

On the relationship between learner autonomy and reading comprehension

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Abstract

The purpose of the present study was to investigate the relationship between MA students' autonomy and their reading comprehension ability. To this end, a 32-item questionnaire and a 20-item multiple-choice reading comprehension test were given to a sample of 68 participants. The collected data were analyzed using the Correlation procedure, one way ANOVA and Regression analysis. Results of the correlation procedure indicated that there was a positive relationship between learners' autonomy and the reading comprehension ability but the one-way ANOVA showed that the differences among the scores of low, mid and high autonomy-level students on the reading comprehension test were not statistically significant. Regression analysis showed that, of the factors considered in the questionnaire, only the Nature of Language Learning was a reliable predictor of reading comprehension ability of the participants.

Key terms: autonomy – reading comprehension

1. Introduction

Independent learning of a foreign language has attracted the attention of many instructors and educators for decades. In their studies, they consider many variables for an autonomous learning, but they commonly agree that willingness and taking responsibility for the learning tasks are the two components of an autonomous learning. Daunwong (2007) asserts that these two components involve metacognitive knowledge and metacognitive experiences. He refers to Fleming and Walls (1998), who state that metacognitive knowledge enables the learners to plan, monitor, manage and reflect on the process of language skills. It also enriches them with more motivation, more tolerance and more engagement in learning specific skills. Many scholars agree that will and skill are the two requirements of autonomous learners. In independent self-directed learning, learners should be aware of their own thinking, to be reflective and strategic, and direct their motivation toward valuable goals.

One of the discernible areas of gap in the literature on reading comprehension and learner autonomy is that although many scholars have identified reading comprehension as one of the most crucial language skills, few have engaged themselves with ways of bringing about autonomous reading. Rivers (1987) believes that reading comprehension is the most essential skill for the learners at different levels, yet it is common to find students who are unable to read in a comprehensive and autonomous way (Pang, 2008). **Verdugo (2004) believes** that students hardly receive any guidance into strategies to facilitate the interpretation of texts autonomously. He asserts that through education, learners should practice to read autonomously by integrating metacognitive, cognitive and socio-affective strategies necessary for a better understanding of a text.

At the same time, learner autonomy has obviously certain requirements. To be autonomous and to take an active role in using language skills requires the learners to be independent, reflective and proactive in the process of language learning. Dafei (2007) holds that autonomous learners should tackle the content and processes of their learning skills effectively. What is less obvious is how this should be achieved and how autonomy affects one's language skills once it is achieved. That is probably why Little (2007) states that nowadays the concept of autonomy is often applied to the content and process of language learning, but not specifically to its skills development. Despite such gaps in the relevant literature, it is often said that in more advanced levels of language learning, the development of learner autonomy and the growth of reading comprehension are fully integrated. The present study attempts to see if – and to what extent – autonomy enhances the achievement of MA level learners in reading comprehension. It seeks to explore the relationship between learner autonomy and the reading comprehension ability of the MA students of TEFL. Specifically, it addresses the following questions:

1. Is there any relationship between MA students' autonomy and their reading comprehension ability?
2. Are there any significant differences among the scores of low, mid and high autonomy level students on a reading comprehension test?
3. Which of the components of the autonomy scale best predicts reading comprehension ability?

A clear understanding of the relationship between reading comprehension and learner autonomy entails a clear description of the concepts of reading comprehension as well as learner autonomy.

2. Reading Comprehension

The relevant literature is indicative of an almost unanimous agreement that reading is one of the most crucial skills in second language learning. As Nuttal (1998, p. 2) asserts, "Reading has been described as the most studied and the least understood process in education". Despite the general consensus on the significance of reading, there are various views as to what reading is. Moeini (2002) summarizes that reading was traditionally regarded as a passive process of reconstructing the author's intended meaning through recognizing the printed letters and words. On the other hand, Goodman (1976), cited by Chastain (1988), considers reading as a psychological guessing game in which the reader is engaged in generating and testing hypotheses. Kaplan (2002) extends the definition of reading to a rapid, strategic, interactive and purposeful process that requires sufficient knowledge of language and world, extensive time on task, and efficient as well as strategic processing.

In addition, various sorts of reading models have been proposed, but most scholars agree on two reading models of how a learner processes a text. They are bottom-up and top-down models and the integration of the two models is the interactive model. The bottom-up processing or data-driven processing is preferred when the initial reading leaves the reader confused or his world knowledge is inadequate. According to Nuttal (1998), the top-down model lets the reader adopt an eagle's view of the text, when he considers it as a whole and relates it to his own knowledge and experience. In the interactive model, the reader draws upon bottom-up and top-down models to interpret the text.

Reading proficiency is actually related to, or dependant on a multitude of factors. Among other things, proficient readers are supposedly capable of employing several strategies such as linguistic, cognitive,

metacognitive and socio-affective strategies. Pang (2008, p. 2) points out that “linguistic knowledge and processing ability refer to readers’ formal knowledge of vocabulary, syntax, and discourse and their ability to use this knowledge in their interaction with texts”. He also holds that cognitive strategy refers to the reader's use of deliberate actions to understand texts. This trend focuses on readers and reading strategies in decoding and building mental representations of texts. According to Brown (1987), metacognitive strategies are self-directed learning skills that direct thought processes when planning, monitoring, evaluating and regulating activity. Pang (2008, p. 8) refers to Carrel (1998) who states that “*in reading, the two key metacognitive factors, knowledge and control, are concerned with readers.*”. The last strategy is socio-affective strategy. Nowadays, it is commonly believed that socio-affective strategy is the balance between cognitive and affective aspects of reading. Rueda, Monza and Arzubiaga (1998) hold that socio-affective factors, also called motivational factors, are amongst the essential characteristics of reading. They believe an engaged reader is one who is motivated, knowledgeable, strategic, and socially interactive in the reading process.

3. Learner Autonomy

Learner autonomy has been a critical issue over the last three decades, during which there has been heated debate over the concept of independent self-directed learning. There are a number of arguments in favor of making the learners autonomous. First, autonomous learners are more active and efficient in the process of language learning. Second, autonomous learners are more motivated to take part in various activities. And third, effective communication is achieved through language use, and one

of the requirements of language use is that the learner be autonomous.

According to Thanasolus (2000, p. 117), in the domain of educational psychology, perhaps the clearest definition that can be given to learner autonomy is *“the learner’s willingness and capacity to control or oversee her own learning”*. In TESL settings, this might be interpreted as the second language learners' desire to get involved and monitor their language learning. This requires not only cognitive but also affective and metacognitive involvement.

The concept of autonomy can be related to a number of philosophical bases. The first philosophy is positivism. Thanasolus (2000, p. 119) maintains that positivism has offered many assumptions, but the one relating to learner autonomy is, *“the widespread notion that knowledge is attained by dint of the hypothesis-testing model, and that it is more effectively acquired when it is discovered rather than taught”*. The second philosophy is constructivism. Constructivist orientation to learning is unique, because at its heart lies the individual learner, his brain mechanism, mental structure and his willingness to learn. Thanasolus (2001, p. 2) refers to Piaget as one of the pioneers of constructivism who believes that the basis of learning is discovery. *“To understand is to discover, or reconstruct by rediscovery. Understanding, therefore, is built up step by step through active participation and involvement”*. The third philosophy of autonomy is critical theory. Thanasolus (2000) declares that critical theory is concerned with the issues of power and ideology. As the learners become more aware of social context and recognize their borders, they gradually become independent and assume greater levels of autonomy.

In the domain of language learning, the independent autonomous learning has a number of characteristics. First, learners take an active role in language learning. Most educators agree that learners should decide the

objective of their courses, what they should learn, what activities to use and how long to spend on each activity. In other words, learners should learn to be self-motivated and self-disciplined in autonomous situations. Second, the teacher is a facilitator in this process. Within the context of autonomous learning, the role of the teacher might not become superfluous. Birchley (2003) avows that the roles of instructors in autonomous learning situations are resource person, language model, motivator, leader, facilitator, counselor and knowledge transmitter. Third, in autonomous learning conditions, the desirable learning environment has some characteristics: the classroom gives the students a sense of being in charge of their learning; practical lessons performed in group work, communicative lessons in which it is easy to ask questions; and the lessons should be meaningful and interesting in the way that students are not forced to memorize by rote.

Most scholars also agree that every teacher and learner should be aware of the factors influencing autonomous learning in order to promote autonomy in their educational settings. These factors include motivation, learner's metacognitive knowledge and learning environment. Motivation is the essential factor that everyone brings to every activity. Dickinson (1995, p. 6) claims that "*autonomous learners become more highly motivated and work more effectively*". Metacognition is the learner's awareness of his/her cognitive process. Metacognitive knowledge includes the learner's ability to plan, monitor and evaluate his learning process. One's success in learning activity depends on expanding one's metacognitive strategies, which in turn, enhance one's language learning. The last factor influencing learner autonomy is the learning environment. As Yu (2006) points out, learning environment refers to external supports including teachers, facilities, learning

materials and so on, which help learners develop learning autonomy.

Learner autonomy is achieved by employing certain kinds of learning strategies. According to Daunwong (2007, p. 7), "*learning strategies are a collection of cognitive or mental tactics used by an individual in particular learning situation to facilitate learning*". He describes learning strategies in different categories; namely, cognitive, metacognitive and socio-affective categories. Cognitive categories cover strategies concerning retrieving, encoding, transferring, inference, contextualization, note-taking and storing of information. Metacognitive strategies are learner's skills employed for planning, monitoring and evaluating the learning activity, which let the learners oversee, manage and control learning processes. Affective strategies refer to emotions, attitudes, and beliefs a person holds in response to specific learning situations. In other words, affective strategies let learners act and react to various learning situations affectively and emotionally.

3.1 Learner autonomy and reading comprehension

The relationship between learner autonomy and the development of language proficiency has recently been the subject of much heated debate. Dafei (2007) states that one of the reasons why the relationship between autonomy and language proficiency, mainly reading proficiency, has become a critical debate in recent years is that researchers have become aware of the fact that effective learning is strongly affected by independent self-directed learning. The other reason is that the global concern in education is forcing the teachers to show the effectiveness of their teaching practices to gain proficiency. And one of the requirements of proficiency gain is for the learner to be autonomous. Within the area of language learning, the success of an autonomous learner depends on his activation and use of

metacognitive knowledge and metacognitive strategies (e.g. planning, monitoring and evaluating) in every skill. A number of researchers in the area of language learning strategies including Little (2007), Thanasolus (2000), and Dafei (2007) believe that in order to promote autonomy in language skills, the learners should extend their strategies of learning beyond teacher-guided to self-guided and independent learning. In case of reading comprehension, this means that students need to manifest self-confidence in their ability to tackle texts and monitor their comprehension.

To sum up, most researchers believe that reading is a purposeful process, mainly at more advanced stages, which involves the interaction of numerous skills, abilities, strategies, and background knowledge to produce comprehension. It is also thought that the higher levels of reading could be fostered by the implementation of learner autonomy. In other words, a higher level of comprehension may occur when the learners are autonomous and employ metacognitive strategies, mainly monitoring strategies. The present study intends to investigate how the autonomy level of the learners at more advanced levels of proficiency is related to their reading comprehension ability.

4. Method

4.1 Participants

A sample of eighty students from Takestan Islamic Azad university, University for Teacher Education in Tehran and Karaj, and Allamah Tabataba'ii University participated in this study. The participants, both male and female, were randomly selected from among MA students of TOEFL. The age of the participants ranged from 25 to 38. The data obtained from twelve participants, who failed to complete their cooperation, were excluded from

statistical analyses. Thus, data from a sample of sixty eight participants were taken into account.

4.2 Instrumentation

To accomplish the purpose of the study, two kinds of instruments were employed:

- 1) An autonomy questionnaire
- 2) Reading comprehension passages

The autonomy questionnaire aimed at obtaining upper-intermediate and advanced level students' beliefs about autonomy and their reaction to TEFL learning situations. The questionnaire was extracted from Cottrell's questionnaires of 2000 and 1999 studies. Her questionnaires identify several dimensions underlying learners' responses. For the purposes of the present study, five factors were selected underlying the participants' responses to questionnaire items about language learning beliefs and the relationship between each factor and autonomous language learning behavior was investigated. The five factors included 'teacher's role (5 items)', 'self-efficacy (6 items)', 'nature of language learning (8 items)', 'strategies of learning (9 items)', and 'reading and autonomy (4 items)'. So, the questionnaire consisted of a total number of thirty two items.

To measure the general reading comprehension ability of the MA students, in this study, TOEFL reading comprehension passages were utilized. The Reading comprehension passages were taken from the 1993 TOFEL Preparation Test and TOFEL Actual Test (2004). Five reading comprehension passages of appropriate length and difficulty with twenty multiple-choice questions were selected. The participants were given 50 minutes to read the passages and answer the questions. It needs to be noted that the validity and reliability of the data collection instruments had already been established.

4.3 Procedures

Having selected the participants, the autonomy questionnaire, which was on a four-point scale (strongly agree, agree, disagree, strongly disagree) was given administered. The participants were asked to respond to the questionnaire by choosing one of the alternatives on the 4-point scale. The participants were then asked to read the TOEFL passages and answer multiple choice questions in fifty minutes. The obtained data were then submitted to statistical analyses.

4.4 Data Analysis

To investigate question number one, that is, the relationship between learner's autonomy and their reading comprehension ability, the Pearson correlation coefficient procedure was used. To find out whether or not there are significant differences among the mean scores of low, mid and high autonomy learners on the reading comprehension test, a one way ANOVA procedure was used. And to investigate which of the components of the autonomy scale best predicts reading comprehension ability, a regression analysis was utilized.

5. Results and Discussions

5.1 Investigation of the first research question

The first question of the study sought to investigate the relationship between the learner autonomy and reading comprehension ability. To test the null hypothesis of the study, a Correlation procedure was used. As displayed in Table 1, the r-observed value is .264 with a probability (two-tailed significance) of .031, less than the .05 level of significance proposed by the researchers.

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Table 1: Correlation Coefficient between the scores of Reading Comprehension and Learner Autonomy

Reading Com autonomy	Pearson Correlation	.264(*)
	Sig. (2-tailed)	.031
	N	67

* means the correlation coefficient is significant at .05 level

Based on the figures in Table 1, it can be concluded that there is a statistically significant, though not very strong, relationship between MA students' autonomy and their reading comprehension ability. It means that the participants' reading comprehension ability increases with their autonomy. Thus the null-hypothesis predicting no significant relationship between MA students' autonomy and their reading comprehension is rejected. This result is consistent with Daunwong (2007) and Dafei's (2007), who reported significant positive correlations between learner autonomy, skill development and language proficiency.

One possible reason for this relationship may be that as learners achieve greater autonomy, they become capable of adopting and using more efficient strategies, which in turn, improve their reading comprehension ability. Another plausible explanation could be that achieving higher levels of proficiency in general, and reading comprehension in particular, gives learners a greater sense of independence and autonomy.

To see if there was any relationship between the various subparts of the questionnaire and the participants' reading comprehension ability, the same procedure was used. Table 2 shows the relationships between the dimensions of the Learner Autonomy and Reading comprehension.

Table 2: Correlation Coefficients for the components of Learner Autonomy and Reading Comprehension:

Pearson Correlation	Self-Efficacy	Strategies of Learning	Nature of Language Learning	Reading Autonomy	Reading Comprehension
Role of Teacher	-.165	.011	-.034	-.012	.196
Self-Efficacy		-.026	.272(*)	.021	-.056
Strategies of Learning			.520(**)	.250(*)	.101
Nature of Language Learning				.164	.356(**)
Reading Autonomy					.106

* means the correlation coefficient is significant at .05.

** means the correlation coefficient is significant at .01

Out of the 15 correlation coefficients calculated, only 4 are statistically significant. They show significant relationships between:

1. Nature of Language Learning and Self-Efficacy($r = .272$),
2. Nature of Language Learning and Strategies of Learning ($r = .520$),
3. Reading Autonomy and Strategies of Learning ($r = .250$),
4. Nature of Language Learning and Reading Comprehension ($r = .356$).

A number of points regarding the obtained results deserve attention. For one thing, the majority of these participants agree that learning and teaching are, and should be, autonomous activities; that education is a tool which helps the learners to be autonomous; and that success in language learning depends on promoting language skills effectively. They also agree on the strategies of learning; how to plan their goals of learning,

how to practice language learning activities, how to take part in activities and how to measure their own progress.

These findings are in line with those of Cottrell. Among the factors Cottrell identified for autonomy in her studies are the nature of language learning and strategies of language learning. Again, this relation between the nature of language learning and strategies of learning might be partially attributable to the fact that advanced learners continuously form and utilize their autonomy conceptions and beliefs (the nature of language learning) at the same time that they attempt to justify, monitor, and evaluate (metacognitive strategy) those conceptions and beliefs.

5.2 Investigation of the second research question

The second research question sought to investigate if there were any significant differences among the reading comprehension scores of learners at various levels of autonomy. Based on their percentile rank on the Learner Autonomy Questionnaire, the participants were divided into three equal groups of low, mid and high autonomy level. As displayed in Table 3, the participants who scored 85 and below on the Learner Autonomy Questionnaire formed the low autonomy group. Those who scored 91.33 or higher were placed in the high autonomy group, the rest of the students, those who scored between 85.00 and 91.33 were placed in the mid autonomy group.

Table 3: Percentile Ranks for Grouping MA Students

	Percentile	Score on autonomy
Low	.33	85.00
Mid	between .33 and .66	between 85.00 and 91.33
High	Above .66	91.33

A one-way ANOVA procedure was used to compare the scores of the high, mid and low autonomy groups on

the reading comprehension test. Table 4 contains the descriptive statistics needed for the ANOVA procedure.

Table 4: Descriptive Statistics needed for the ANOVA procedure

Level of Autonomy	N	Mean	Std. Deviation
High	26	13.27	3.779
Mid	18	12.00	3.464
Low	23	10.61	4.746
Total	67	12.01	4.161

A one-way analysis of variance was utilized to see whether the observed differences in the performances of the three groups were statistically significant. The results of the ANOVA procedure are summarized in table 5.

Table 5: One-way ANOVA for Reading Comprehension by Levels of Autonomy.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	86.391	2	43.196	2.616	.081
Within Groups	1056.594	64	16.509		
Total	1142.985	66			

Based on these results, it can be concluded that there are no significant differences among the scores of low, mid and high autonomy students on the reading comprehension test. That is to say, although there is a correlation between autonomy and reading comprehension scores, the differences among the reading scores of learners with different levels of autonomy are not statistically significant. There may be two reasons accounting for this finding. One is that the correlation coefficient, although statistically significant, is probably

not high enough to be the cause of differential performance on the reading comprehension test. The other reason is that the classification of the participants into three levels of autonomy based on their performance on the questionnaire might have been a fragile classification. In fact, if the participants were homogenous with respect to their level of autonomy, their classification into three levels would not necessarily indicate different patterns of behaviour. Moreover, the minute differences in the level of autonomy among the participants on the borderline might have further confused the classification. At the same time, the limited number of items in the autonomy questionnaire may also have contributed to the confusion of the classification.

5.3 Investigation of the third research question

The third research question aimed to investigate which of the components of the autonomy scale best predicted reading comprehension ability. To this end, a stepwise regression analysis was done. As displayed in Table 6, the 'Nature of Language' is the single variable that enters the regression equation.

Table 6: Model Summary

Model Summary(b)				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.356(a)	.127	.114	3.918
a Predictors: (Constant), nature of language				
b Dependent Variable: reading comprehension				

The 'Nature of Language' has a correlation coefficient of .356 with Reading Comprehension. Its square, i.e., .127 shows that 'Nature of Language' can predict 12.7 percent of the total variance in Reading Comprehension scores.

Table 7 shows the regression coefficients. The regression coefficient of .479 indicates that if one's score on the 'Nature of Language' increases, so does his or her

score increase on Reading Comprehension. It means that the more they know and adopt the autonomy conceptions about the nature of language learning, the more they make progress in reading comprehension ability, and the more effectively they tackle reading problems. The t-value ($.003 < .05$) shows that the regression coefficient is statistically significant.

Maybe the reason for this result is that, both autonomy (the nature of language learning conceptions) and reading comprehension, mainly at advanced level, are individual and personal attributes. The other reason might be partially related to the proficiency level of students (MA level). This result may not have been obtained had the proficiency level changed to BA or other levels.

Table 7: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.362	3.498		.389	.698
	Nature of language learning	.479	.156	.356	3.075	.003

a Dependent Variable: reading comprehension

Table 8 shows the variables excluded from the regression equation because of their non-significant contribution to the regression model. This is shown through their non-significant t-values whose probabilities are all higher than .05 level.

Thus from among the five components of the autonomy factor, i.e. Nature of Language Learning , Role of Teacher, Self-Efficacy, Strategies of learning and Autonomy, only the first one contributes significantly to Reading Comprehension.

Table 8: Variables excluded

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Model		Beta In	t	Sig.
1	TEACHER'S ROLE	.208(a)	1.828	.072
	SELF-EFFICENCY	-.165(a)	-1.381	.172
	STRATEGIES	-.116(a)	-.850	.398
	AUTONOMY	.049(a)	.412	.681

6. Conclusions

Many researchers agree that autonomy is a good scheme in theory, but somewhat idealistic and impractical as a goal of language teaching in some educational settings. The main purpose of this investigation was to find the relationship between the MA level learners' autonomy and their reading comprehension ability. A number of conclusions can be drawn from the statistical analyses and the obtained results. The correlational procedure indicates that there is a positive, though moderate, relationship between learner autonomy and the reading comprehension ability. Most researchers agree that high-proficient and autonomous readers are more confident in dealing with complex reading activities. In other words, the more autonomous the students are at MA level, the more skilled and proficient readers they are. It can also be concluded that despite the existence of a positive relationship between autonomy and reading comprehension, there are no significant differences between the reading scores of learners at various levels of autonomy. Third, the regression coefficient indicates that of all the components of learner autonomy, 'Nature of Language Learning' is the only reliable predictor of reading comprehension ability.

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