, .431. The Z-Value, 4.68 was statistically significant ( $p < .000$ ).

### DISCUSSION

The results of this meta-analysis submitted four studies. The combined data from these studies showed that statistically significant. A significant association was found between intervention program and attitude of students with learning disability. Also significant was found between learning disability and non learning disability students in attitude. Educators who work with students with learning disabilities need to identify how to avoid negative attitude in these students and be aware of the interventions accessible to help them. These results can help teachers for developing programs and methods to support students with LD to increase a sense of achievement in their school.

#### Limitations

The most obvious limitation of this research is the relatively small number of samples that provided data for the analyses. Limitations to the meta-analysis and the included studies should be considered when interpret these result. We averaged the results of all definitions for each outcome across the different groups' studies, and used that result in meta-analysis.

#### Implications

The important implication of this study for research on the attitude of students with learning disability is that researchers should description data at the individual level as well as at the group level. Even if students are randomly assigned to treatment and comparison groups, pre-test scores on a measure of attitude should be reported. In addition, researchers should cite normative information for the outcome measure, so that it is possible to interpret whether and to what extent the attitude of students in the study is in fact low. A previous research that has compared the attitude of students with and without learning disability has noted that students with learning disability have negative attitude than their peers without learning disability; what is not stated is whether such differences are really meaningful. In the midst of view to school-based interventions, the suggestions of the present study mainly concern the selection of students for

intervention. Given the demonstrated variation in the attitude of students with learning disability, it is no longer acceptable to aim students for attitude interventions based only on the criterion that they have been identified as having learning disability. Interventions not only are valuable for schools to provide but have cost for students as well, especially in terms of reduced instructional time. Students with learning disability, who by definition have academic difficulties in one or more areas of the education, can not afford to be included in interventions that they do not really need and from which they do not benefit. Decrease in instructional time should be determined based on a student's individual need for a given intervention and on the probability that individual student will receive significant benefit.

## CONCLUSION:

Psychologists are arranging study in understanding the focus purpose of attitude for students with learning disability. The articles include in this particular matter help to importance the result of attitude in determining a multiplicity of forms of reading. Attitude is infused in classroom time, take issue in center purposes in regular contact. The complexity and active life of attitude create them hard to research. Accordingly, the field would development widely from an increase in practical, in theory, and experimentally study making an allowance for attitude in reading locations. I hope that the articles in this particular issue will support others to combine attitude their enduring programs of psychological study.

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