

Social Intelligence: Diversity among Different Language Proficiency Levels

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Abstract

Language acquisition and social intelligence are generating considerable interest in terms of their vital applications in today's modernized world. Research over the previous decades in the domain of second language learning has mainly focused on neurological and cognitive aspects of a bilingual mind and whether bilinguals outperform monolinguals in various linguistic facets. These studies failed to address possible interconnections between second language learning and intelligence. Likewise, social intelligence has rarely been discussed as a distinct phenomenon from emotional intelligence. With this in mind and the fact that our knowledge of possible interconnections between social intelligence and language proficiency level is largely based on very limited data, the current study attempted to explore the relationship between social intelligence and language proficiency level. Participants included a monolingual group comprising of 30 participants and three English proficiency groups of elementary and advanced, involving 30 subjects in each group. All participants responded to the Tromso Social Intelligence Scale questionnaire. The evidence from this study revealed significant differences concerning participants of the advanced proficiency group with respect to their social skill and social intelligence. Furthermore, a strong, positive correlation was shown only between the advanced and elementary groups regarding their social intelligence.

Keywords: language proficiency level, Social intelligence

1. Introduction

Nowadays, following the emergence of modern methods of instruction and educational authorities, obsessive concern with pedagogical issues, bilingualism and even multilingualism and their linked elements have also been intellectually investigated. Today's supersonic world of technology and the accumulative widespread emergence of international trade, necessitate familiarity and expertise in a second language that observably plays a conspicuous and prominent role in the world of intercontinental commerce and industry.

Research conducted in the domain of brain and language learning has always been embedded with many unanswered questions, most of which revolve around whether smart people are within any special competence that enables them store and retrieve linguistic information better; what makes some people more efficient in language learning and many other broadly similar questions. Though biologists, neurologists and cognitive psychologists are still in profound disagreement over the above mentioned ambiguities, they all share the view that intelligence can be considered as a common concept through all these questions (Behjat, 2012). Reviewing the literature on the realm of intelligence elucidates researcher's unquenchable thirst for illuminating complicated and numerous facets of this ambiguous property of living creatures. As Juchniewicz (2008) points out "The importance placed on intelligence has direct consequences in all facets in life, ranging from academic success to engaging in a personal relationship" (p. 16).

The concept of intelligence is a multidimensional element. Gardner (1983) in his seminal book entitled *Frames of Mind: The Theory of Multiple Intelligences* introduces the concept of multiple intelligences (MI) and suggested eight intelligences, later, Albrecht (2005) simplified Gardner's Multiple Intelligences (MI); and identified six primary intelligences of MI which are shown in the following table.

Table 1.1
 Gardner's Multiple Intelligences (MI)

Category	Description	
A	Abstract Intelligence	Symbolic Reasoning
S	Social Intelligence	Dealing with people
P	Practical Intelligence	Getting things done
E	Emotional Intelligence	Self-awareness and self-management
A	Aesthetic Intelligence	Sense of form, design, music, art and literature
K	Kinesthetic Intelligence	Whole-body skills like sports, dance or flying a jet fighter

In the past it was assumed that Emotional Intelligence (EI) and social intelligence (SI) are inextricably interwoven together; however, over that past few years due to meticulous studies in the field of intelligence this notion has little by little faded away. Goleman (2006), in his valuable book entitled, *Social Intelligence, the New Science of Human Relationships* confirms this theory. In line with Goleman's points of view, Albrecht (2007) states that:

Goleman had been thinking about social intelligence as possibly a separate dimension on a par with emotional intelligence instead [*sic*] of included within it. This cleavage of the Goleman model into two distinct parts caused somewhat of theoretical brain cramp inasmuch as the EI build [*sic*] out was more than ten years underway and devotees of the Goleman theory had been working hard to keep EI and SI welded together in the same structure. (p. 36)

Goleman (2006) divides social intelligence into two broad categories as follows:

1. **Social awareness:** what we perceive about other people.
2. **Social facility:** how we take action on that sense of awareness

Up to now, many surveys have been carried out on the realm of intelligence, specifically emotional intelligence, exploring its possible connectedness to other humanistic issues (e.g. Ferguson & Austin, 2010; Song et al., 2010; Miller, 2011; Kautzman, 2011; Enhelder, 2011) but as Albrecht (2005) points out, SI is beyond intelligence quotient (IQ) and EI and in fact "represents a kind of 'intelligence' in itself, quite apart from the usual 'IQ' kind of intelligence that academics, psychologists, and educators have studied so diligently" (p. XII). In recent years scholar's intrigue of second language learning is proliferating due to worldwide communication system which necessitates a common language, shared amongst the people in order not to misinterpret each other's intentions. However, though a growing body of literature evaluated the concept of language learning in diverse fields, few studies have been published on possible interconnections between language proficiency level and intelligence and almost none in relation to social intelligence.

There are a few studies that evaluated the concept of language proficiency in relation to emotional intelligence. For example, Shakib and Barani (2011) investigated the relationship between emotional intelligence and language proficiency of Iranian high school students, their study revealed that "there was reliable and meaningful relationship between language proficiency and emotional intelligence. In a similar study, Jamali Nesari, Karimi, and Filinezhad (2011) considered emotional intelligence and vocabulary learning of Iranian EFL learners at the intermediate level. Their findings indicated that "there was no significant relationship between EI and vocabulary learning. Moreover, no difference was found between emotional intelligence of male and female participants" (p. 900).

In a valuable study, the relationship between Iranian EFL learners' beliefs about language learning, their language learning strategy use and their language proficiency was estimated. In this study Abedini, Rahimi, and Zare-ee (2011) pointed out that "EFL learners with more positive and reasonable beliefs, generally, use the strategies more and also have higher level language proficiency" (p. 1029). Although these studies have been conducted in the intricate and convoluted issue of language proficiency level, it has not yet been established whether intelligence or even social intelligence which is the focus of this study is a crucial factor in language learning therefore, this study seeks to conscientiously explore, at what language proficiency level (elementary, intermediate and advanced), bilingual students (Persian and English) are more socially intelligent.

2. Method

2.1 Participants

First, One hundred and fifty (N=150) participants were selected from one of the English institutes in Tehran. Next their levels of proficiency was determined through the (PET, 2004) test and finally ninety (N=90) subjects were selected randomly and each language proficiency group (elementary, intermediate and advanced) eventually consisted of thirty people (N= 30).

2.2 Instruments and materials

In order to measure social intelligence of the participants, the Tromso Social Intelligence Scale (TSIS) ($\alpha = .89$) developed by Silvera et al. (2001) was used. The TSIS scale is a self-report measure of social intelligence and includes 21 questions. Gini (2006) who has conducted the adaptation of the Italian version of the TSIS to the adolescent population holds that:

The scale measures three areas of social intelligence: a) social information processing, that is the ability to understand and predict other peoples' behaviors and feelings; b) social skills, that stresses the behavioral aspects of the construct by assessing the ability to enter new social situations and social adaptation; c) social awareness, that measures the tendency to be unaware of or surprised by events in social situations. (p.4)

It is worth mentioning that Reliability and validity of the TSIS developed by Silvera et al. (2001), have been verified and confirmed by other scholars in other versions of this scale, For example, (Dogan & Cetin, 2009; Gini, 2006).

2.3 Procedures

As it has been mentioned earlier, first the participant's levels of proficiency were measured by administering the PET and then when the participants of each group were randomly selected, both language proficiency and monolingual groups filled out the TSIS.

2.4 Data Analysis

After the required data were collected, two levels of analysis including descriptive and inferential statistics were carried out. With respect to inferential statistics, through the calculation of the mean scores of different groups using one-way multivariate analysis of variance (MANOVA), the comparison of the combination of the subcomponents in this study, i.e., Social-information Processing (SP), Social Skills (SS), and Social Awareness (SA), was carried out as well. The application of MANOVA is particularly advantageous over ANOVA in this study. According to Pallant (2007), "Multivariate analysis of variance (MANOVA) is an extension of analysis of variance (ANOVA) for use when you have more than one dependent variable. These dependent variables should be related in some way, or there should be some conceptual reason for considering them together" (p. 275). On the other hand, ANOVA takes into account only one dependent variable at a time and conducting separate ANOVAs regarding each dependent variable may "run the risk of an 'inflated Type 1 error'" (p. 275).

However, follow-up analyses through one-way ANOVAs were also carried out to gain deeper insight into the relationships found among the subcomponents in this study. As mentioned earlier, running separate ANOVAs increases the possibility of Type 1 error. In order to avoid this, Pallant (2007) cites Tabachnick and Fidell (2007) and mentions that:

It is suggested that you set a higher alpha level to reduce the chance of a Type 1 error... The most common way of doing this is to apply what is known as a Bonferroni adjustment. In its simplest form, this involves dividing your original alpha level of .05 by the number of analyses that you intend to do ... In this case, we have three dependent variables to investigate; therefore, we would divide .05 by 3, giving a new alpha level of .017. We will consider our results significant only if the probability value (Sig.) is less than .017. (p. 287)

Consequently, Bonferroni adjustment was required to be applied in this study as well. In line with Pallant (2007), since there were three subcomponents to the concept of Social Intelligence including SP, SS, and SA, the original alpha level of .05 was divided by the number of dependent variables, i.e., three, and the final alpha level of .017 was the criterion for measuring the significance of the reported results through MANOVA and follow-up ANOVAs.

3. Results and Discussion

3.1 MANOVA and Follow-up ANOVAs

With respect to normality tests, the ratios were all within the acceptable ranges of +/- 2 for all groups. A MANOVA and follow-up ANOVAs were run to investigate the relationship among the proficiency level groups at the .017 level of significance. The sig value in test of equality of covariance matrices was larger than .001

therefore, the assumption of homogeneity of variance-covariance matrices was not violated (Pallant, 2007). Furthermore, Table 3.1 displays that there is no value less than .017. Therefore, the assumption of equality of error variances was not violated.

Table 3.1
Levene's Test of Equality of Error Variances

Variables	F	df1	df2	Sig.
Social-information Processing	.438	2	87	.647
Social Skills	1.236	2	87	.296
Social Awareness	3.827	2	87	.026
Social Intelligence	.684	2	87	.508

As it is shown in table 3.2 Multivariate tests indicated that there was a statistically significant difference among the proficiency groups in terms of their social intelligence.

Table 3.2
Multivariate Tests

Proficiency Groups	Value	F	Error df	Sig.
Pillai's Trace	.170	2.669	172.000	.000
Wilks' Lambda	.834	2.689	170.000	.000
Hotelling's Trace	.193	2.709	168.000	.000
Roy's Largest Root	.160	4.585	86.000	.005

Table 3.3
Tests of Between-Subjects Effects

Dependent Variable	df	Mean Square	F	Sig.
Social-information Processing	2	50.744	1.652	.198
Social Skills	2	328.233	6.857	.002
Social Awareness	2	79.878	1.741	.181
Social Intelligence	2	1075.244	4.982	.009

Table 3.3 also indicates that the variables of social skills and social intelligence have the values less than .017 therefore; significant differences among the proficiency groups were on their social skills and social intelligence. The following table displays the values of the effect size for social skills and social intelligence which are according to the guidelines provided by Cohen (1988) small.

Table 3.4
Effect Size

Dependent Variable	Partial Eta Squared
Social Skills	.136
Social Intelligence	.103

In order to find out where exactly the differences among the proficiency groups lie, it was necessary to conduct follow-up ANOVAs on each dependent variable. The results of one-way ANOVA on SP showed no statistically significant difference at the .017 level of significance for the language proficiency groups: $F(2, 87) = 1.652, p = .198 > .017$. However with respect to SS the results of one-way ANOVA showed statistically significant difference at the .017 level of significance for the language proficiency groups: $F(2, 87) = 6.857, p = .002 < .017$. Additionally, post-hoc tests were carried out to exactly identify where the difference(s) lie. As shown in Table 3.5, the mean difference between the elementary and advanced groups is statistically significant at the .017 level of significance, i.e., $MD = 5.367, p = .010 < .017$. The mean difference between the intermediate and advanced groups was also statistically significant, i.e., $MD = 6.033, p = .003 < .017$. There was, however, no statistically significant relationship between the elementary and intermediate groups as the level of significance was found to be $p = .926 > .017$.

Table 3.5
Post-hoc Tests' Results on Social Skills

Proficiency Groups		Mean Difference	Std. Error	Sig.
Elementary	Intermediate	.667	1.786	.926
Elementary	Advanced	-5.367*	1.786	.010
Intermediate	Elementary	-.667	1.786	.926
Intermediate	Advanced	-6.033*	1.786	.003
Advanced	Elementary	5.367*	1.786	.010
Advanced	Intermediate	6.033*	1.786	.003

*. The mean difference is significant at the .017 level.

The following figure shows the mean scores on social skills for the proficiency groups.

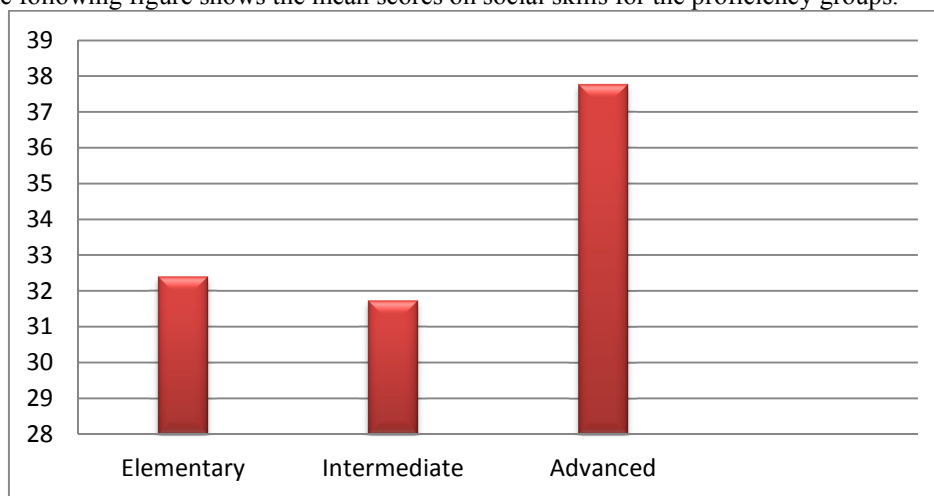


Figure 3.1. Proficiency Groups Mean scores on Social Skills

The results of one-way ANOVA on SA showed no statistically significant difference at the .017 level of significance for the language choice groups: $F(2, 87) = 1.741, p = .181 > .017$ but, considering social intelligence, the results of one-way ANOVA showed statistically significant difference at the .017 level of significance for the proficiency groups: $F(2, 87) = 4.982, p = .009 < .017$. The following table displays that the mean difference between the elementary and advanced groups is statistically significant at the .017 level of significance, i.e., $MD = 11.200, p = .011 < .017$.

Table 3.6

Post-hoc Tests' Results on Social Intelligence

Proficiency Groups		Mean Difference	Std. Error	Sig.
Elementary	Intermediate	-1.933	3.793	.867
Elementary	Advanced	-11.200*	3.793	.011
Intermediate	Elementary	1.933	3.793	.867
Intermediate	Advanced	-9.267	3.793	.043
Advanced	Elementary	11.200*	3.793	.011
Advanced	Intermediate	9.267	3.793	.043

*. The mean difference is significant at the 0.017 level.

The following figure shows the mean scores on social intelligence for the proficiency groups.

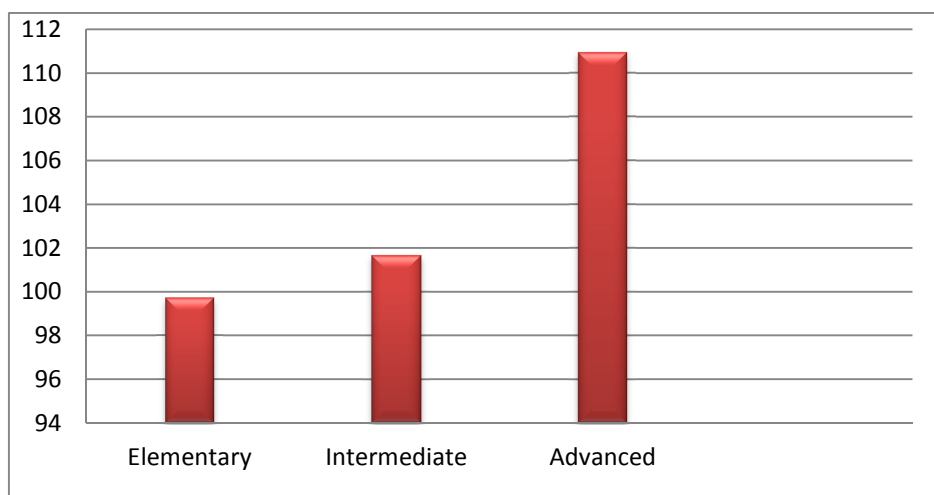


Figure 3.2. Proficiency Groups Mean scores on Social Intelligence

3.2 Correlation Analysis

As it is displayed in Table 3.7 there was a strong, positive correlation only between the advanced and elementary groups. No statistically significant relationship was reported regarding the other groups.

Table 3.7

Correlation Analysis for Social Intelligence

		(SI) Elementary	(SI) Intermediate	(SI) Advanced
(SI) Elementary	Pearson Correlation		.099	.404*
	Sig. (2-tailed)	-----	.601	.027
	N		30	30
(SI) Intermediate	Pearson Correlation	.099		.063
	Sig. (2-tailed)	.601	-----	.740
	N	30		30
(SI) Advanced	Pearson Correlation	.404*	.063	
	Sig. (2-tailed)	.027	.740	-----
	N	30	30	

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

4. Conclusions

On the basis of the statistical analyses presented earlier in this chapter, there were statistically significant differences among the groups on social skills and social intelligence. However, there was no statistically significant difference among the groups on social-information processing and social awareness. The statistically significant difference on social skills was between the advanced and elementary groups and the advanced and intermediate groups with the levels of significance of .01 and .003 respectively. No significant result was reported regarding the relationship between the intermediate and elementary groups. The statistically significant difference on social intelligence was only between the advanced and elementary groups. Additionally, the results of correlation coefficient showed a strong, positive correlation only between the advanced and elementary groups regarding their social intelligence. No significant correlation was reported on social skills, social-information processing, and social awareness.

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