
Are Learner's Workforce-related Attributes Associated with English Proficiency of Japanese College Students?

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Research Questions

A growing body of research in the area of second language acquisition has found the following aspects. As for the effect of aptitude and motivation on L2 proficiency, many studies found a positive effect of learner's aptitude and / or motivation on his or her L2 proficiency (Carroll, 1981; Ely, 1986; Gardner, 1980; Gardner and MacIntyre, 1992; Guiora, 1980; Guiora, et al., 1967; Guiora, 1972; Horwitz, 1987; Nishimata, 1999; Samimiy and Tabuse, 1992). A recent study found a positive correlation between learner's SAT mathematical scores and L2 proficiency (Nshimata, 1999) when examining American students learning Japanese. As for the effect of L1 proficiency on L2 proficiency, a recent study found that a positive correlation between American learners' SAT verbal scores and their scores on Japanese proficiency tests (Nishimata, 1999; Tanno, 1998). As for the effect of personality traits on L2 proficiency, a mixed picture emerged. A number of studies found a positive or negative effect of personality traits (e.g., extroversion / introversion, risk-taking, tolerance of ambiguity, empathy, self-esteem, and inhibition) on L2 proficiency (e.g., Busch, 1982; Chapelle and Roberts, 1986; Ely, 1986; Heyde, 1979; Gardner and Lambert, 1972; Guiora, et al., 1967; Guiora, et al., 1972 and 1980; Naiman, et al., 1978; Strong, 1984). The reason for obtaining the mixed picture was attributed to less valid and less reliable measurements of personality traits examined.

A casual inspection of the literature of second language acquisition indicates that a number of elements have remained unexamined. One unexamined element is learner's workforce-related attributes. In fact, no study has been conducted to examine the workforce-related attributes because workforce-related attributes appear to be the last category that researchers of second language acquisition can imagine as a predictor variable. However, this last category deserves attention from the view point of human resource management because a resurgent thrust for studying English by the Japanese in recent years has paralleled the internationalization of the Japanese economy in conjunction with the advancement of the worldwide Internet system of computers. In the midst of these circumstances, many Japanese companies engaged in international business have tried to enhance the level of English proficiency of some of their employees. Many companies

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have requested that their own employees take some types of job-related tests of English proficiency (e.g., TOEIC, 英語検定試験, etc). What is more, numerous Japanese companies often request job applicants (e.g., college seniors) to demonstrate their levels of English proficiency in one way or another while conducting job interviews. Simply put, college and university students---the future workforce of the Japanese business world---are no longer immune to these requirements.

These requirements make the career guidance department (就職部) of institutions of higher education sensitive to the English proficiency of their own students. In fact, the career guidance departments of many colleges and universities have started using career guidance tests that are designed to measure English proficiency of their own students. These requirements provide researchers of second language acquisition and human resource management with new opportunities to test their hypotheses, facilitating a cross-fertilization of the two academic fields. A common theme underlying the two fields is what attributes of learners (Japanese students) best predict their English proficiency. The present study is a joint effort of the two fields in order to develop a prediction model of Japanese college students' English proficiency.

Thus, a main focus of this study is placed on the examination of the association of learner's workforce-related attributes with L2 proficiency (English proficiency of Japanese college students). At the same time, this study examines the association of two other categories (learner's four types of competence and Japanese language proficiency) with L2 proficiency. The assumption is that workforce-related attributes predict learner's L2 proficiency as much as the two other categories of elements predict learner's L2 proficiency. Hence, the following three research questions are posed. 1: Are learner's workforce-related attributes associated with his or her English proficiency? 2: Are learner's four kinds of competence associated with his or her English proficiency? 3: Is learner's Japanese language proficiency associated with his or her English proficiency?

Method

1. Instrument of Data Collection

Data (410 observations) were obtained through a career guidance/aptitude test for college students that was implemented from 1996 to 1998 at a college. The career guidance/aptitude test was originally developed by ETS (Educational Testing Service of the U.S.A.) and was modified by a private Japanese corporation as a comprehensive test in order to provide Japanese college and university students with career guidance. Its reliability and validity have been proven for many years by a number of Japanese colleges and universities. This study used some portions of the test data.

2. Definitions and Operationalization of Concepts

Criterion Variables: Score of English Proficiency Test. This test was designed to measure the degree to which a testing participant was able to analyze the complicated messages embedded in short paragraphs or stories written in English. The style of the test was similar to one that Japanese colleges and universities use as entrance exam except for one aspect: the score of each participant was indicated in a normal distribution curve ranging from 30 to 70.

Predictor Variables. The following three categories of predictor were used: X₁: Workforce-related attributes, X₂: Competence, and X₃: Japanese language proficiency.

X₁: Workforce-related attributes. The following thirteen attributes were measured. X₁₋₁: work motivation (the ability to keep goals high and to challenge things in a positive manner). X₁₋₂: tolerance of stress (the tendency to be adequate in handling mental and physical stresses). X₁₋₃: adaptability (the tendency to be adequate in handling new environments). X₁₋₄: self-control (the ability to control his/her behaviors and emotion). X₁₋₅: persuasiveness (the ability to persuade others). X₁₋₆: empathy (the ability to understand and accept the feelings and ideas of others). X₁₋₇: cooperative manner (the ability to cooperate with others in order to resolve problems). X₁₋₈: leadership (the ability to promote projects as a group leader). X₁₋₉: self-reliance/direction (the ability to act on one's own without being influenced by others). X₁₋₁₀: creative manner (the ability to create something new and innovative). X₁₋₁₁: realistic manner (the ability to implement the most efficient methods in a realistic manner in order to resolve problems). X₁₋₁₂: international orientation (the ability to find something abroad and its cultures interesting). X₁₋₁₃: computer orientation (the ability to familiarize oneself with office automation equipment and to learn how to use the equipment in a positive manner). Each of these thirteen attributes was measured by a participant's responses ('yes' or 'no') to ten questions underlying each of the thirteen attributes.

X₂: *Competence.* The following four types of competence were used. X₂₋₁: competence of Japanese language analysis. X₂₋₂: competence of data analysis. X₂₋₃: competence of logical thinking. X₂₋₄: competence of systematic thinking. Each of these four types of competence was measured by the degree to which a participant was able to correctly respond to multiple choice questions. The score was indicated in a normal distribution curve ranging from 30 to 70.

X₃: *Japanese language proficiency.* This was measured by the degree to which a participant knew the Japanese language in general. The score was indicated in a normal distribution curve ranging from 30 to 70.

Results of Data Analysis

The Pearson correlation coefficient analysis was used to test the assumptions between the criterion variable and the three categories of predictor variables. Table 1 presents the results of the analyses at the significance level of .05.

Table 1. Correlation between Criterion Variable and Predictor Variables

Criterion Variables: Score of the English Test	
Predictor Variables	
X ₁ : Workforce-related attributes	
X ₁₋₁ : work motivation	.03
X ₁₋₂ : tolerance of stress	.05
X ₁₋₃ : adaptability	.07
X ₁₋₄ : self-control	-.00
X ₁₋₅ : persuasiveness	.06
X ₁₋₆ : empathy	-.05
X ₁₋₇ : cooperative manner	-.03
X ₁₋₈ : leadership	-.07
X ₁₋₉ : self-reliance/self-direction	.04
X ₁₋₁₀ : creative manner	.01
X ₁₋₁₁ : realistic manner	-.03
X ₁₋₁₂ : international orientation	.05
X ₁₋₁₃ : computer orientation	.02
X ₂ : Competence Variables	
X ₂₋₁ : Japanese language analysis	.17**
X ₂₋₂ : data analysis	.10*
X ₂₋₃ : logical thinking	.04
X ₂₋₄ : systematic thinking	.27***
X ₃ : Japanese language proficiency	.23***

* $p < .05$, ** $p < .01$, *** $p < .001$

1. Are learner's workforce-related attributes associated with English proficiency? Contrary to the assumption, none of the thirteen workforce-related attributes were found to be statistically significant. The results of the analysis did not provide any support for the assumption.

2. Are the four types of learner's competence associated with English proficiency? Three out of the four types of competence were found to be statistically significant. They were (1) competence of Japanese language analysis ($r = .17, p < .01$), (2) competence of data analysis ($r = .10, p < .05$), and (3) competence of systematic thinking ($r = .27, p < .001$).

3. Is learner's proficiency of Japanese associated with English proficiency? Learner's proficiency of Japanese was found to be statistically significant ($r = .23, p < .001$), as was predicted.

Discussion

The victory of the U.S. economy in conjunction with the worldwide Internet system has played a significant role in pushing English into the status of dominant language. Other languages have become mere local varieties that are used only by their own native speakers. These circumstances induce researchers not only of second language acquisition but also of human resource management to examine elements that enhance or predict English proficiency of non-native English speakers. This study, though in a small scale, is an attempt to respond to these circumstances. It would be safe to state the following points. The first finding that workforce-related attributes predict little of learner's proficiency of English is at odds with the assumption. The second finding that some types of competence predict learner's English proficiency is consistent with the findings of some previous studies (Carroll, 1981; Ely, 1986; Gardner, 1980; Gardner and MacIntyre, 1992; Nishimata, 1999). The third finding that L1 proficiency is one of the good predictors of L2 proficiency is also consistent with the findings of previous studies (e.g., Nishimata, 1999; Tanno, 1998).

These present findings suggest a simple picture regarding what underlies the English proficiency of Japanese college students. Although learner's workforce-related attributes failed to predict English proficiency, conventionally known elements predict it to some extent. In a sense, the conventional wisdom survives at this time.

Two cautions of this study should be noted. First, the observations used in this study do not necessarily represent the entire population of Japanese college and university students. In addition, the type of English proficiency test that this study relied on is merely one of many possible tests measuring English proficiency. The combination of other types of proficiency tests and other sample groups could be used and could generate different results. Hence, learner's workforce-related attributes may not be completely ruled out as predictor variables of the English proficiency of Japanese college students. Second, the correlation analyses presented in this study partially answer the primary goals of the

prediction model. It would be wise to move away from static correlational studies. Future research must develop more panel or other longitudinal designs in order to develop causal or explanatory models.

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