



# **Психофизиологические и лингвистические аспекты тестирования студентов, обучающихся по направлениям «Теория и практика перевода»**

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## **Psychophysiological and Linguistic Testing for Students Enrolled in Interpreter and Translator Training Programs**

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### **Аннотация**

Современные технологии предоставляют возможность проводить «опережающее» тестирование обучающихся с целью оценить потенциал их развития в избранной профессиональной сфере. Предлагаются как собственно лингвистические методы, так и методы, относящиеся к другим областям научного знания. Помимо лингвистических компетенций предлагается исследовать коммуникативные и организаторские склонности обучающихся, остроту

слуха, помехоустойчивость слуховой системы, определять ведущее ухо и состояние звуколокализационной функции испытуемых, исследовать свойства внимания (объем, сосредоточенность, распределение, устойчивость, переключаемость). Авторы статьи обращают внимание на негативное влияние шума на рабочем месте на ЦНС и, соответственно, качество работы и здоровье переводчика, что требует мер по регламентированию уровня шума и продолжительности его воздействия.



## Abstract

Contemporary technologies have made it possible to carry out “anticipatory” testing in order to evaluate the students’ potential in their chosen field of study. Both linguistic testing and interdisciplinary approach appear useful. In addition to linguistic testing, a number of other research methods can be proposed, such as communicative and organizational aptitude test, hearing sense testing, noise-immunity and lateralization testing, evaluating condition of sound localization system of the subject, attention properties (attentional capacity, concentration, distribution, stability, selectiveness) . The authors then turn to the problem of excessive noise on the workplace and its negative impact on the CNS, which contributes to deterioration of performance and, ultimately, causes health problems, thus, noise level and duration should be limited.

**Ключевые слова:** перевод, внимание, слуховое восприятие, латерализация.

**Key words:** interpreting, attention, auditory acuity, lateralization.

## Introduction

In the modern world, we see a steady demand for skilled translators and interpreters. At the same time, advances in technology allow us to improve on the professional level of training due to the use of new contemporary equipment and development of new methods based not only on the traditional paradigm but also on the achievements of multidisciplinary research. The high cost of training imposes higher requirements on students. Contemporary technologies make it possible to carry out “anticipatory” testing in order to reveal the students’

potential by evaluating their linguistic competence as well as psychophysiological reactions.

## Communicative and Organizational Skills

According to A.Fedorov [Федоров, 2002], translating and interpreting place high demands on linguistic competence and psychophysiological mechanisms on the translator/interpreter. The task of rendering oral or written speech in another language is undoubtedly a complex and challenging one. Communicative and Organisational Aptitude Test proved to be informative and revealed high values for scale «communication» for most tested students who chose languages as their major (values ranging 16-19 out of 20 points). Organizational skills, however, seemed to be lacking with only two students out of nine tested scoring 17-19 for «organization» The same test revealed very high organizational and communicative skills in all of the working interpreters (values ranging 17-19 out of 20 for scale «communication» and 16-19 for scale «organization»). At the same time, medical and technical students did not demonstrate high values in this test in general (values ranging 3-11 and 6-15 for «communication» respectively and 15-18 and 7-13 for «organization»). One may suppose that working interpreters (age 29-42) developed high communicative and organizational skills in the course of time. However, this assumption cannot be expanded to the students, aged 18-20, who have not had much professional experience. Therefore, it appears that young people in general evaluate their own abilities adequately when choosing their career path. Due to the relatively small number of participants in this testing program, though, so far the



authors can only make preliminary assumptions.

### **Language Skill Testing**

It is generally recognized that enrolling for interpreting/translating study programs requires language skill testing. Traditionally, the latter includes an essay (testing fluency and ability to express thoughts clearly in writing), interview (receiving and producing utterances, presentation skills and general communication ability), paraphrasing (identification of main ideas, quick transformations, text processing), listening (comprehension of spoken material, memory skills, selective attention). Advanced students may also be tested for simultaneous and consecutive interpreting skills as well as sight translation and written translation.

### **Auditory Perception**

All types of interpreting require excellent auditory perception. It has been noticed that, paradoxically, many interpreters prefer their mother tongue as source language and second language as target language. This curious fact only emphasizes the importance of auditory perception (ability to identify, interpret, and attach meaning to sound). With some types of translation (chuchotage, film translation, etc.) the interpreter receives audio signal through an open channel. In this case noticeable noise interference is often present, when the speech signals perceived by the interpreter are partially blocked by transient or constant unwanted noises, such as coughing, door slamming, paper rustling, various technological noises, etc. [Шадрин, 2008]. In this case we are dealing with the phenomenon known in psychoacoustics as «the cocktail party effect», when the interpreter has to focus

his/her auditory attention on a particular stimulus while filtering out a range of other auditory stimuli. The cocktail party effect is primarily a binaural effect; it is related to the localization of sound sources by the auditory system and its capacity to assign proper characteristics to these sources. It is well known that people whose hearing is impaired unilaterally seem to have a lot more difficulty eliminating the interfering noise. [Altmann et. Al, 2007]. The communicative success of interpreting in this instance directly correlates with the interpreter's auditory acuity, noise-immunity, concentration/vigilance. Therefore, it seems important to carry out screening auditory acuity tests. Such tests are frequently included in routine medical examinations. A doctor who is positioned at some distance from the subject performs the test, the patient does not look at the doctor. Each ear is checked separately. A person with normal hearing will be able to distinguish whisper at 10 m. distance. During such a test it may sometimes be possible to discover decrease in perception of high-pitch tones. Constant high-frequency noise initially causes temporary, reversible changes. In normal conditions after some time hearing is restored. If detrimental effect of background high-frequency noises takes place for years (1-2 to 5-10 years), temporary deterioration passes into constant. At first auditory nerve terminal damage affects perception of high-frequency range (>4000 Hz). Sounds [f] and [c] become indiscernible. Gradually hearing sensitivity reduction extends to more low-frequency sounds ([u], [o], [m], [n], [r] [Альтман, 1990]. Noise-induced hearing loss is a potentially dangerous and irreparable condition. For this reason, auditory acuity should be checked regularly, hearing threshold measured. Headsets, speakers and earphones must be examined



regularly to avoid excessive background noise. Hemispheric lateralization should be investigated to discover the stronger ear.

### **Attention and Memory.**

Attention and memory properties are just as important. It is necessary to establish individual properties of attention, such as attentional capacity, concentration, distribution, stability, selectiveness. For this purpose it is possible to perform a number of tests, aimed at revealing the above-mentioned properties (attentive matrices test, Riesz-Rey's test, Schulte's tables) [Истратова, 2006]. These tests also help us reveal some important personality features, such as inclination towards speed or accuracy, attitude towards one's own mistakes, mental speed, speed of eye search movements. When performing this task it is possible to track involuntary weakening or strengthening of breath, loudness of speech. Also, a test for evaluating short-term acoustical memory can be offered (number of lexical units which the person can remember from one aural presentation).

### **Summary**

(1) Contemporary technologies allow for possibilities of «anticipatory testing» of linguistic competence and psychophysiological characteristics of students enrolling in translation and interpreting study courses.

(2) Communicative and Organisational Aptitude Test revealed high values for scale «communication» for most tested students who chose languages as their major. The same test revealed very high organizational skills in all of the working interpreters. At the same time, medical and technical students

did not demonstrate high values in this test in general.

(3) Think-aloud protocol may be additionally used in linguistic testing.

(4) Frequently an interpreter may experience the so-called «cocktail party effect». Therefore, it is necessary to test interpreter's auditory acuity, noise-immunity and lateralization.

(5) Testing attention characteristics may be necessary: capacity, concentration, distribution, stability, selectiveness.

(6) Workplace hygiene is essential: certain noise levels may cause damage to the auditory organ and central nervous system.

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