

Self-Perception, Attitude and Reading in Elementary School Students

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The aim of this study was to assess the relationship among self-perception, attitude and reading ability in elementary school students in Ilam, Iran. The relationship among self-perception, attitude and reading ability has been examined in an enormous number of studies. The large numbers of these studies have discovered confirmation for a mutual effects model. In this study 380 elementary school students participated. The researcher employed self-perception, attitude and reading scales. All instruments were back translated from English to Persian and Persian to English. The structural equation modeling was used to examine the relationship between feeling to read (self-perception and attitude) and reading ability in elementary school student. The results showed that goodness of fit in all variables and domain variables.

Keyword: SEM, feeling, self-perception, attitude, reading, achievement, grade, gender

Reading ability is the traditional area of starting school success and advanced school achievement (Perfetti, 1985). Personal experiences in learning to read influence subsequent accomplishment in reading and the progress of reading self-perception (Chapman & Tunmer, 1995). The study shows that students' literacy, which contains reading comprehension and attitude toward reading, fluctuated depending on the background variables for example gender and previous reading activity (Bray et al, 2004).

Reading instructors have developed valid and reliable ways to evaluate self-perception and attitude toward reading. Attitude toward reading plays one of the essential roles in the development and application of stable reading ability (McKenna & Kear, 1995; Mihandoost, 2012d). Negative attitude to read can disrupt the possibility of every reading experience (Mihandoost, 2012c; Villaume & Brabham, 2002). Studies indicated that negative reading attitudes on the part of the students do exist (McKenna, Kear, & Ellsworth, 1995; Mihandoost, 2012a; Schumm, Moody, & Vaughn, 2000) although other studies provide evidence that student reading attitude changes with the background of the reading experience (Worthy, Moorman, & Turner, 1999).

Students self-report indicates that those who believed they were competent enough in the domains of spelling, reading, writing, math, and organization and were able to employ suitable strategies as required (Meltzer, Roditi, Houser, & Perlman, 1998). Based on the study by Bear and Minke's (1996), a method of "self-perception profile for

third-graders," it was found that the students perceived themselves sufficiently competent to do their schoolwork. Researchers maintain that apparently socially favorable feedback from parents, teachers, friends, and others have been influential on students' self-perception (Kloomok & Cosden, 1994; Mihandoost, 2012b; Rothman & Cosden, 1995). The study by Bandura (1997) indicated that self-perception is stranded in self-efficacy theory. Children appear to take four essential aspects into description when typing literacy self-perceptions. These aspects include achievement, observational comparison, social feedback, and physiological states (Bottomley, Henk, & Melnick, 1997).

Achievement in reading is the important learning activity started by student during the elementary school, and it is an initial factor to success at school. Based on prior researches, important factor that is related to self-perception is reading achievement (Borkowski, Carr, Rellinger, & Pressley, 1990; Henk & Melnick, 1992). Self-perceptions play a central role in learning outcomes (Blom, 2006). Studies show that low achievement has been found to lead to negative self-perceptions (Muijs, 1997). According to Chapman and Tunmer (1997), this approach has been described as a skill development model. Also, self-perception has consequences for their skill development because it is an effort in the context of learning (Swerling & Sternberg, 1994). Furthermore, based on study by Chapman and Tunmer (1997), self-enhancement model recommends that self-perception is a primary determinant of school achievement.

Relationship between self-perception and school achievement is an important assumption in theories of learning and school achievement. The linkages between self-perception and school achievement has been illustrated in a number of studies and theoretical models such as skill development model and self-enhancement model. Skill development model asserts achievement in school causally mains self-perception. In this model, school self-perception is seen as a function of achievement. Although the self-enhancement model holds that a higher self-perception increases higher level of school achievement (Pinxten, Fraine, & Damme, 2010) a number of studies supported the mutual effects of skill development model and self-enhancement model (Marsh, Hau, & Kong, 2002; Marsh & O'Mara, 2008; Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2005). Based on the self-enhancement model, self-perception is a determinant of school achievement, while the skill development model suggested that self-perception is a consequence of school achievement. Furthermore, effect sizes of previous achievement on following self-perception supported skill development models. Moreover, effect sizes of previous self-perception on following achievement supported of self-enhancement models (Guay, Ratelle, Roy, & Litalien, 2010).

In the present study, the researcher focused on examining the relationship between the reading ability, self-perception, and attitude to read across gender and grade in elementary school students in Ilam, Iran. The researcher used the term self-perception to refer to the self-concept. Also in this study the researcher tried to answer two below questions: 1. Is there a relationship between self-perception and attitude to read and

reading ability? 2. Is there relationship between self-perception and attitude to read and reading ability across gender and grade?

Hypotheses

1. There is a relationship between self-perception and attitude to read and reading ability in elementary school students.
2. There is a relationship between self-perception and attitude to read and reading ability across sex and grade in elementary school students.

Method

Participants

The sample consisted of 380 students (228 male and 152 female) attending 8 schools selected through a stratified procedure participated in the study. All of them were living in Ilam, Iran. Two hundred and eight students were in the fifth year of elementary school (age 10 to 12 years; M age = 11 years), one hundred and seventy two students were in the fourth year of elementary school (age 9 to 10 years; M age = 9.5).

Measures

Prior to the research, English instruments were adapted into Persian language for the students in elementary schools in Iran. The instruments were translated from English to Persian and back translated from Persian to English. A pilot study was conducted to determine the reliability of the Persian version of the instruments. The account below describes self-perception, attitude and reading ability in this study. The researcher used pilot study to determine the reliability of the Persian version of the scales. Finally, these instruments were sent to 10 psychologists to determine their content validity.

Self-perception: Perception of Ability Scale for Students (PASS: Boersma & Chapman, 1992) was used. The PASS includes 70 items relating to feelings about school performance in six basic academic areas include reading, penmanship, satisfaction in school, math ability, confidence, and general ability (each of which encloses 12 items), and Confidence in Academic Ability encloses 10 items. Scores on the PASS can range from 0 to 70. In this research, Cronbach's alpha reliability of the scale was between .76 and .85.

Attitude toward reading: Attitude toward reading scale comprises 20 items that asked the students to rate their reading attitudes. This scale includes two subscales: academic attitude toward reading and recreational attitude toward reading (McKenna & Kear, 1990). The pictures of this scale include different moods from "extremely pleased", to "extremely displeased". The score of images will be 4 points for happiest and 1 point for very upset. Marks can range from 20 to 80 points for the whole scale. The internal consistency of attitude scales was measured using Cronbach's Alpha. The Cronbach's Alpha ranged from .74 to .89 (McKenna & Kear, 1990). In this research, Cronbach's alpha reliability of the scale was between .78 and .84.

Reading Scale: Reading scale was made by Woodcock, Mather and Schrank (2004). The two subscales of reading scale include passage comprehension and reading fluency. This study for assessing reading achievement employed two subscales passage comprehension and reading fluency.

The Passage Comprehension includes 47 items. The initial scale consists of symbolic learning. The next items are presented in a multiple-choice format in which the students are supposed to point to the picture represented by a phrase. In the last part, the students read a short text and attempt to find the missing key word which could lead to making sense of the text. The level of difficulty of the items increases as pictorial clues are removed, the passages become longer, the words more complicated and the semantic and syntactic levels become more complex. The Passage Comprehension has a median reliability of .83 for ages 5 - 9, and .88 for adult age groups (Woodcock, et al., 2004). In this study, the Cronbach's alpha reliability for the scale was .89.

Also **reading fluency** consists of 98 items and assesses the student's ability in speed reading. The students answer questionnaire yes or no format. The sentence difficulty increases step by step. Reading fluency has a median reliability of .90 for ages 6 - 19 and .90 for adult groups (Woodcock, et al., 2004). In this research, the Cronbach's alpha reliability for the scale was .91.

Procedure

The research was conducted in a four-week period. Before the study, the researcher met with the school authorities to secure agreement for conducting the research. The agreement letter was contracted from the educational center in Ilam, Iran. In addition, a detailed letter of announcement was sent to each student's home to obtain the parents' agreement for the child to take part in the study. Furthermore, two examiners were invited to work as graduate psychology assistants. They were first taught how to implement the instruments. The teaching lasted 3 days for 15 hour sessions. Finally, when the examiners learned the instruments, they used it for the students.

Statistical Analyses

In this study the researcher employed the SPSS and the AMOS software for analysis of data. The data was analyzed by several statistical methods such as; Cronbach's α coefficient to examine reliability of the questionnaires. Mean, standard deviation, skewness and kurtosis were used for the observed variables. Also, the present study used structural equation modeling. The structural model represents the relationship among the latent constructs; furthermore the measurement model describes the relations among the indicators and the latent variables (Jöreskog, Sörbom, du Toit, & du Toit, 1999). In this study, the structural relations among self-perception, attitude and reading ability across gender and grade were assessed.

Results

Ilam students completed Persian versions of self-perception, attitude to read and reading scales. In this study, CFA is appropriate for assessing factor structure model. The

researcher employed CFA to test the fit of that 10 factors including 6 factors of self-perception, 2 factors of attitude, and 2 factors of reading ability and assessing relationship between these scales across gender and grade. Descriptive statistic (means, standard deviations, skewness, and kurtosis) are illustrated in Table 1 and 2.

Since the maximum likelihood estimation procedures used in this study can produce distorted result when the normality assumption is severely violated (Curran, West, & Finch, 1996), the normality of each variable is investigated in terms of its skewness and kurtosis. Moreover, the skewness of this study was from .17 to 1.32 and the kurtosis was from .13 to 3.47. According to Curran et al (1996) absolute values of skewness index greater than 2 and kurtosis index greater than 7 illustrate serious departure from normality. Therefore, in this study the normality hypothesis of the variables were acceptable (see table 2).

Table 1

Means and Standard deviation for age and grade (N=380)

	<i>M</i>	<i>SD</i>	Min	Max
Age	11	.82	10	12
Grade	4.54	.5	4	5

Table 2

Showing the mean and standard deviation of the Self-perception and Reading Subscales

Measure	<i>M</i>	<i>SD</i>	Skew	Kurtosis
Self-Perception	37.85	7.13	1.13	3.47
Attitude	69.06	9.81	.92	.38
Comprehension	31.05	8.67	.53	.58
Fluency	56.65	11.07	.36	.13
General self-perception	3.26	2.86	.93	.31
Math self-perception	7.55	1.49	.19	1.25
Reading self-perception	5.7	1.92	1.08	.95
Penmanship self-perception	6.28	1.58	.29	2.45
Satisfaction self-perception	9.06	1.98	.73	.47
Confidence self-perception	5.74	1.33	.44	.63
Academic attitude to read	34.5	5.21	1.008	.52
Recreational attitude to read	34.74	5.37	1.11	.97

Table 2 shows that mean, standard deviation, Skewness and Kurtosis for self-perception and self-perception subscales, attitude and attitude subscales, as well as comprehension and fluency subscales of reading ability.

Also, Table 3 shows that the summary of the hypothesized first-order in structural model. This model provided acceptable fit to the data on the basis of the comparative fit index in final model (CFI = .96), root mean square error of approximation (RMSEA = .04), goodness of fit index (GFI = .90), Bentler-Bonett or non-normed fit index (TLI / NNFI = .92), chi-square ($\chi^2 = 70.09$), degree of freedom ($df = 35$) and probability ($p < .001$).

Table 3
Fit indices for Hypothesized First Order for Self-perception and Reading Subscales

Measure	$\chi^2(df)$	p	GFI	TLI	IFI	CFI	RMSEA
Self-Perception	435.41 (297)	<.001	.90	.90	.92	.91	.05
General Ability	52.68(26)	<.001	.91	.92	.96	.95	.05
Math	26.05(10)	.004	.94	.80	.93	.92	.06
Reading	48.71(12)	<.001	.95	.74	.92	.91	.08
Penmanship	12.17(6)	.05	.90	.91	.98	.97	.04
Satisfaction	5.30(2)	.07	.91	.80	.98	.97	.06
Confidence	23.68(14)	.05	.93	.90	.94	.93	.04
Attitude	72.94(20)	<.001	.90	.91	.96	.95	.07
Recreational	55.72(13)	<.001	.92	.90	.94	.94	.08
Academic	133.52	<.001	.91	.90	.91	.91	.08
Self-perception and Attitude	74.19(24)	<.001	.91	.90	.93	.94	.07
Final	70.09(35)	<.001	.90	.92	.96	.96	.04

The model was examined using the 70 self-perception items, 20 attitude items, 47 comprehension items and 98 fluency items in grade fourth and fifth elementary school students in Ilam, Iran. The fit results for first order are shown in Table 2. In this study, CFA indicated that the model did fit these data. For final model in first-order had a χ^2/df ratio of 2.003 and both IFI and CFI value were above .90; the RMSEA value for final model was .04.

Table 4
Relationship between self-perception, attitude and reading ability across gender and grade

Measure	χ^2	df	p	IFI	TLI	CFI	GFI	RMSEA
Full model	95.34	44	<.001	0.94	.90	.94	.90	.05
Self-perception and sex	64.51	6	<.001	.90	.89	.90	.93	.08
Self-perception, sex and Grade	46.27	13	<.001	.94	.90	.94	.91	.07
Attitude, fluency, comprehension, and Sex, Grade	4.11	4	.39	.99	.98	.95	.90	.01

Table 4 indicated that second-order structure with gender and grade. CFA illustrated that both orders did fit these data. The six factors of self-perception, two factors of attitude, two factors of reading ability for full model in second-order had a χ^2/df ratio of 2.17 and both IFI and CFI value were above .90. The RMSEA value for full model was .05 with a 90% confidence interval ranging from 29.96 to 83.47. Table 3 shows the relationship between self-perception, attitude and reading ability across gender and grade in elementary school students in Ilam, Iran.

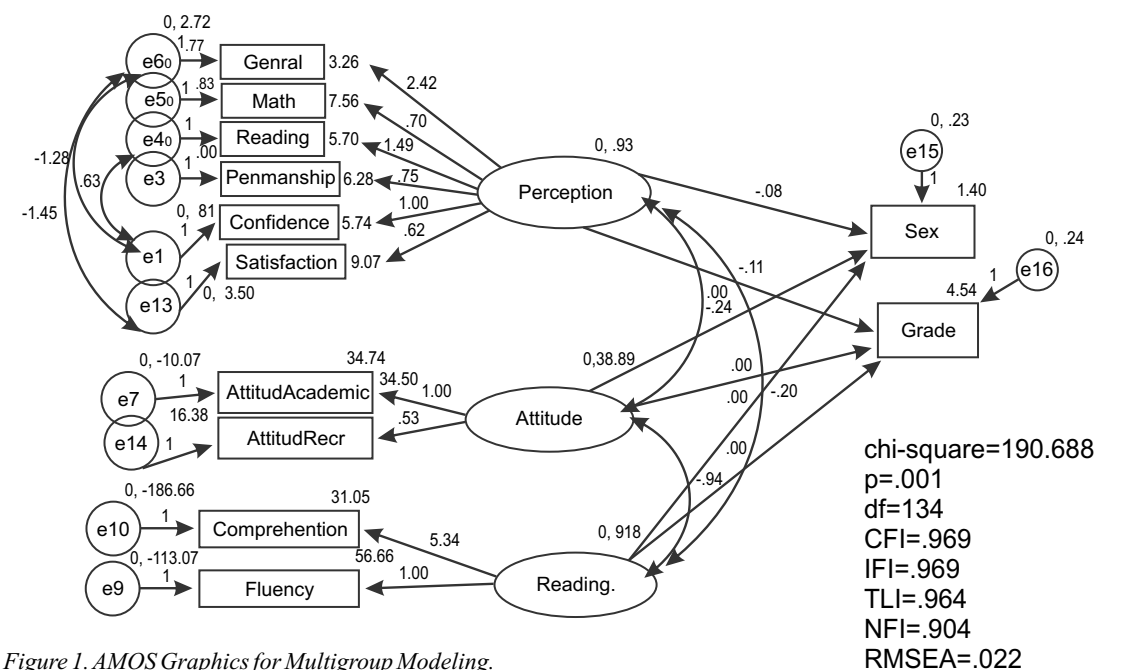


Figure 1. AMOS Graphics for Multigroup Modeling.

The above figure shows that structural equation modeling of the reciprocal relation between self-perception, attitude, fluency and comprehension across two variables; gender and grade. Path coefficients relevant to the reciprocal effects model or those that are significant are excluded for purposes of clarity.

Table 5
Correlation between self-perception, grade, gender, fluency and comprehension.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Attitude	1.00														
2. Perception	-.04	1.00													
3. Reading	-.05	-.06	1.00												
4. Grade	-.02	-.20*	-.00	1.00											
5. Sex	-.02	-.16*	-.00	.03	1.00										
6. Attitude-R	.63	-.02	-.03	-.01	-.01	1.00									
7.Satisfaction	-.01	.30	-.02	-.06	-.04	-.00	1.00								
8.Comprehension	-.09	-.12*	1.86	-.01*	-.00*	-.05	-.03	1.00							
9.Fluency	-.01	-.01*	.27	-.00	.00	-.00	-.00	.51*	1.00						
10.Attitude-A	1.16	-.04	-.05	-.03	-.02	.73	-.01	-.10	-.01*	1.00					
11.General	-.03	.81	-.05	-.16	-.13	-.02	-.00	-.10	-.01	-.03	1.00				
12.Math	-.01	.45	-.03	-.09	-.07	-.01	.13	-.05	-.00	-.02	.36	1.00			
13.Reading	-.03	.74	-.05	-.15	-.12	-.01	.22	-.09	-.01	-.03	.61	.33	1.00		
14.Pennmanship	-.01	.45	-.03	-.09	-.07	-.01	.13	-.05	-.00	-.02	.37	.20	.33	1.00	
15.Confidence	-.02	.73	-.04	-.14	-.11	-.01	.22	-.09	-.01	-.03	.25	.32	.29	.33	1.00

Table 5 shows that correlation significant at the .05 and .01 levels. Based this table correlation between self-perception, grade, sex, fluency and comprehension were stronger than other variables and sub variables.

Discussion

For all of the students' self-perception, attitude and reading ability variables were the first-order and second-order and consistently provided a good fit according to all areas and were the best fitting relative to both models. In all instances, first-order and second-order models included a significant correlation between the self-perception, attitude and reading ability variables across gender and grade that was significant in importance (ranging from .41 to .69). The results of this study illustrated that CFA in both orders did fit these data. The six factors of self-perception, two factors of attitude, two factors of reading ability, in second-order model had a χ^2/df ratio of 2.17 and both IFI and CFI value were above .90. The RMSEA value was .05 with a 90% confidence interval ranging from 29.96 to 83.47. The results of this study supported two main research questions: 1. Is there a relationship between self-perception, attitude to read and reading ability? 2. Is there a relationship between self-perception, attitude to read and reading ability across gender and grade? At first sight, there were relationship between self-perception, attitude to read and reading ability (comprehension and fluency) in elementary school students (first-order model). Since they all supported the reciprocal effects model. However, when we look at the reading ability of the relation between self-perception, and attitude to read, substantial relationship was found between variables in first-order.

With respect to the second question, the fit of second-order model (RMSEA=.05) was substantially worse compared to the fit of first-order model (RMSEA=.04). This finding thus confirms evidence found in previous research (Marsh & O'Mara, 2008;

Marsh et al., 2005; Rrautwein, Lüdtke, Marsh, Köller, & Baumert, 2006). The results of this study supported the results of the Helmke and Van Aken study (1995). These results did support a full reading ability, self-perception, and attitude to read across gender and grade in the final model (Full model). This study also provides support for the domain specificity of self-perception, attitude to read and reading ability; this finding is in line with some studies such as Marsh & O'Mara (2008); Marsh, Trautwin, Koller, and Baumert (2006); Valentine, Dubois and Cooper (2004).

Limitation

The sample size of the study is limited to students in the fourth and fifth grades in the elementary schools in Ilam, Iran. This is because most of the problems about feeling to read begin after the third grade in the Persian language (Researcher Communication, 2010). Therefore, the result of this study cannot be generalized to the students in other areas.

Conclusion

In this study two scales were used for assessing feeling to read and two subscales reading ability for assessing comprehension and fluency in Ilam, Iran elementary school students. The researcher employed SPSS and AMOS for the analysis of data. The theoretical model of students' self-perception, attitude to read and reading ability across gender and grade were used. Structural Equation Modeling and measurement model were supported. The result shows that goodness of fit in variables and domains variables.

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