Intervention Reading Comprehension Program in French Language

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DOI: 10.26907/esd.16.4.06  
Submitted: 30 April 2020; Accepted: 10 November 2020

Abstract

One of the priorities of European language policy is to maintain linguistic diversity, cultural identity and, last but not least, to promote effective foreign language learning. French language has a long tradition in the Slovak geographical area, whether in a historical, cultural or economic context. In the educational context over the last decade, however, it has become a second foreign language, which has begun to be reflected in particular in the declining numbers of pupils studying French. Quantitative indicators in the form of statistical yearbooks show a sixty to seventy-five percent decrease in the number of pupils learning French at different levels of education. The lower numbers of lessons, normally allocated for a second foreign language, affects the quality of the knowledge and language skills that the pupil has to acquire in order to be able to communicate at the required level in French.

Based on the current position of French language in the Slovak school environment and the requirements that are placed on the language level of students, our goal was to design an effective tool that would take into account the various factors affecting the acquisition of foreign language competence of students in French. The main aim of our contribution is to present to the professional public a tool in the form of an intervention program, which specifically focuses on the development of one of the key language skills included in the Common European Framework of Reference for Languages, namely reading comprehension in French language. The degree of difficulty of its acquisition depends on several factors. The mastery of the linguistic, sociolinguistic and intercultural specifics typical for French language plays an important role in this process. In a broader sense, however, it is a much more complex process, which is also conditioned by cognitive, social and personality variables. These variables can also be called predictors or factors that significantly affect the understanding of a foreign language text.

The overall concept of the intervention program is based on pre-research associated with measuring the level of reading comprehension and determining the predictors affecting students’ comprehension of the text. Considering the pre-research carried out to determine the achieved level of pupils in reading comprehension, the proposed intervention program can be regarded as a preventive, but also a corrective tool for the development of language competence in French language. The compilation of an intervention program in the form of ten model intervention units for the development of reading comprehension in French has a precise structure and takes into account the ontogenetic specifics of the target group (third-year students of secondary education). The ambition of the intervention program is to include various possibilities and ways of working with text in French with regard to the development of the relevant predictor, and thus contribute to improve the quality of language education of students and last but not least to be an inspiration for teachers (as well as future teachers) of French language in a new original way.

Keywords: intervention, program, reading comprehension, measurement, French language, predictors.
Программа вмешательства в понимание текста, прочитанного на французском языке

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DOI: 10.26907/esd.16.4.06
Дата поступления: 30 апреля 2020; Дата принятия в печать: 10 ноября 2020

Аннотация
В число приоритетов европейской языковой политики входит сохранение языкового разнообразия, культурной самобытности и эффективного изучения иностранных языков. На территории Словакии долгое время сохранялись традиции изучения французского языка как в историческом, так и в культурном, и в экономическом контексте. Однако в последнее десятилетие французский язык стал занимать позицию второго иностранного языка, что привело к уменьшению числа учащихся, его изучающих. Ежегодная статистика свидетельствует о значительном, на шестьдесят-семьдесят пять процентов, снижении количества учащихся, изучающих французский язык на разных ступенях образования. Сокращается и количество часов, отводимых на изучение второго иностранного языка, что оказывает влияние на качество образования. В этих условиях была поставлена цель – разработать эффективный инструментарий, который будет учитывать влияние различных факторов на формирование иноязычной коммуникативной компетенции обучающихся французскому языку. Основная цель исследования заключается в предоставлении специалистам такого инструмента, как программа вмешательства, направленного на развитие одного из ключевых языковых навыков – понимания прочитанного текста на иностранном языке. Трудность усвоения этой компетенции связана, в частности, с лингвистической, социолингвистической и межкультурной спецификой французского языка. На понимание иноязычного текста влияют и когнитивные, социальные и личностные факторы (предикторы). В основе программы вмешательства лежит исследовательская работа, в рамках которой измеряется уровень понимания иноязычного текста и определяются предикторы, оказывающие воздействие на этот процесс. Предлагаемая программа вмешательства может рассматриваться как превентивная мера, а также как инструмент коррекции развития иноязычной компетенции. Программа разработана в форме десяти типовых модулей, обладает четкой структурой и учитывает онтогенетические особенности целевой группы – учащихся третьего класса средней школы. Она включает различные способы и методы работы с франкоязычным текстом с целью развития соответствующего предиктора, что способствует повышению качества обучения иностранному языку, а также служит источником инновационных идей для преподавателей (и будущих преподавателей) французского языка.

Ключевые слова: вмешательство, программа, понимание содержания прочитанного, французский язык, предикторы.
Introduction

Today, students and teachers are confronted with pressures that did not exist several decades ago, or were not as frequent as today. According to statistics, 10 to 15% of children worldwide face behavioural or learning disorders (Lynch, 2019). For this reason, teachers are forced to take an active approach to identifying the specific educational needs of pupils before their pupils lag far behind. The effective use of educational interventions, methods and strategies can help a teacher to identify the weaknesses of his pupils, to prevent or to address a problematic area of education in time.

What is meant by an intervention? Kolař et al. (2012) define an intervention as an action, mostly from the outside, influencing internal affairs e.g., groups or personalities. It is the input of another person in order to help solve a problem, master a certain process and understand the context. It specifies the pedagogical intervention as the input of the teacher or educator into the processes of learning, mastering the content of education and the processes of managing problems. Teacher interventions are planned in advance, but may also result from the situation. These are positive inputs aimed at helping the student, as well as inputs of an inhibitory nature. Pedagogical intervention is proactive, i.e. it addresses the specific needs of pupils before they become a serious obstacle to their further education. The intervention is intentional, i.e. it concerns a specific area in which it seeks to consolidate or develop a remedy. In addition, the intervention is characterized by a degree of flexibility, which adapts the selected methods to the needs and progress of the pupil (Lynch, 2019).

Intervention programs are not, in principle, a new phenomenon. They belong to the group forms of education with the possibility of using various methods. They are based on the basic principles of interpersonal learning, group cohesion and dynamics. Their strength also lies in experiencing authentic emotions when processing the experience. The principle of learning lies in personal experience and its reflection. Therefore, the intervention program can also be called a variant of experiential and self-regulatory form of learning. In addition to interpersonal learning, we also develop individual work, which is very important in processing information and emotions (Lalinská et al. 2020, 2021). The intervention program focuses on optimizing one area through intervention, that is, it always focuses on one process, which is strengthened or developed by the technique. An intervention is defined as acting on an individual through a process, technique or method that aims to modify, change or strengthen a process.

In connection with our intervention programs, we focus on intervention in the teaching of French, Spanish and Italian in secondary schools for students with the level A2. This intervention should have a preventive but also corrective character. The aim of the preventive approach to the intervention is to strengthen the optimal state; it applies to more language-skilled students or students who have cognitive processes developed at a higher level. The aim of the corrective approach is to optimize and develop cognitive processes so that there is understanding; it concerns less language-skilled students and their understanding and cognitive processes at a lower level. The intervention in the programs we propose is applied in the form of three complementary lines: predictor development (stimulation and support of cognitive and metacognitive processes), work with the text (educational activities carried out before, during or after reading the text, development of communication competence (language, sociolingual and intercultural component).

Measuring reading comprehension in French language

Before creating an intervention program aimed to develop reading comprehension in French, we carried out pre-research in which we focused our attention on two starting
areas. The first was to measure the overall level of reading comprehension in French. The second large area was the measurement of students’ cognitive processes in relation to language processes, which were mainly related to the mastery of morphosyntactic and lexical language resources with regard to students’ sociolinguistic and sociocultural competence. The aim of our measurements was to identify the factors influencing the text comprehension at the level of interaction of linguistic and cognitive variables in the process of intensive and extensive reading and to create a reliable measurement tool that could be used in later experimental verification of the intervention program. The whole research apparatus was used to identify individual phenomena, within which the following research tools were used:

- a test to measure reading comprehension in French (level A2) together with a short questionnaire focusing on the pupil’s reflection / self-reflection, language skills and reading preferences,
- a test to measure the level of proficiency of language tools (grammatical, lexical, sociolinguistic and cultural) in French at A2 level,
- a scale of Personal Need for Structure (PNS) (Thompson, et al, 2001),
- Tolerance of Ambiguity Scale.

The aim of these research elements was to create a comprehensive picture of the quality of reading comprehension in French language. The research tools were adapted to the target group with regard to their age and level of education. Due to the limited space, we will only present the relevant results that have become the research platform for the framework structure and the creation of the intervention program. These are mainly the following research areas:

- assessment of the level achieved by pupils in reading comprehension in French
- finding out the relationship between reading comprehension and:
  - Mastering language tools, specifically grammatical, lexical, sociolinguistic or sociocultural language use,
  - Need for cognitive structure,
  - Tolerance for ambiguity.

The subjects of our research interest were high school students, for whom we assumed the achievement of the reference level A2. For this reason, we carried out the measurement at the end of the second year, or at the beginning of the third year of a secondary school (grammar school, secondary vocational school), when it is possible to assume the achievement of foreign language competence of pupils at reference level A2 in accordance with The International Standard Classification of Education ISCED 3 (EuroStat, 2020) and the concept of foreign language teaching in primary and secondary schools. In addition, it is a period when high school students begin to profile themselves and choose the subjects of seminars to prepare for the school leaving exam (called Maturita).

**Achieved level of students’ reading comprehension in French**

We were looking for an answer to the initial research question:

*Are students at the end of their second year of high school able to read the text in French, understand it and answer the items designed for level A2 in accordance with applicable school legislation?*

To answer this question, we used a test to measure reading comprehension in French, which we subjected to a comprehensive analysis in terms of CTT - Classical Test Theory (concept of reliability test) and item analysis in terms of IRT - Item Response Theory.
(concept determining the cognitive ability of the student in relation to the probability of his correct response to the item with some difficulty). The test was administered to 131 pupils from seven different secondary schools (including grammar schools and vocational secondary schools).

By analysing the test in terms of classical theory, we came to the conclusion that the reliability rate (Cronbach α, Kuder-Richardson coefficient) reached a relatively good value of $Cα (FJ) = KR (FJ) = 0.83$. This is the value of the reliability of a measuring tool with a very low degree of chance impact. The test can be seen as one of the basic tools that will serve to decide whether or not the student has the particular competence (in our case, the skill to read with understanding).

To assess the language level of reading comprehension of the students in our research sample, we used the Schulz method, which is based on combining IRT models. The main aim of Schulz’s method is to calculate the probability of the correct answer of each student with a certain cognitive ability to each test item with a certain difficulty. From the probabilities of the correct answer to individual items, their arithmetic average is then calculated for each student. This means that for each student we get his average probability of a correct answer to the items from the given reference area.

Decision about mastering or not mastering the language at a given reference level (in our case at A2 level), was taken on the basis of a comparison of the average probability of each pupil with a pre-selected criterion. If we adhere to the original theoretical principles of this method, Schulz sets the value of this comparison criterion of average probability at 0.80 (Schulz, Kolen, Nicewander, 1999). This means that if a person has an average probability of a correct answer to items from a given area greater than or equal to 0.80, then it can be stated that he/she has the required competence at a given level. If its average probability is less than 0.80, the person does not speak the language at the given reference level. In connection with the measurement of language competence using homogeneous tests, psychometrists who are intensively involved in measuring language levels under the CEFR (for example, the French CIEP in Paris) set this benchmark less strictly and recommend using 0.65 to assess the language competence. If the test consists of a very small number of items with different degrees of difficulty, it is worth considering reducing this comparison criterion even further, for example to 0.50 (Butašová & Lalinská, 2014).

We first compare the summary results of the Schulz method with respect to the various comparison criteria (0.80, 0.65 and 0.50) in the form of table 1.

<table>
<thead>
<tr>
<th>Comparison criterion</th>
<th>0.80 (Schulz)</th>
<th>0.65 (CIEP)</th>
<th>0.50</th>
</tr>
</thead>
<tbody>
<tr>
<td>The number of students who reach the required level of reading comprehension</td>
<td>72</td>
<td>96</td>
<td>119</td>
</tr>
<tr>
<td>The number of students who do not reach the required level of reading comprehension</td>
<td>59</td>
<td>35</td>
<td>12</td>
</tr>
</tbody>
</table>

The table above shows that the pupils passed the test to measure reading comprehension in French relatively well. With the strictest comparison criterion, more than half of the tested students reached the required level (55%). With our milder benchmark of 0.65 (CIEP), 73.3% of students reached the required level and 26.7% of students did not reach the expected level in reading comprehension. The intervention program created by us will therefore also serve as a preventive, but also a corrective tool for developing reading comprehension in this target group.
Factors influencing text comprehension

Another important aspect of the performed measurements in the field of reading comprehension was the identification of factors that could affect the comprehension of texts in French by the students of our research sample. In this context, we sought answers to the following question: What factors (variables) are related to students' success in reading comprehension?

To find the answer to this research question, we again used a reading comprehension test in French, but this time we also took into account the results obtained using other measurement tools, namely:
- a test to measure the level of command of language tools (grammatical, lexical, sociolinguistic / sociocultural) in French at A2 level,
- Personal Need for Structure scale (PNS),
- Tolerance of Ambiguity Scale (TA).

From these, we selected the most important conclusions related to the factors influencing reading comprehension in French. In our research, we assumed that we can predict students' performance in reading comprehension of foreign language texts according to certain variables. Thus, we admitted the existence of such factors that could have a significant impact on reading comprehension. We could divide these variables into two basic groups:
- variables related to the level of language proficiency (morphosyntactic, lexical, sociolinguistic / sociocultural),
- variables related to psychological, or personality characteristics of students.

The test for determining the level of language proficiency was designed to include all of the above attributes, i.e. morphosyntactic, lexical and sociolinguistic / sociocultural items. The measurement of psychological characteristics of students was the subject of measurement using a scale to determine the ability of cognitive structuring of stimuli and a scale of tolerance of an individual to ambiguous situations. Both of these psychological phenomena also play an important role in the process of learning a foreign language. Several studies suggest that people with higher levels of cognitive structuring have better communication skills. On the other hand, tolerance of ambiguity in a foreign language represents the ability to work independently with new stimuli, while language users engage in communication in a new creative and often intuitive way (Stranovská & Ficzere, 2020).

The relationship between reading comprehension and language tools (LT), the need for cognitive structure (PNS) and tolerance for ambiguity (TA) was determined through correlation analysis and Pearson Correlation coefficient ρ). The individual variables represented the gross scores in the individual tests and questionnaires (scales). Table 2 presents the evaluation of this correlation analysis. Significant correlations at the level of statistical significance α = 0.01 are indicated by two stars (**).

<table>
<thead>
<tr>
<th>Predictors</th>
<th>LT</th>
<th>TA</th>
<th>PNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading comprehension</td>
<td>Pearson Correlation ρ)</td>
<td>0,679**</td>
<td>-0,203</td>
</tr>
<tr>
<td>Significance level / Sig. (2-tailed)</td>
<td>0,000</td>
<td>0,087</td>
<td>0,003</td>
</tr>
</tbody>
</table>
| Statistical significance at the level α = 0,05 (*), α = 0,01 (**), α = 0,001 (***)

Based on the data presented in Table 2, it can be stated that the pupils' performance in reading comprehension of French texts was significantly related to their performance in
the language test. We also noted a significant correlation between reading comprehension and the personal need for structure variable (PNS). A statistically significant relationship was not confirmed in the case of the relationship between reading comprehension and the degree of tolerance for ambiguity.

**Identifying reading comprehension predictors**

The process of reading comprehension can be explored on several levels. In the Common European Framework of Reference for Languages, reading comprehension is characterized as an activité de récéption - receptive language activity. In this regard, the reception of a text can be defined with respect to cognitive processes acting in parallel, such as perception, comprehension and memorization. In this context, the interaction of linguistic and cognitive processes in text comprehension is particularly interesting in the scheme of Cibáková (2015), which reflects cognitive processes (cognitive functions according to the revised Bloom’s taxonomy) at various levels of text comprehension. Stimulating cognitive functions provides a prerequisite for creating a more effective text comprehension. These levels of text comprehension can be related to the cognitive variables of our intervention program arranged hierarchically from the lowest processes to the highest cognitive processes (Table 3).

**Table 3. Relationship between levels of text comprehension and predictors of reading comprehension**

<table>
<thead>
<tr>
<th>Levels of text comprehension</th>
<th>Cognitive variables of the intervention programme (predictors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The ability to identify information in the text</td>
<td>attention, concentration, memory processes, perception, cognitive structuring (language tools)</td>
</tr>
<tr>
<td>The ability to deduce, i.e. derive information that is not formulated explicitly in the text (inference processes)</td>
<td>inferential thinking</td>
</tr>
<tr>
<td>The ability to interpret and integrate information from the text with previous knowledge and experience, i.e. to construct meaning beyond the text</td>
<td>divergent thinking, tolerance for ambiguity</td>
</tr>
<tr>
<td>The ability to critically analyse and evaluate the text from the viewpoint of content, composition and language, as well as in terms of the implemented communication objective</td>
<td>critical thinking (reflection and self-reflection)</td>
</tr>
</tbody>
</table>

Developing a predictor means stimulating and supporting individual cognitive and metacognitive processes (Stranovská & Ficzere, 2020). In each model intervention unit, one or two consecutive predictors develop by deliberately concentrating our activities and procedures on a given cognitive process. We proceed from lower processes to higher ones, i.e. attention, concentration, memory, perception, cognitive structuring, inferential thinking, imagination, fantasy, divergent thinking, tolerance of ambiguity, critical thinking and self-reflection. For example, in the first intervention unit, we start with the simplest cognitive process, with attention and concentration. We develop it by simultaneously concentrating on the development of the given predictor in the intervention unit when working with the text. In the next unit, we add memory and proceed to the final work with critical thinking.

The intervention program for reading comprehension for French is specific, it is a support program that develops understanding of the French text being read. It was compiled with the intention of helping teachers in preparing the student to understand
The text and work with the text in French, in developing the student’s reading skills such as understanding the main idea, searching for specific information, deducing the meaning of implicit information in the text, evaluation of the text and the like (Rusnáková & Kučerková, 2021). We pay considerable attention to metacognitive processes: knowing the limits in the process of understanding the text, awareness of your strategy of working with the text, identifying problems that require solution, creating plans and strategies, evaluation, self-evaluation and self-reflection.

The framework structure of the intervention program

The framework structure of the intervention program for the French language has been designed to cover sufficiently the range of texts that would be suitable for developing the established predictors affecting reading comprehension at the A2+ reference level. The intervention program consists of ten model intervention units, which are designed in the form of 45-minute lessons. The program includes texts for intensive and extensive reading, literary (artistic) texts, factual texts (journalistic, newspaper, professional, popular, administrative) and user texts, which can be further classified as linear public texts (announcements, instructions, advertisements, leaflets), linear private texts (SMS messages, e-mail, chat, letters, blogs) and non-linear texts, which most often occur in the form of graphs, tables, pictograms, programs, brochures and various types of infographics. The framework structure of the intervention units takes into account the gradual development of predictors (from lower cognitive processes to higher ones) with regard to the appropriate type of text. It is designed as follows:

1. attention and concentration + factual text;
2. attention, concentration and memory processes + public user texts (e.g. advertisements, menus, itineraries, announcements, instructions);
3. perception and language tools + private user texts (e.g. letters, e-mails, SMS messages);
4. perception, cognitive structuring and language tools + factual / professional text;
5. perception, cognitive structuring and language tools + factual / professional text;
6. inferential thinking + user popular text (e.g. rap, slam);
7. inferential thinking + user text;
8. divergent thinking and tolerance of ambiguity + literary text;
9. divergent thinking and tolerance of ambiguity + literary text;
10. critical thinking, reflection and self-reflection + literary text.

Each intervention unit consists of three stages - introductory, intermediate and final. In the introductory stage (a group warm-up), a warm-up or motivational activity occurs. Warm-up activities are not always directly related to the topic of the text (often giving the impression that they are detached from the context), but subconsciously support the development of a given predictor (cognitive and metacognitive process), link language and cognitive processes, activate the affective level of students by removing the fear from a foreign language and naturally direct them to work with a text or topic. The intermediate stage (group productivity) consists of pre-reading activity, assignment during reading and post-reading activity, which also focus on developing a defined predictor in a given intervention unit. The purpose of this stage is to link the work with the text with the development of understanding at a certain level, which is developing gradually towards more complex processes. The final stage (dissolution of the group) contains mainly the techniques inducing relaxation (relaxation techniques), activities aimed at finishing the theme, closing emotional themes (music and reading a foreign language text, e.g., a poem, a short story or a description of nature, pictures, storytelling, etc.). The main aim of this
stage is reflection and relaxation of students in the cognitive, emotional and social areas, with which the student works intensively throughout the intervention unit.

Discussion

The initial research platform for the research study is represented by grant tasks associated with the development of literacy in the mother tongue which are Slovak for the majority and Hungarian for a minority living in the south of the country, and development of reading comprehension in the first or second foreign languages. The first or the second foreign languages in Slovakia as it is in the European Union, are English, German, French or Spanish. The Intervention programs were designed for all of these languages. The central theme of the research tasks was the study of reading comprehension as a process that depends not only on language, but also on cognitive, cognitive-personal, social and affective variables of pupils; called predictors or factors of reading comprehension in the intervention. Based on the theoretical framework rooted in psycholinguistics, our goal was to design an effective tool that would appropriately stimulate, optimize and consolidate individual aspects of reading comprehension process in mother tongue and foreign languages, thus developing not only students’ reading literacy but also multilingual awareness, which can be considered as the key competences for lifelong learning.

As the research results showed, the main category of the predictors for successful language learning are: memory, attention, concentration, memory processes, perception, cognitive structuring, inferential thinking, tolerance of ambiguity, critical thinking represented by self-reflection. All of these were identified as crucial for overall comprehension of reading competence development. A strong correlation was found between the factors of Tolerance of ambiguity and Personal need for structure, as well as a moderate relationship was identified between the overall performance in the test and the achievements in the category reading comprehension within the same test. The items of the test were measuring the language means or tools, represented by the ability to use an appropriate grammar unit or a structure in a context. The results showed how tight these two phenomena are. Students whose performance in French was poor, also received lower scores in the category of reading comprehension. Therefore, it is important to develop also linguistic competence alongside the other competences in foreign language education.

Conclusion

In this research paper, we presented the Intervention program of reading comprehension in French and then pointed out its contribution to the teaching of French in the Slovak school environment. The theoretical basis of reading comprehension is essential for the subject studied. It touches on a very important area of the principles of operation of the intervention program, namely the mutual interaction of linguistic, cognitive and personality variables in the reading process. In the research study we introduced the Intervention programme for development of reading literacy in mother tongue and foreign languages, whether it English, German or French. In this specific study we introduced the programme for development of French language in the Slovak educational setting, specifically the selected research sample was the secondary school students from various regional parts of Slovakia. This area is mainly related to the identification of predictors of reading comprehension, which we substantiated with the performed measurements within the preliminary research. Based on this, not only the framework structure of the intervention program but also individual intervention units were designed. The results showed significant correlations between selected personal
factors of Tolerance of ambiguity and Personal need for structure as well as the factors of Language proficiency, especially the ability to use various selected grammatical structures and sociocultural aspects of French as a second foreign language appropriately.

Acknowledgements

This work was supported by the Slovak Research and Development Agency under the contract N° APVV-17-0071 and VEGA 1/0062/19.

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