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ABSTRACT

A large-scale test development project at the Language Teaching Research Center of the University of Gothenburg aims to develop tests in English as a foreign language for use in various areas of business and public administration. After testing, certificates stating current proficiency level in each of the four language skills (listening, reading, writing and speaking) will be given. Each person's knowledge of the language will be rated on a five-point scale. The project work involves correlation studies of the interrelationship between different parts of the test and between language proficiency and various intelligence factors. In one investigation an English language placement test was administered parallel to a battery of psychological tests covering analogies, opposites, verbal fluency, spatial ability and Pukort, a Swedish version of the Purdue Creativity Test. Personality tests measuring dominance, deliberateness, sociability, emotionality, flexibility, perseverance, emotional stability and independence were administered. Results show that certain relationships exist between language proficiency measures and personality and psychological variables. This should be considered when assessing foreign language mastery. (CHK)

THE RELATIONSHIP BETWEEN FOREIGN LANGUAGE PROFICIENCY AND VARIOUS PSYCHOLOGICAL VARIABLES

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Paper read at the Fourth
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1. Introduction

This paper presents briefly a large-scale test development project that is being carried out at the Language Teaching Research Center, University of Gothenburg, Sweden. The aim of the project is to develop tests in English as a foreign language for use in various areas of business and public administration. The project is sponsored by the Swedish Employers' Confederation (SAF), Stockholm, and the Swedish Council for Personnel Administration (PA-rådet), Stockholm. The tests are planned for use on a nationwide basis in any situation where the foreign language ability of a person, or a group of persons, needs to be assessed. Certificates stating current proficiency level in each of the four language skills (Listening, Reading, Writing and Speaking) will be given.

The first two years of the project are being devoted to the preparation of standardized proficiency tests in English covering the following areas: Vocabulary, Grammar, Reading Comprehension, Listening Comprehension, Writing and Speaking Ability.

2. Organization of Tests

Before taking the main test the candidate is given a short introductory test measuring word knowledge and general language ability. The result on this test determines which level of the main test should be taken. The main test contains sub-tests measuring each of the four language skills.

The organization of the tests is shown in Figure 1:

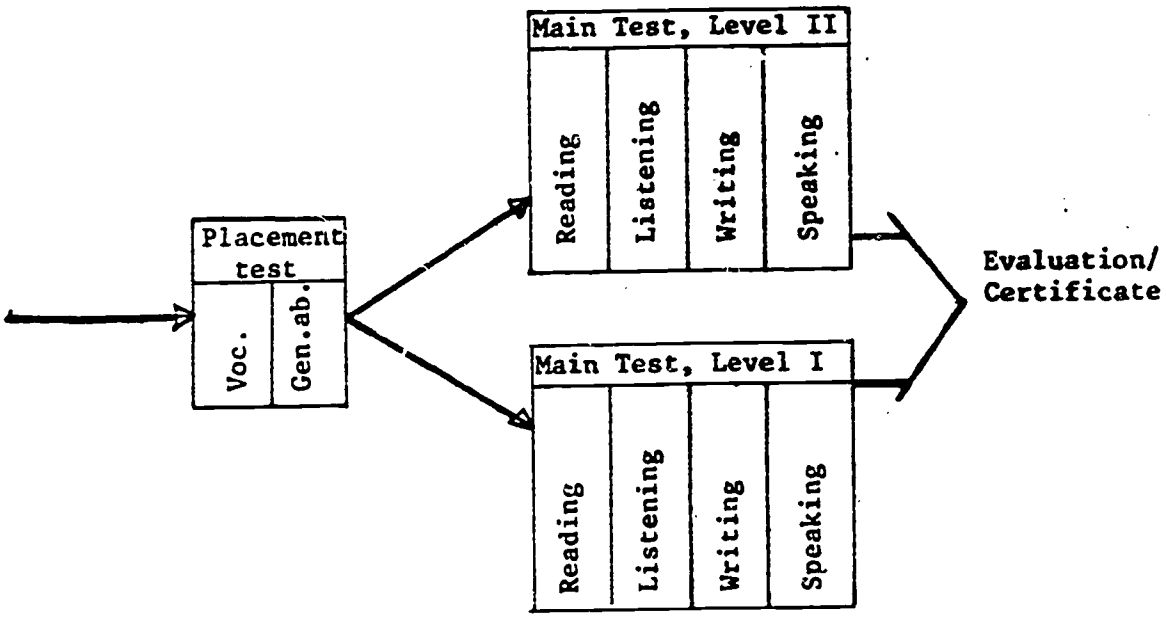

Figure 1
The Organization of the Tests

The short introductory test is administered mainly for reasons of economy. Having a rough estimate of the candidate's general proficiency in the language enables one to assess quite reliably

the more exact level in a relatively short time, and it saves the candidate from being subjected to questions that are too easy or too difficult for him.

The placement test takes about 20 minutes and the main test 2 1/2 - 3 hours to administer.

3. Evaluation of Test Results

Each candidate's knowledge of the language will be expressed in "operational" terms. For this purpose a 5-point descriptive, absolute scale has been worked out for each of the four skills. Test scores will be converted into scale levels, which state explicitly the candidate's actual control of the language. On the basis of the test results a person may thus, for instance, be placed at the following proficiency level with regard to listening comprehension:

> "Understands normally everything that is being said at normal speed in standard language. Can have certain difficulties in comprehending unfamiliar dialect, as well as telephone and radio messages received under poor listening conditions."

Obviously, this aspect of the evaluation is both crucial and difficult, especially as it is mainly

based on the performance on multiple-choice tests, and it links up with validation problems. We have not yet reached the stage where we can finally test the feasibility of our idea.

4. Research

The project work involves correlation studies of the interrelationship between the different parts of the tests, as well as studies of the correlation between language proficiency and various intelligence factors such as general verbal comprehension, ability to draw logical conclusions and ability to perceive spatial relations. The language test results are furthermore being correlated with a number of personality traits as measured by a new personality inventory called EPF, which covers eight different traits. Each trait is measured by means of ten self-assessment questions (Ekvall, 1975). Finally the language test results are being correlated with performance on tests aimed at revealing so-called divergent production, which is thought to be a factor underlying creative ability.

4.1 Findings

I am now going to present some of the data obtained on the relationship between English language proficiency, as measured by our new tests, and various psychological and other variables.[1]

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[1] I am greatly indebted to Dr Rune Holmquist, Malmö, [illegible] undertook the testing of the subjects and

In one investigation one of our short placement tests was administered parallel with a battery of psychological tests to 53 farm management students. The English test consisted of 40 vocabulary items and 20 sentence-combination items (so-called rejoinders). The Kuder-Richardson reliability index (formula 20) for the whole test was .91.

The psychological test battery consisted of the following sub-tests (the descriptions have been formulated by the author on the basis of the original Swedish presentations):

1. WIT III: Analogies — Part of a general intelligence test. Measures ability to draw logical conclusions on the basis of verbal material (mother-tongue vocabulary items).

2. WIT III: Opposites — Measures general verbal comprehension in the native language as shown in the ability to select the appropriate opposites of lexical items presented.

3. W1: Verbal fluency — A short verbal fluency test to be taken within a time limit (4 minutes). The subject is asked to write as many words as he can of a specified type.

4. WIT III: Spatial ability — Also a sub-test in the intelligence test (WIT III). Measures ability to perceive two-dimensional spatial relations ("jig-saw puzzle" tasks).

5. Pukort — A Swedish version of the Purdue Creativity Test. Measures what is called divergent production, which is an essential and necessary component in creative thinking.

The following eight sub-tests are all included in EPF, a Swedish personality inventory measuring eight different variables.

6.	EPF: Dominance	Measures a person's striving for leadership and responsibility, and his wish to influence and dominate other people.
7.	EPF: Deliberateness	Refers to the degree of spontaneity and impulsiveness in a person's reactions. A high value on this variable indicates a person who wishes to plan and work in a careful and deliberate manner.
8.	EPF: Sociability	This measure gives a person's position on the extroversion--introversion scale. A high degree of sociability means facility in establishing relations with others and a liking for other people's company.
9.	EPF: Emotionality	Measures the degree to which a person is dominated by and gives vent to his emotions. A highly emotional person experiences feeling like sorrow, happiness, compassion and anger more often and more intensively than the ordinary person.
10.	EDP: Flexibility	Measures a person's attitude towards change, and his readiness and ability to adapt to new situations.
11.	EPF: Perseverance	This variable concerns the degree of perseverance and determination demonstrated by a person's behaviour.
12.	EPF: Emotional stability	A high score on this variable is indicative of a personality with a generally optimistic and even temperament. A low score indicates a variable temperament, ranging from the highly optimistic to the very pessimistic, and poor ability to endure stressful situations.
13.	EPF: Independence	This trait shows a person's degree of independence with regard to other people's views, decisions, and acts. A low score indicates a person who is afraid of expressing deviating opinions and who tends to agree with the person he is talking to at the moment.

Table 1 presents the correlations among all the variables (one asterisk denotes significance at the .05 level, two asterisks significance at the .01 level):

Table 1. Intercorrelations between English Language Proficiency Results and Various Psychological and Personological Variables in a Sample of Farm Management Students (N = 53)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. WIT III: Analogies	1.00													
2. WIT III: Opposites	.47^{xx}	1.00												
3. WIT III: Spatial Ab.	.39^{xx}	-.23	1.00											
4. Pukort	.18	.14	-.06	1.00										
5. EPF: Dominance	.20	-.01	.02	-.08	1.00									
6. EPF: Deliberateness	-.25$^{(x)}$	-.08	.02	-.27^{x}	.07	1.00								
7. EPF: Sociability	.06	.07	-.02	.16	.43^{xx}	-.12	1.00							
8. EPF: Emotionality	-.04	.03	.08	.21	-.17	.04	.18	1.00						
9. EPF: Flexibility	.04	.07	.23	-.07	.58^{xx}	.18	.38^{xx}	.05	1.00					
10. EPF: Perseverance	-.10	.00	-.06	-.17	.36^{x}	.36^{x}	.22	-.11	.34$^{(x)}$	1.00				
11. EPF: Emot. stability	-.06	.20	.08	-.21	.23	.08	.11	-.20	.32^{x}	.38^{xx}	1.00			
12. EPF: Independence	.14	.12	.15	-.03	.55^{xx}	.00	.28^{x}	-.07	.59^{xx}	.38^{xx}	.33^{x}	1.00		
13. Engl.Test:Vocabulary	.13	.28^{x}	.14	-.01	-.16	-.32^{x}	.20	-.14	-.18	-.12	-.13	-.08	1.00	
14. Rejoinder	.25$^{(x)}$	.37^{xx}	.16	.07	-.12	-.30^{x}	.15	-.27^{x}	-.21	-.08	-.04	-.12	.83^{xx}	1.00
15. Total	.19	.33^{x}	.14	.04	-.14	-.33^{x}	.18	-.16	-.19	-.09	-.10	-.09	-	-

The English test has the highest positive correlation with one of the verbal tests (WIT III: Opposites; r = .33), which measures comprehension of words in the native language. An equally high coefficient, although negative (r = -.33), appears with the personality trait called Deliberateness. This would seem to indicate that the person who tends to ponder for too long over which option to pick in multiple choice items is more likely to go wrong than the person who acts on impulse. If this finding is substantiated by other pieces of research it would probably be helpful to formulate test instructions accordingly, i.e. to give some sort of advice to the candidates not to spend too much time on any particular item.

The fact that proficiency in English correlates equally high with an intelligence variable and a personality variable might be taken as evidence that effective prediction of language mastery must take into account personality factors, over and above actual language test results. This has also been pointed out by many writers. Commenting on the topic Clark (1972) states that "the student's linguistic proficiency in a foreign language--as evidenced by accuracy of pronunciation, range of vocabulary, level of grammatical control, and so forth--has only a tenuous and not easily established relationship to his communicative proficiency, defined as his ability to "get a message across" with a specified ease and social effect" (p. 222).

A few calculations have also been made of the correlation between reading comprehension skills and the factors presented above. A reading test consisting of short pieces of text followed by comprehension questions of the multiple choice type was administered to a group of vocational guidance counsellors. The texts were intentionally kept quite short in order to make the test as "direct" and as little dependent on memory factors as possible.

The psychological test battery included an inductive-logical test, which was intended to show to what extent performance on a reading test covaries with inductive-logical ability.

The results are reported in Table 2:

Table 2

The Correlations between Reading Comprehension Skills and Various Psychological and Personality Variables in a Sample of Vocational Guidance Counsellors (N = 20).

		Reading Test
1.	Inductive-Logical Test	.67^{xx}
2.	WIT III:Spatial Ability	.36
3.	Shapes: Spatial Ability	.40
4.	WIT III: Opposites	.33
5.	Wl: Verbal Fluency	.18
6.	EPF: Dominance	-.26
7.	Deliberateness	-.41$^{(x)}$
8.	Sociability	.42^{x}
9.	Emotionality	.54^{x}
10.	Flexibility	.36
11.	Perseverance	-.31
12.	Emotional Stability	-.08
13.	Independence	.30

It is to be noted that the sample is very small (N = 20) and therefore the coefficients can merely be regarded as indications of the kinds of relationships that might exist.

However, in this sample the Reading Test has the highest positive correlation with the inductive-logical test ($r = .67$; $p < .01$). It thus seems as if success on reading comprehension test consisting of texts followed by multiple-choice questions is to some, if not a large, extent dependent on inductive and logical reasoning abilities. The coefficients for the other psychological variables are non-significant.

The personality traits measured by the EPF inventory correlate positively with reading comprehension in two sub-tests, namely Sociability and Emotionality ($p \leq .05$). It is further of interest to note that we again tend to get a negative relationship between results on a language test (Reading) and the personological variable called Deliberateness, which would seem to mean that a certain degree of spontaneity and impulsivenss is advantageous to the attainment of good language scores.

It has been suggested that the ability to learn foreign languages might be inversely related to spatial ability. In a study with American freshmen Stafford (1972) found negative relationships between grades in foreign language courses and

spatial visualization aptitude as measured with the Identical Blocks Test. Our findings do not support those results. If anything there is a tendency towards a positive connection between foreign language achievement and spatial ability in our samples.

Summing up the results of the correlation studies with tests of English as a foreign language, we may say that there appears to exist certain relationships between language proficiency measures on the one hand and personality and psychological variables on the other, which ought to be taken into account when one wants to make precise assessments of anyone's foreign language mastery.

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