

## 2 RESEARCH CHARACTERISTICS

### 2.1 The aim and objectives of the research

Based on existing research, the results of which are outlined above, the aim of my research is two-fold and has been formulated as follows:

- 1) To find out to what extent the formation and use of active verb forms, auxiliary verbs, modal verbs, conditional clauses, passive voice, countability in nouns, articles and prepositions are interconnected in English grammar when acquired by Slovak learners.
- 2) To find out the possible existence and number of underlying factors influencing the acquisition of the grammatical aspects listed in 1.

To meet the research objectives, the following **research plan** was set up:

- (1) To determine characteristics of the target group.
- (2) To select grammatical tasks for the research testing of selected grammatical skills.
- (3) To choose schools and carry out the testing.
- (4) To carry out correlation analysis.
- (5) To find out whether and, if so, to what extent the acquired grammatical aspects are interconnected.
- (6) To apply the findings to the process of English grammar acquisition.
- (7) To draw conclusions and suggest possible areas of further research.

**24**

### 2.2 Target group characteristics

A group of 143 students (83 girls and 60 boys) attending 8-year secondary comprehensive schools (Osemročné gymnáziá) in Slovakia was examined. Schools in Košice, Lipany, Prešov, Revúca, Sabinov, Sečovce, Snina and Stará Ľubovňa were involved in the research.

Table 1: The numbers of respondents by gender and school

School	SE	SB	RA	SL	LP	KE	SV	PO	Total
Male	7	12	7	10	10	3	8	3	60
Female	12	8	6	16	15	7	11	8	83
Total	19	20	13	26	25	10	19	11	143

SE – Sečovce, SB – Sabinov, RA – Revúca, SL – Stará Ľubovňa, LP – Lipany, KE – Košice, SV – Snina, PO – Prešov, Total – total number of male/female respondents per school.

All the students involved in the research were of approximately the same age (born within a year of each other), and when the research was conducted, they were attending the fifth grade of the aforementioned schools. They had been taking formal instruction in the form of English lessons with qualified teachers for four years prior to the research. This is how possible discrepancies in the learners' proficiency caused by different ages were avoided. There was no native speaker participating in or leading the education process in any of the classes.

The selection of schools was based on accessibility and cooperativeness of their headmasters and the teachers. Originally, over 200 respondents in total were subjected to the research. To guarantee the highest possible homogeneity, however, their number was lowered by means of a detailed process of selection, as a consequence of which, the following individual students were excluded from the research group:

- Those whose nationality was not Slovak.
- Those who regularly spent more than two weeks at any one time in an English speaking country.
- Those who misunderstood or completely failed to understand any task in the test.
- Those who failed to fill in all the relevant information in the questionnaire.

25

In this way, as homogenous a group of respondents as possible was created.

## **2.3 RESEARCH METHODS**

### **2.3.1 Methods of obtaining research data**

#### **2.3.1.1 Questionnaire**

To find out the data important for deciding on the final research group, a questionnaire consisting of a mixture of open and closed questions was created. The questionnaire was divided into three main parts – an introductory part where the respondents were supposed to provide information on their gender, nationality and age. Based on this information, the respondents were later divided into groups for statistical processing.

Next, the respondents provided data about their family backgrounds like parents' and siblings' ages and language skills in English. The aforementioned data were included in the research and the possible influence of these parameters was tested.

Finally, data on the respondents' formal input in English (length and intensity) were gained, as well as information about their studies outside of school.

The Slovak version, as it was presented to the respondents, can be found in **Appendix 1**.

### **2.3.1.2 English grammar test**

The grammatical awareness of the respondents was examined by means of a **grammar test** specially designed for this purpose and pre-tested on a group of learners of English as a foreign language of the same age and level. The items that caused confusion were removed from the final draft.

The test consisted of nine sections, each examining a different aspect of English grammar.

- The **first** section – **cloze test** – was used to find out how the students were able to cope with filling in gaps without being given the options to choose from. Different parts of speech (nouns, adjectives, pronouns, verbs, adverbs, determiners, etc.) were selected to cover a broad range of the field.
- The **second** section dealt with **active verb forms**. Verbs were to be put into four dialogues (twenty verb forms altogether) where the correct tense-aspect combination was clearly and unambiguously suggested. The respondents were supposed to fill in the following verb forms: present simple and continuous, past simple and continuous, present perfect simple and continuous, future simple and continuous.
- Section **three** focused on the use of **auxiliary verbs**. The students' task was to fill the correct auxiliary verbs in the blanks. Twelve verbs were provided with the possibility of the same auxiliary verb to be used more than once, which prevented the students from 'guessing' the correct answer by choosing from the 'left over' auxiliaries.
- The **fourth** section examined **modal verbs** by means of a multiple choice exercise. Thirteen sentences were set in context to better illustrate the situation in question and in each item, the respondents were given three options to choose from.
- To test the understanding and correct formation of **conditional clauses**, multiple choice (four options) was used in section **five** where the students were asked to correctly fill in either the verb in the main

clause or the one in the subordinate clause of condition. Ten conditional sentences of type I, II and III were used in alternation.

- Section **six** was dedicated to **passive voice** where the respondents were supposed to rewrite eight sentences using the mentioned grammatical structure. A variety of tense-aspect combinations was used in this section.
- To test correct comprehension of the difference between **countable** and **uncountable nouns**, in the **seventh** section, the respondents were asked to fill in the blanks in twelve sentences, choosing between the correct form of the indefinite article (**a/an**) and quantifier **some**.
- In section **eight**, five meaningful paragraphs consisting of sentences with noun phrases functioning as subjects, objects and complements were used. In this exercise, fifteen items were to be filled in using a correct **article** (**the** – definite, **a/an** – indefinite or **—** standing for zero article).
- The last, **ninth**, section was designed to test the correct usage of English **prepositions** in fifteen sentences of varying difficulty. With no options given, the respondents were asked to provide their own answers.

The above test was constructed to examine the most important aspects of English grammar as well as to cover the problem areas arising from the differences between the system of Slovak as the first language and English as the target language.

A full version of the grammar test, as presented to the respondents, can be found in Appendix 2.

### 2.3.2 Methods of processing research data

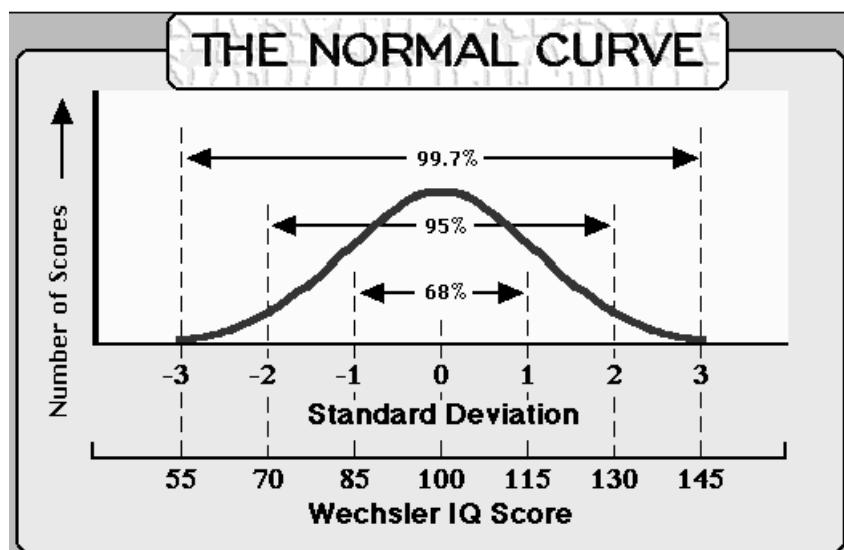
The statistical methods which were used to process research data are presented below. It is necessary to understand how the results were obtained, although the details, or even specific patterns which were applied to calculate the results, are beyond the scope of this treatise. Still, to understand what was calculated and what is, thus, presented in the chapter comprising the results of this work, it is important to have a brief idea of what these methods are and what they measure.

### 2.3.2.1 Defining normal distribution and T-test

The first important issue to consider with regard to choice of appropriate statistical methods is the normality of the research subjects' distribution. Normal distribution (as represented by the normal curve graph in **Figure 3**) is defined by its mean (average score) and its standard deviation (a measure of how scores are dispersed relative to the mean).

It could be said that **normal distribution** is the standard spread of cases in the population, with the majority being closest to the average. The further from the average the cases are, the fewer of them can be found.

**Figure 3: The normal curve**



28

(Huitt, 2002)

If a biological or psychological characteristic was measured in a representative sample of the population, the results, if presented in a graph, would form a normal curve. To provide an example, if the height of the female population in Slovakia was measured, and it was found out that the average height was 165 cm, most cases would lie in this average area (let us say between 160 and 170 cm), and fewer and fewer cases would approach the shortest or tallest woman's height. Similarly, in most school classes, most students are average and there are fewer very good or very weak students.

In order to test whether a coefficient was found by chance or whether there is an actual relationship between the examined parameters, a **t-test** is applied. The value 't' stands for the number of standard deviations applied to the results (how measurements in a set differ from the average).

### ***2.3.2.2 Correlation analysis***

It is possible to determine a relationship between any two variables in the world. This relationship can be observed and, in statistics, expressed by a correlation coefficient (referred to as 'r' in the research), ranging from -1 through 0 to +1. Zero expresses no relationship at all, while -1 and +1 signify the strongest possible relationship, be it negative or positive. Using height and weight of people as an example, a positive relationship would be observed when both figures increase. (Taller people, in general, are heavier than shorter people.) A negative relationship occurs when one figure increases while the other decreases. For instance, this can be observed when measuring short-term memory capacity in relation to age of a person (the older a person is, the less they can remember).

In this treatise, relationships between performances in the selected grammatical aspects were tested in the respondents.