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► **To cite this version:**

Elias Sheybanifar. How your students would like to be evaluated? A correlational study of Personality, Intelligence and Examinees' Preference for Assessment Method. *Teaching & Learning*, 2020. hprints-02942490

**HAL Id: hprints-02942490**

**<https://hal-hprints.archives-ouvertes.fr/hprints-02942490v1>**

Submitted on 17 Sep 2020

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**How your students would like to be evaluated?  
A correlational study of Personality, Intelligence and Examinees' Preference  
for Assessment Method**

Elias Sheybanifar<sup>1</sup>

**ABSTRACT**

Does personality has any impact on scores? What kind of tests preferred the most by intelligent learner? Students choose their way of learning and studying based on their perception of the assessment requirements (Birenbaum, 1994; Birenbaum & Feldman, 1998). Assessment type of measuring students' knowledge can therefore influence the learning process of the positive way. Hence, selecting an assessment instrument plays important role in the learning process (Dochy & McDowell, 1997; Wiliam, 2011). Students ' assessment preferences show their conceptions of the learning and their approach to learning (Birenbaum, 2003; Struyven, 2005). Investigating students ' assessment preferences is thus helping us extract the factors which drive the learning process. This research aimed to investigate the relationship between assessment preference and examinees' intelligence and personality types. The researcher revealed the role of personality and intelligence in assessment preference. The main point in this research is the validity of evaluation sustained. Multiple choice is the most preferred test by students. Multiple regression analyses were used and researcher found the best predictor for each type of test. Finding students' preference clarify the way of how teachers should choose their evaluation methods and this measuring methods must be fair. If the teacher knows the majority of his class, knows their personality and be aware of their intelligent he would be able to choose correct way of assessing his classes and gather true, pure and valid scores.

**Keywords:** Assessment, Assessment Preference, Big Five, Individual Differences, Personality.

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## INTRODUCTION

One can get a higher score of one type of assessment while the same examinee might get a different score of a test of the same content but with a different type of method. The experience of preferring one type of test to the other type is very common among students (Birenbaum, 1997, 2007). They may prefer one type more than the others, not only because of the higher score but also because of their ease. In recent researches, the number of studies including preferences for students in higher education has increased very strongly (Birenbaum, 2003; Entwistle, 1991). Among these topics, students' assessment preferences have been the least frequently studied. A number of studies have clearly argued the influence of assessment on students' approaches to learning and learning (Ramsden, 1992; Scouller, 1998). These researches, however, can be described in terms of two perspectives. The majority of examinees deal with the relationship between student personality and assessment preference.

This research-line regards types of personality as a somewhat fixed disposition of students and tries to investigate its relation to assessment preference. On the other hand, however, some recent researchers have assumed assessment preference as a fixed disposition and focused on other factors (Gijbels & Dochy, 2006; Struyven, Dochy, & Janssens, 2005; Struyven, Dochy, Janssens, Schelfhout, & Gielen, 2006). They examined the correlation between examinees' assessment preferences and learning factors, and how examinees' preferences change based on their learning experience. Students choose their way of learning and studying based on their perception of the assessment requirements (Birenbaum, 1994; Birenbaum & Feldman, 1998). The strategic use of assessment type can therefore influence the learning process of the positive way (Gibbs, 1999; Gijbels, Van de Watering, & Dochy, 2005). Hence, selecting an assessment instrument plays an important role in the learning process (Dochy & McDowell, 1997; Wiliam, 2011) This implies that

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there should be a proper instruction in assessment method (Biggs, 1996, 2003) Students' assessment preferences show their conceptions of the learning and their approach to learning (Birenbaum, 2003; Struyven, 2005 ). Investigating students' assessment preferences is thus helping us extract the factors which drive the learning process. There have been few studies on assessment preferences (Birenbaum, 1997, 2007). Methods of evaluation contain essay type tests, completion test, multiple choice, close test, true-false test, information gap and oral exam.

These types are the most common and preferred types of existing versions (Birenbaum 2007). Subject aimed at assessment preferences is very little. The present research aimed to meet this need and looks at how examinee' assessment preferences change based on their personalities and fluid intelligence. In relation to fluid intelligence, Furnham and Chamorro-Premuzic (2005) found no significant relationship between self-assessed fluid intelligence and preference for assessment method. Furnham and Chamorro-Premuzic (2005) report two studies on this topic. In one, neuroticism was significantly negatively correlated with a preference for essay-type and oral exams; extroversion was positively correlated with a preference for oral exams, agreeableness with essay-type questions, and conscientiousness with continuous assessment.

As mentioned earlier, students' fluid intelligence and personality may affect not only their preferences in assessment method but also their scores. In one point, we can say if scores affected by some other factors other than the ability, the validity of the test is blemished. The second point can be said as assessment preferences of students. One type more than the others, we have to pay attention to ability differences. Consider student A is 2 points higher than student B in the exam X, so their ability defined like this: A is better (more empowered) than student B, all other tests on the same trait must reveal the same result, but imagine in other types of assessment about the same knowledge or trait, student B gets the same score or even higher, in

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this case, one can show his ability in one specific type while the other cannot. These differences cause different preferences in students as examinees, and their scores will not be valid anymore. Validity is defined based on two issues, what to test and how to test (Bachman, 1995). The point of test validity is the other problem that can be defined as the relationship between each variable, like fluid intelligence to preferred assessment. One with deep high fluid intelligence and also higher levels of personality traits may perform better on specific formats of assessment. It is up to the teacher to decide which format to take, however, all of the variables should be considered if any significant relationship will be found. This study aimed to investigate these relationships between assessment preference and examinees' fluid intelligence and also personality types.

As in any educational system, there are many ways of assessing and evaluating a university student's knowledge after a course. There are so many ways, examinee could be examined in one-to-one, or examiner-panel, oral examinations or even he or she could be evaluated on a series of coursework assignments or one major project. They may even do a self-rating or be evaluated by their peers; or they may be evaluated in appointed or self-selected groups, with each student receiving the average mark of the group. There is a variety of historical and discipline-specific reasons why courses are examined using particular methods or series of methods (Bachman, 1995). In this study, the researcher wants to investigate individual correlates to students' preferences for examination method.

### **LITERATURE REVIEW**

There have been relatively few studies on assessment preferences and its role on learning process (Birenbaum, 1997, 2007). Birenbaum (1997) argued that differences in assessment preferences

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among university students coincide to a large extent with learning orientations and differences in learning strategies.

In recent researches, Birenbaum (2007) 900 university students participated in the study. They analyzed four learning styles: a meaning directed, a reproduction directed, an undirected and application directed. In their study extraversion had a positive correlation with the meaning directed and application directed learning style. Conscientiousness also had a positive correlation with the application directed, meaning directed and reproduction directed and had a negative correlation with the undirected learning style. Openness to experience had a positive correlation with the application directed and meaning directed and had a negative correlation with the undirected learning style.

These correlations can confirm the issue told by Raad and Schouwenburg (1996) that the Big Five factors extraversion, conscientiousness, and openness to experience have educational relation. Achievement motivation had a weak positive correlation with the reproduction directed, application directed and meaning directed learning style.

Seliger (1978) investigated the correlation between extraversion and L2 competence of same second language learners and realized that the learners, who participated in more language interactions, (High Input Generators) gained higher grades in the final exam.

Moreover, Ely (1986) examined the effect of risk taking and sociability as the domains of extraversion of 75 university students who are learning Spanish. In order to measure the participants' oral accuracy and fluency, Ely held an interview. The participants were also needed to write a composition to be scored for their written accuracy. Extraversion did not seem to have a significant correlation with class participation and any of the three indices of Spanish proficiency.

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In another study, Eyong, David, and Umoh (2014) investigated the influence of personality trait on the academic performance of secondary school students in Nigeria. They claimed that conscientious students performed better since conscientiousness is related to hard work and this will have influence on their academic performance. Also, their findings indicated that agreeable students significantly performed better than the others who are not agreeable. This may be related to the fact that academic involves socialization, and agreeable students are satisfied and can accommodate themselves in social situations. The results in this study revealed that students who are highly neuroticism performed worse than the others who are low on this trait. This is because these learners have negative emotional feelings and they are nervous, and they don't have relaxed and stable mind. They also emphasized that government, teachers, and parents can benefit from their results.

In addition, Zhang and Ziegler (2016) investigated how the Big Five influence scholastic performance. 836 school students from China participated in their study. The researchers compared two models; the B5NT model which focuses on indirect effects of the Big Five by way of learning approaches and self-beliefs which successively activate particular learning attitudes affecting scholastic performance. The data supported the B5NT model but in the DM model just conscientiousness and openness was supported. Their study showed that students who were higher in neuroticism and lower in openness got lower school grades, since they adopted surface-learning approaches. The students higher in conscientiousness and openness achieved better grades since they were probably use a deep learning approach. They also claimed that there wasn't any difference between predicting learning of a native language like Chinese here vs. learning of a foreign language like English. The only difference was between openness and extraversion which openness had direct influence on English grades but extraversion had a direct influence on Chinese

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grades. These issues may be because of the design of English text books in China which had less emphasis on listening and speaking. So, the students have less oral performances. Agreeableness was not successful in predicting any of grades. The reason may be that in most Chinese schools do not demand cooperative behaviors but if some changes happen and authorities encourage group learning, agreeableness would also change into a significant predictor. (Peeters, Van Tuijl, Rutte, & Reymen, 2006).

In the study done by Chamorro-Premuzic and Furnham (2008), they investigated the degree to which personality, fluid intelligence, and learning approaches predict academic performance. 158 undergraduate students from London University participated in this study. The results showed that, conscientiousness, openness, deep and achieving approaches to learning all have a positive relation with academic performance (AP). The strongest predictor of exam grades was conscientiousness, however, gf, deep learning approach, conscientiousness, openness defined the highest percentage of variance. Also, it is reported that openness acted as a mediator between IQ and AP, this means that people with higher IQ get higher grades and the reason is that they are more open to new experience.

### **METHOD**

This chapter discusses the methodology which includes participants and setting, instrumentation, materials, and procedure. Each of them will be elaborated in details. The study aimed at investigating the relationship between the Big Five personality traits, fluid intelligence and assessment preference among Iranian undergraduate English students. The participants of the study include 250 B.A TEFL students in Payam Nour and Islamic Azad universities of Mashhad, Khorasan Razavi, Iran. They include both gender female and male students with the age range of 18-25 years old. They choosed randomly. The researcher randomly selected participants among all possible B.A students. To measure assessment preference we use a short questionnaire, it



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contained a scale from strongly agree to strongly disagree with seven questions. Short questions reveal what students' preferences are. These seven questions are simply saying "I prefer *one test type*" and students should mark "strongly agree" to "strongly disagree". The tests are essay type, completion test, multiple choice, cloze test, true-false, information-gap and oral exam.

Personality was assessed using the Persian translated version of Five Factor Inventory (NEO\_FFI): Neuroticism-Extraversion-Openness Five-Factor Inventory (Costa & McCrae, 1989). This inventory is a short version of the NEO-PI-R and assesses the personality dimensions of neuroticism (low emotional stability), extraversion, openness to experience, agreeableness, and conscientiousness. Hundreds of studies have used this inventory as it demonstrates good internal and external validity (Costa & McCrae, 1992). Items ask about typical behaviors or reactions and are answered on a five-point liker-type scale, ranging from "strongly disagree" to "strongly agree". Individuals are asked to describe themselves over a range of 60 items. The high score shows which trait is more noticeable. In Goldberg's research (2009), the reliability for each trait was reported as follows; Agreeableness (0.82), Conscientiousness (0.79), Neuroticism or ES (0.86), Openness to Experience (0.84), Extraversion (0.87). Moreover in chapter 4, the cronbach alpha was gained for each trait; Extroversion (0.91), Agrreableness (0.87), Conscientiousness (0.85), Neuroticism (0.74) and Openness to Experience (0.89). (See table4.4). The probable time for filling out this questionnaire was about ten minutes. The translated version used by by Garoosifarshi (1377). The Cronbach alpha for NEO-FFI questionnaire as reported by Garoosifarshi (1377) were 0.83 for neuroticism, 0.75 for extraversion, 0.80 for openness, 0.79 for agreeableness, and 0.79 for conscientiousness, cited in Fathi Ashtiani (2009).

To measure the Fluid intelligence, standard version of Raven test was administered (40min). It is a non-verbal multiple-choice test. In fact, this is a pictorial test in which the test taker is supposed

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to choose the appropriate picture which is mostly identical with the pictures in the stem part. The participants have to complete a series of drawings by identifying relevant features based on the spatial organization of an array of objects, and choosing one object that matches one or more of the identified features. Validity and reliability of Raven progressive matrices is shown by Raven, Court, & Raven (1977). Such matrices assess the ability of realizing one or more relationships between mental representations or relational reasoning.

Some students were tested in one day over two time of classes and some of them were tested in two different days. All completed the questionnaires under the supervision of their professors and the researcher. First step was completing the fluid intelligence test and then assessment preference. The next step was completing personality questionnaire. The researcher also explained and clarified the intention and purpose of this study to students. Students were given instruction before filling out the questionnaires. The time given to the participants to fill out the questionnaires was about 50 minutes. Correlation coefficient and Multiple Linear Regression was run in order to analyze the data.

The data were analyzed using SPSS software 22.0 (2014) to investigate the probable relationships between the examinees' personality, fluid intelligence and assessment preference among Iranian undergraduate students. The data gathered from the three questionnaires were analyzed through SPSS software. Cronbach alpha used to see if they show significant value. The researcher used multiple regression analysis to find the best predictor. All sets of personalities have been put into the regressions to figure out which one is the best predictor of each assessment method.

**DATA ANALYSIS**

The present study is an attempt to explore the relationship of fluid intelligence, personality and assessment preference of the Iranian intermediate students.

**Normality Test**

To assess the normality of data distribution, the Kolmogorov-Smirnov test was utilized. This test is employed to check whether the distribution deviates from a comparable normal distribution.

**Table 1**

**The Results of Kolmogorov-Smirnov Test**

	<b>Statistics</b>	<b>df</b>	<b>Sig.</b>
<b>Extroversion</b>	.021	250	.17
<b>Agreeableness</b>	.034	250	.09
<b>Conscientiousness</b>	.049	250	.07
<b>Neuroticism</b>	.023	250	.11
<b>Openness to Experience</b>	.033	250	.09
<b>Fluid Intelligence</b>	.029	250	.10
<b>Preference for assessment method</b>	.041	250	.08

If the *p*-value is non-significant ( $p > .05$ ), we can say that the distribution of a sample is not significantly different from a normal distribution, therefore it is normal. If the *p*-value is significant ( $p < .05$ ) it implies that the distribution is not normal. Table 1 presents the results of the Kolmogorov-Smirnov test for different sub-constructs of personality traits, fluid intelligence and their preference for assessment method. As it can be seen, the obtained sig value for all variables

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is higher than .05. Therefore, it can safely be concluded that the data is normally distributed across all the variables.

Table 2 presents descriptive statistics of sub-constructs of personality traits including the mean, standard deviation, maximum and minimum scores. The comparison of these scores appears in the following pages.

**Table 2**

**Descriptive Statistics of Sub-Constructs of Personality Traits**

	N	Minimum	Maximum	Mean	D	Mean per item
<b>Extroversion</b>	250	13.00	40.00	32.24		
<b>Agreeableness</b>	250	12.00	41.00	35.73		
<b>Conscientiousness</b>	250	14.00	45.00	33.93		
<b>Neuroticism</b>	250	8.00	33.00	25.68		
<b>Openness to Experience</b>	250	17.00	49.00	35.90		

The possible range of scores for extraversion and neuroticism is between 8 and 40, for agreeableness and conscientiousness is between 9 and 45, and for openness to experience is between 10 and 50. Because the number of items was different in the various subscales of the questionnaire, an average item score was computed for each sub-construct, ranging from 1 to 5. Extraversion has the highest mean score (4.03) and Neuroticism has the lowest mean score (3.21). Table 3 presents descriptive statistics of learners' fluid intelligence.

**Table 3**

**Descriptive Statistics of learners' Fluid intelligence**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>Fluid Intelligence</b>	250	17.00	31.00	28.55	6.97

The possible range of score for the fluid intelligence scores is between 0 and 36. As it can be seen in table 3 the mean score of learners' report in fluid intelligence is 28.55 with standard deviation of 6.97. Table 4 presents descriptive statistics of sub-constructs of preference for assessment method (Essay type test, completion test, multiple choice test, cloze test, true-false test, information gap test, oral exam)

**Table 4**

**Descriptive Statistics of Sub-Constructs of Preference for Assessment Method**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>D</b>
<b>Essay Type Test</b>	250	1.00	5.00	2.98	
<b>Completion Test</b>	250	1.00	5.00	3.29	
<b>Multiple Choice Test</b>	250	2.00	5.00	4.85	
<b>Cloze Test</b>	250	2.00	5.00	3.44	
<b>True-False Test</b>	250	1.00	5.00	4.12	
<b>Information Gap</b>	250	2.00	5.00	3.10	
<b>Oral Exam</b>	250	1.00	5.00	2.53	

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The possible range of scores for all seven preferences for assessment method is between 1 and 5. Multiple Choice Test has the highest mean score (4.85) and Oral Exam has the lowest mean score (2.53).

Table 5 summarizes the information obtained from Cronbach alpha. For the fluid intelligence test with dichotomous items (0 and 1) Cronbach alpha was utilized. As can be seen, the fluid intelligence test gained acceptable indices of Cronbach alpha as a whole (.72). Moreover, for the personality traits and preference for assessment method questionnaires, Cronbach was used. As can be seen, the utilized questionnaires gained good indexes of Cronbach alpha in their subscales.

**Table 5**

### Results of Cronbach Alpha and KR-20Indexes after Reliability Analysis

Scale	Subscales	Number of items	Cronbach alpha
<b>Fluid Intelligence</b>	-----	36	.72
	<b>Extroversion</b>	8	.83
	<b>Agreeableness</b>	9	.80
<b>Personality Traits</b>	<b>Conscientiousness</b>	9	.79
	<b>Neuroticism</b>	8	.85
	<b>Openness to Experience</b>	10	.92
<b>Preference for Assessment</b>	-----	7	.83

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The alpha coefficient for 7 items of Total Preference for Assessment was .83, and for five sub-constructs of Personality Traits was between 0.79 to 0.92, which suggest that the items have relatively good internal consistency.

Table 6 indicates the results of correlation between Iranian TEFL learners' personality traits and their preference for assessment method.

**Table 6**

### **Results of Correlation between learners' personality traits and their Preference for assessment method**

	<b>Extraversion</b>	<b>Agreeableness</b>	<b>Conscientiousness</b>	<b>Neuroticism</b>	<b>Openness</b>
<b>Essay Type Test</b>	.09	.08	.12*	-.18**	.21**
<b>Completion Test</b>	.13*	.01	.06	.02	.10
<b>Multiple Choice</b>	.17**	.11*	.05	-.07	-.12*
<b>Cloze Test</b>	.14*	-.03	.10	-.09	.11
<b>True-False Test</b>	.08	.06	.01	.00	.07
<b>Information Gap</b>	.13*	.10	.11*	-.15*	.13*
<b>Oral Exam</b>	.15*	.07	.10	-.23**	.25**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

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As Table 6 shows, Extraversion has positive relationship with Multiple Choice ( $r=.17$ ,  $p<.05$ ), completion test Choice ( $r=.13$ ,  $p<.05$ ), cloze test Choice ( $r=.14$ ,  $p<.05$ ), information gap test Choice ( $r=.13$ ,  $p<.05$ ), and oral exam Choice ( $r=.15$ ,  $p<.05$ ). Agreeableness has positive relationship with Multiple Choice ( $r=.11$ ,  $p<.05$ ). Conscientiousness has positive relationship with Essay type test ( $r=.12$ ,  $p<.05$ ) and information gap test ( $r=.11$ ,  $p<.05$ ). Neuroticism has negative relationship with Essay type test ( $r=-.18$ ,  $p<.05$ ), information gap test ( $r=-.15$ ,  $p<.05$ ), and oral exam ( $r=-.23$ ,  $p<.05$ ) and Openness to experience has the positive relationship with Essay type test ( $r=.21$ ,  $p<.05$ ), information gap test Choice ( $r=.13$ ,  $p<.05$ ), and oral exam Choice ( $r=.25$ ,  $p<.05$ ). However, there is a negative relationship between Openness to experience and Multiple Choice ( $r=-.12$ ,  $p<.05$ ).

**Table 7**

### Results of multiple regression analyses of assessment styles and five personality traits

	Essay Type		Completion Test		Multiple Choice		Cloze Test		True-False		Information Gap		Oral Exam	
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
<b>Extraversion</b>	.04	0.28	.05	0.32	<b>.18</b>	<b>2.35</b> **	.10	1.69	.01	.12	.08	.51	<b>.16</b>	<b>2.21</b> **
<b>Agreeableness</b>	.03	0.27	.04	0.35	<b>.14</b>	<b>2.09</b> *	.08	1.20	.07	0.99	.10	1.09	0.01	0.19
<b>Conscientiousness</b>	<b>.13</b>	<b>2.06</b> *	.06	0.85	.02	0.12	.09	1.57	.00	0.00	.07	1.07	.05	.65
<b>Neuroticism</b>	<b>-.19</b>	<b>3.17</b> **	-.01	0.11	-.05	.38	-	.2603	.00	0.00	-.07	1.44	<b>-.21</b>	<b>3.54</b> **



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<b>Openness</b>	<b>.24</b>	<b>3.77</b>	.06	0.9	<b>-.11</b>	<b>2.10</b>	.09	1.6	.03	.42	.10	1.9	<b>.29</b>	<b>4.31</b>
		**		8		*		0				0		**
<b>F(5,244)</b>	4.29		.99		3.84		1.1		.49		1.29		5.70	**
	**				**		1						**	
<b>Adj.R<sup>2</sup></b>	.07		.01		.06		.02		.01		.02		.09	

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Table 7 displays the results of multiple regression analyses with the seven assessment preference as the dependent variables and five personality traits as the independent variables. As this table shows, Extroversion is significant predictor for Multiple Choice ( $B=.18, t=2.35$ ), and Oral Exam ( $B=.16, t=2.21$ ). Agreeableness is significant predictor for Multiple Choice ( $B=.14, t=2.09$ ). Conscientiousness is significant predictor for Essay Type ( $B=.13, t=2.06$ ). Neuroticism is negative significant predictor for Essay Type ( $B=-.19, t=3.17$ ), and Oral Exam ( $B=-.21, t=3.54$ ). In addition, Openness to experience is positive predictor of Essay Type ( $B=.24, t=3.77$ ), and Oral Exam ( $B=.29, t=4.31$ ) and negative predictor of Multiple Choice ( $B=-.11, t=2.10$ ). Therefore, the first null hypothesis was rejected.

Table 8 indicates the results of correlation between Iranian TEFL learners' fluid intelligence and their Preference for assessment method.

**Table 8**

**Results of Correlation between learners' Fluid Intelligence and their Preference for Assessment Method**

	<b>Essay Type</b>	<b>Completion Test</b>	<b>Multiple Choice</b>	<b>Cloze Test</b>	<b>True- False</b>	<b>Information Gap</b>	<b>Oral Exam</b>
<b>Fluid Intelligence</b>	<b>.21**</b>	<b>.07</b>	<b>.27**</b>	<b>.05</b>	<b>-.09</b>	<b>.10</b>	<b>.16*</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).

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

As the table shows, there are significant relationships between three Preferences for assessment method and fluid intelligence: Multiple Choice ( $r=.27$ ,  $p<.05$ ), Essay Type ( $r=.21$ ,  $p<.05$ ), and oral exam Choice ( $r=.16$ ,  $p<.05$ ).

Table 9 displays the results of regression analyses with the seven assessment preferences as the dependent variables and fluid intelligence as the independent variable.

**Table 9**

*Results of multiple regression analyses of assessment method and fluid intelligence*

	Essay Type		Completion Test		Multiple Choice		Cloze Test		True-False		Information Gap		Oral Exam	
	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t	Beta	t
<b>Fluid Intelligence</b>	<b>.18</b>	<b>2.40**</b>	.03	0.54	<b>.21</b>	<b>3.71**</b>	.04	.87	-.02	.21	.08	1.33	<b>.11</b>	<b>2.01*</b>
<b>F(1,248)</b>	5.76**		.92		5.93**		1.02		.86		1.90		2.99*	
<b>Adj.R<sup>2</sup></b>	.04		.01		.05		.01		.01		.02		.03	

As Table 9 shows, fluid intelligence is a significant predictor for Essay Type ( $B=.18$ ,  $t=2.40$ ), Multiple Choice ( $B=.21$ ,  $t=3.71$ ), and Oral Exam ( $B=.11$ ,  $t=2.01$ ). Therefore, the second null hypothesis was rejected.

### **Discussion of the Findings**

Based on the findings, it was clearly proven that there is a moderate but statistically significant relation between personalities, fluid intelligence and assessment preferences among TEFL learners. The examiners, based on their fluid intelligence and personality can subconsciously answer one type of assessment much better. It was proven that the most preferred type of measurement are multiple choice, true-false and cloze test. It was shown that extroverts can get high scores in multiple choice tests and oral exams. The results from Table 7 demonstrate how

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each personality type accounted for each assessment types. The result is important for test takers, syllabus designers and assessment developers.

The researcher clearly showed that personality and fluid intelligence are related to how students like to be assessed. All null hypotheses were rejected, Also the research showed how fluid intelligence and personality crucially influence examinees' performance. In many countries some branches such as arts and science needed to be tested with written exams like essay exams. They cannot be tested by some method of assessing like oral exams, except for languages examinees. Normally educational system choose the best way that students should be tested, although students prefer to choose a course or a teacher based on the way they'll be assessed.

They preferred multiple choice although examinees did mind if the test measuring true ability, the important aspect was only the score of the test. Overall, true-false items are popular. However, their correlation is low. The result confirmed not only there were differences in the way examinees wanted to be assessed with different personalities but also how each individual wanted to be assessed. The correlation table showed multiple-choice format is the most preferred test by intelligent examinees. Probably because of finding logical relation among responses, this can be the subject of further study. Regression tables can be interpreted in two ways, first they showed how each personality accounted for each test for example an extrovert examinees get higher score in multiple choice than the other types of personalities.

The second aspect can be interpreted as the relation among all the personalities, fluid intelligences and the assessment methods, teachers should consider how these two variables influence scores. The final table of regression showed that fluid intelligence related to multiple-choice and essay exams. So it is assumed one with higher fluid intelligence will get better result in any multiple-choice exams. This claim can impinge on the validity of exams such as university

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entrance in Iran. The higher examinees' fluid intelligence is, the least they wanted to do completion tests. Multiple choice is the most preferred by extrovert students too. Furnham and Chamorro-Premuzic (2005) found the same result. They argued that fluid intelligence was correlated with preference for multiple choice exams. Furnham, Christopher and Martin (2007) speculate that "bright students prefer multiple choice exams because the answer is in front of them, and picking it out from among the incorrect answers should be comparatively simple for an intelligent student". Researcher also explored the same result as Furnham, Chamorro-Premuzic (2005) and Chamorro-Premuzic (2006) that neuroticism is negatively correlated with preference in essay exams. Multiple choice as the most preferred gain non-preference in openness. The same result found by Chamorro-Premuzic (2005). Chamorro-Premuzic and Furnham (2005) found openness is correlated with fluid intelligence, so it should have been the predictor of multiple choice, but our result showed they have negative correlation ( $r=-0.12$ ). This study found openness is weakly related to exam method preference and the same result mentioned for conscientious examinees by Furnham and Chamorro-Premuzic (2005) that examinees like essay type. They concluded that they like essay type because they are probably satisfied to work hard on a tasks under non-threatening conditions over a long period of time, therefore less conscientious examinees prefer assessments that occur in short period of time. Researcher has put all sets of personalities into the regressions, they predicted three favored assessment methods: the oral exams, essay-type exam and the multiple choice test. Fluid Intelligence was the best predictor of multiple choice. The measuring methods of examinees' skills and ability acquired is an important issue for teachers and syllabus designers who wanted to find fair methods of assessing. Examinees themselves show strong preferences for certain methods that they believe are best suited to their personality and ability. Future study

needed for clarify any unexplained aspect of examinees preference and why they like one method over the others, if it remains any.

### **CONCLUSION**

The main purpose of this study was to investigate the relationship between assessment preference and examinees' fluid intelligence and personality types. The major point relies on here, what helps the examinee to pass a test in a certain method of assessing? The researcher showed fluid intelligence and personality have a great role. In one point, one with higher fluid intelligence gets a higher score among the others even though he has a lower ability. Which type of tests is the most preferred, and its reason can be the subject for further research. Students' preference has the great role in the way of how teachers choose evaluation methods. It is crucially important that measuring methods be fair. If not, educational system would not get its goal. The testing method and choosing the best way of assessing has often been overlooked by language teachers and has tended to be a much-neglected part of language programs (White & Arndt, 1991). This plays an important role in education. So teachers need to know how to evaluate their classes. Teachers need to understand the key features of a valid test.

The findings suggest that examiners of the second language ought not to choose one method over the others simply. They must be aware of the potential effects of test methods on examinees performance. It is also important for examiners to identify the exact nature of different test formats. Extracted trait by each test may not be exactly what examiner looking for. The result of this research stated that different personalities and different amount of fluid intelligence preferred different test methods. This has been already confirmed by the present study.

Syllabus designers should also make a revision of exercises, they may be delusive for teachers to find if whole class comprehend the lesson. It is highly recommended for language testers to conduct the in-depth qualitative analysis of test items.

## REFERENCES

- Ben-Porath, Y. S., & Waller, N. G. (1992). Five big issues in clinical personality assessment: A rejoinder to Costa and McCrae.
- Biggs, J. (1996). What do inventories of students' learning processes really measure? *British Journal of Educational Psychology*, 3, 3–19.
- Biggs, J. (2003). Aligning teaching and assessing to course objectives. *Teaching and learning in higher education: New trends and innovations*, 2, 13-17.
- Birenbaum, M., & Nasser, F. (1994). On the Relationship between Test Anxiety and Test Performance. *Measurement and Evaluation in Counseling and Development*, 27(1), 293-301.
- Birenbaum, M. (1997). Assessment preferences and their relationship to learning strategies and orientations. *Higher education*, 33(1), 71-84.
- Birenbaum, M., & Feldman, R. A. (1998). Relationships between learning patterns and attitudes towards two assessment formats. *Educational Research*, 40(1), 90-98.
- Chamorro-Premuzic, T., & Furnham, A. (2004). A possible model for understanding the personality-intelligence interface. *British Journal of Psychology*, 95(2), 249-264.

## Personality and Intelligence Correlate of Examinees' Preference for Assessment Method

Chamorro-Premuzic, T., & Furnham, A. (2005). *Personality and intellectual competence*.

London: Lawrence Erlbaum.

Chamorro-Premuzic, T., Furnham, A., Dissou, G., & Heaven, P. (2005). Personality and preference for academic assessment. *Learning and Individual Differences, 15*, 247–256.

De Raad, B., & Schouwenburg, H. C. (1996). Personality in learning and education: A review.

Dochy, F. J., & McDowell, L. (1997). Assessment as a tool for learning.

Ely, C. M. (1986). Language learning motivation: A descriptive and causal analysis. *The Modern Language Journal, 70*(1), 28-35.

Entwistle, N. J. (1991). Approaches to learning and perceptions of the learning environment. *Higher education, 22*(3), 201-204.

Eyong, E. I., David, B. E., & Umoh, A. J. The Influence of Personality Trait on the Academic Performance of Secondary School Students in Cross River State, Nigeria.

Gijbels, D., van de Watering, G., & Dochy, F. (2005). Integrating assessment tasks in a problem-based learning environment. *Assessment & Evaluation in Higher Education, 30*(1), 73-86.

Gijbels, D., Dochy, F., Van den Bossche, P., & Segers, M. (2005). Effects of problem-based learning: A meta-analysis from the angle of assessment. *Review of educational research, 75*(1), 27-61.

Peeters, M. A., Van Tuijl, H. F., Rutte, C. G., & Reymen, I. M. (2006). Personality and team performance: a meta-analysis. *European Journal of Personality, 20*(5), 377-396.



## Personality and Intelligence Correlate of Examinees' Preference for Assessment Method

- Ramsden, P., & Moses, I. (1992). Associations between research and teaching in Australian higher education. *Higher Education, 23*(3), 273-295.
- Schelfhout, W., Dochy, F., Janssens, S., Struyven, K., Gielen, S., & Sierens, E. (2006). Educating for learning-focused teaching in teacher training: The need to link learning content with practice experiences within an inductive approach. *Teaching and Teacher Education, 22*(7), 874-897.
- Scouller, K. (1998). The influence of assessment method on students' learning approaches: Multiple choice question examination versus assignment essay. *Higher Education, 35*(4), 453-472.
- Seliger, H. W. (1978). Implications of a multiple critical periods hypothesis for second language learning. *Second language acquisition research: Issues and implications*, 11-19.
- Struyven, L., & Steurs, G. (2005). Design and redesign of a quasi-market for the reintegration of jobseekers: empirical evidence from Australia and the Netherlands. *Journal of European Social Policy, 15*(3), 211-229.
- William, D. (2011). *Embedded formative assessment*. Solution Tree Press.
- Zhang, J., & Ziegler, M. (2016). How do the big five influence scholastic performance? A big five-narrow traits model or a double mediation model. *Learning and Individual Differences, 50*, 93-102.