Abstract

The aim of the current research study was to examine the dynamics of foreign language competence as applied in a programme designed for foreign language competence development in an academic environment. The programme, named The Linguistic Intervention Programme, represented a variety of active social learning techniques, self-regulated learning and a set of specific foreign language teaching strategies. One hundred and three university students participated in the research experiment. The research method utilized a foreign language proficiency test to serve as the appropriate tool to study the effects of the LIP techniques on the sample. The findings reveal that the result of the LIP in foreign language competence does not depend on the selection of foreign languages, meaning that the LIP is efficacious no matter what language is used in application of the techniques.

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Keywords: Linguistic Intervention Programme; foreign language education; foreign language competence; active social learning; self-regulated learning.
1. Introduction

Currently, the need to speak foreign languages across the world has created a significant need for efficient methodologies, high quality resources and well-educated and qualified, interdisciplinary educated foreign language teachers for the development of foreign language competence. While there has been a sincere search into these aspects of foreign language education, the objectives and syllabi of such programmes have also gone through extensive overhauling to meet the needs of the global marketplace. This overhaul is connected to the need for good communication skills in foreign languages as today, it is not enough to be able to read or write in a foreign language, but to be able to communicate authentically in a foreign language speaking world. Acknowledging these needs, foreign language teaching methodology has shifted its focus from grammar and traditional receptive teaching to communicative and community based approaches with a wider focus on the interdisciplinary aspects of foreign language education. Although foreign language teaching is a broad topic that has been extensively discussed over the years, the following study was meant to be a discourse on uncovering insights into potentially successful methodology in teaching foreign languages as well as examining a specific element of foreign language learning, that is the dynamics of foreign language competence.

The field of foreign language learning has been discussed and analyzed from a wide variety of viewpoints and determinants (Richards 2006; Janíková, 2011; Lojová, 2005; Stranovská, 2011; Rickheit, Sichelschmidt & Strohner, 2007; Rickheit, Strohner & Vorwerg, 2008). Previous research studies looked mainly into foreign language competence and its relationship to communication skills and reading comprehension skills (Devine, 1987; Carrell, 1983; Clarke, 1976; Eskey, 1973; Goodman 1967, 1971). Furthermore, the aims of the previous research studies were to examine the two following hypotheses: The Linguistic Threshold Hypothesis and The Linguistic Interdependency Hypothesis. The basic argument of the Linguistic Threshold Hypothesis is that a certain level of competence in a foreign language has to be in place before learners are able to perform fluently in a foreign language. The Interdependency Hypothesis argues that prior to the acquisition of the second or foreign language (L2, L3), the first language (L1) skills have to be sufficiently developed. Recent studies have focused predominantly on examining predictors of reading; operating memory, language sensitivity, rapid naming, and phonological awareness, as well as personal characteristics and social competences of language acquisition (Anthony & Francis, 2005; Foy & Mann, 2006; Smith-Spark & Fisk, 2007; Stranovská et al., 2013). Additionally, contemporary research studies examined the influence of a variety of foreign language instructional methods in teaching foreign language on foreign language competence.
(Farkašová, 2008, Janíková, 2011, Stranovská et al., 2013). However, the variable of foreign language development in relation to intervention on the variable of foreign language learning strategies used and their influence on foreign language learners’ competence has not been investigated in the academic environment as evidenced by the paucity of research studies on intervention in foreign language learning in the academic environment. Stanovic (1984) and Ehlers (1998) investigated interdependency of learning strategies in first and foreign languages and the influence of the strategies on foreign language learning and found that the interdependency of learning strategies did influence foreign language learning and competence.

Therefore, the current study sought to examine the dynamics of foreign language competence through the means of the Linguistic Intervention Programme (LIP). Pre-test and post-test scores served as the tool to measure the dynamics of foreign language competence in this study. Although there has been an increase of intervention programmes since the beginning of the 20th century, there have not been any intervention programmes specifically designed for foreign language competence development through the strengthening of personal and social variables, and linguistic competence indicators.

1.1 Foreign Language Competence

Canale and Swain (1980) identified strategic competence as one of the components in their model for communicative competence, together with grammatical competence and sociolinguistic competence. The basic principles of the competences include the idea that language teaching is based on viewing the language as a means of communication. Communicative competence, as put forward in the current discussion, is a set of particular competences. Firstly, it is the knowledge of certain grammatical rules including building sentences and phrases, which underpins the ability to form grammatically correct parts of speech. Secondly, it is the ability to use parts of grammar in the proper context and the ability to vary the use of grammar depending on the situation or event. Thirdly, it is also the ability to maintain communication and convey the message even though the knowledge of English (or any other foreign language) is limited (Richards, 2006). Considering these aspects of communicative competence, it is not enough to drill grammar rules and read texts in the target language. This clearly indicates that the methodology of teaching such competence requires a variety of approaches leading to a variety of activities and changes in the roles of learners and teachers.
Furthermore, it is vital that learners acquire the target language in a productive form, not only in a receptive form, especially if the context and environment they live in is predominated by their native language, not the target language. It is not enough to just be exposed to the target language by understanding the individual structures and rules about the target language. Learners need to get involved in authentic situations and contexts when they produce the actual target language required when a thought is joined with language. This mental process is what develops foreign language competence.

1.2 Model of Foreign Language Competence

Johnson (1996) and Anderson (1989) forwarded a model of foreign language competence development that was considered in the LIP examined in this study. This model foregrounded the PRO-DEC-PRO progression: procedural knowledge – declarative knowledge – procedural knowledge, which sought to foster the transformation of declarative knowledge to procedural knowledge, the process of automation and internalisation, and the ability to describe and use grammatical structures correctly in real life situations when attention is turned to various other aspects of communication, especially to meaning and context. Such a situation would also be influenced by time, stress, emotions, and so on.

Theoretically, the process has been endorsed by several experts on general and applied linguistics and psycholinguistics (Anderson 1989; Argyle, 1972; Lojová, 2008) as an essential part of foreign language development. It is based on continuous disengaging of conscious attention, which is subsequently dedicated to more difficult activities. Acquired rules are firstly applied in accurate linguistic forms. In the following process of automation, the conscious attention is lowered, which enables the capacity of the attention channel for more difficult and complex activities, such as choice of accurate lexical means, contextually required and functional denotations. The essence of development of foreign language competence lies in continuous use of accurate linguistic structures without actually paying much attention to the structures themselves. Applying theoretical acquired knowledge in various social situations provides learners with the ability to generalize the acquired knowledge and eliminate inaccurate rules and structures. Learners verify constantly created hypotheses on procedure of specific language rules. Thus, such processes simultaneously generate certain awareness of correct foreign language use. The duration of the process depends on several factors such as complexity of linguistic acts, frequency of use, methods of foreign language instruction, and so on. Such procedures Johnson (1996) argues
promotes the development of not only foreign language competence but mainly performance; fluency and accuracy.

1.3 The Linguistic Intervention Programme (LIP)

The Linguistic Intervention Programme (LIP) refers to the modification of foreign language instructional methods, techniques and procedures including classroom management and arrangement in order to achieve the highest possible efficiency in the process of foreign language learning, (Stranovská et al., 2013; Stranovská & Hodáková, 2013). In the context of foreign language learning, it refers to optimisation and modification of the process of foreign language acquisition, foreign language identification, self-reflection and self-evaluation. Moreover, LIP is an eclectic interconnection of a wide variety of teaching methods, techniques and strategies, which develop three essential variables: foreign language competence, foreign language performance, as well as personal and social competences. The foreign language intervention is applicable across various fields of education as well as across different age levels.

LIP introduces active social learning (ASL) and self-regulated learning (AL), both referring to a set of strategies and techniques of foreign language learning. Linhart andPerlaki (1978) consider ASL as the highest level of learning claiming that individuals practicing ASL learn naturally as if in real life situations. They learn competences of intentional social behaviour, they learn to recognise imperfections in their own lives as well as how to be involved in group dynamics. ASL emphasizes the active engagement of an individual and active use of knowledge and skills from previous experiences in order to master another activity. Additionally, in foreign language acquisition, it refers to foreign language experience and foreign language identification in various social situations. The aim of LIP is for the learners to acquire new perspectives in foreign language communication: practice newly acquired behaviour and experience simulated foreign language communication in real life situations, since the main objective for the learners is to attain a certain level of interpersonal competence as well as autonomy in learning.

2. Research

2.1 Research Sample

The research was conducted in the academic years 2011/2012, 2012/2013, and 2013/2014 at Constantine the Philosopher University in Nitra, Slovakia. 106 university students participated at the research study. The participants were enrolled in teaching programmes in the following
sciences: natural sciences, education, and arts. Foreign language study programmes were minor obligatory courses of English and German languages, called English for Specific Academic Purposes and German for Specific Academic Purposes. The target group participants were second year students. The average age of the participants was 20.5. The students had studied English for 9 years and German for an average of 8 years before the research began.

2.2 Hypotheses

The research study was based on the following hypotheses:

**HO:** The LIP applied in the programme increases foreign language competence of foreign language learners.

**HO1:** The vector of the variable *foreign language competence* does not depend on languages 
(EN (English), DE (German)).

**HO2:** The vector of the variable *foreign language competence* depends on scores in pre and post-test measurements (*Pre_RC_Score, Post_RC_Score)*.

A multivariable variance analysis (MANOVA) was used to determine the outcome of the hypotheses above. The data were verified by using tools of variance analysis.

2.3 Research Methods

A test of foreign language competence served as the tool for verification of foreign language competence and foreign language reading comprehension. It consisted of 74 items and measured competence in morphology, syntax, lexicology, history and culture and reading comprehension. The test was designed according to ISED 3, level B1/B2. (The test used in the research is available upon request.)

2.4 Research Procedure

The LIP was carried out in the following research phases: 1. LIP design; 2. Target group monitoring; 3. Experiment phases: pre-measuring, post-measuring; 4. Statistical data processing; 5. Data analysis; 6. Drawing conclusions.

The structure of the LIP is as follows:

0. Introduction of the programme and discussions on expectations, and pre-measurements.

4. Non-verbal communication, intercultural communication.
5. Non-verbal communication, intercultural communication.
6. Verbal communication, intercultural communication, speech acts.
7. Verbal communication, intercultural communication, speech acts.
8. Problem-solving situations, speech acts.
9. Problem-solving situations, speech acts, academic language.
10. Problem-solving situations, speech acts, academic language.

The intervention sessions included the following techniques:
A. Relaxation techniques, free expression techniques supporting verbal and cognitive structuration,
B. Self-reflection techniques, perception of others; identity and foreign language,
C. Social interaction techniques, intercultural communication techniques,
D. Verbal and non-verbal communication techniques, intercultural communication and speech acts in foreign language,
E. Techniques aimed at analysis of cooperative forms of behaviour.

The above techniques were utilised to optimise the process of automation where the lowering of the consciousness would be triggered by using the relaxation and free expression techniques. Using these techniques would draw attention away from the need to focus on accuracy as a conscious effort and allow the building of accurate linguistic structures implicitly. Hence, the use of cooperative forms of behaviour, verbal and non-verbal communication techniques, intercultural communication and social interaction techniques all worked together to aid students to develop foreign language competence in a covert manner, while focusing on collaborative and cooperative behaviour.

2.5 Research Results

2.5.1 Language comprehension

Analysis of variance (MANOVA) and multiple comparison of variance analysis were used to verify the effect of LIP on the variable foreign language comprehension.
Table 1. Multivariate analysis of variance (MANOVA) – Foreign language

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>146427.9</td>
<td>1</td>
<td>146427.9</td>
<td>603.5098</td>
<td>0.000000</td>
</tr>
<tr>
<td>Language</td>
<td>151.9</td>
<td>1</td>
<td>151.9</td>
<td>0.6260</td>
<td>0.430617</td>
</tr>
<tr>
<td>Error</td>
<td>25233.2</td>
<td>104</td>
<td>242.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC</td>
<td>8334.7</td>
<td>1</td>
<td>8334.7</td>
<td>109.7457</td>
<td>0.000000</td>
</tr>
<tr>
<td>LC*Language</td>
<td>1308.0</td>
<td>1</td>
<td>1308.0</td>
<td>17.2226</td>
<td>0.000068</td>
</tr>
</tbody>
</table>

Table 1 illustrates statistically significant differences (p=0.000) between pre- and post-measurements of foreign language comprehension. Based on results of analysis of variance, the null hypotheses are refuted – in one variable at least, statistically significant differences were found. After refuting the global hypotheses, it was possible to investigate significant differences in the score of the variable foreign language competence.

Table 2. Multiple comparison – Foreign language comprehension (Pre_RC_Score, Post_RC_Score)

<table>
<thead>
<tr>
<th>LC</th>
<th>Mean</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre_LC_Score</td>
<td>25.22642****</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post_LC_Score</td>
<td>36.85849****</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Multiple comparisons of homogenous groups – statistically significant differences in scores of relevant variables between pre- and post-core and languages – were identified. Statistically significant differences of the variable foreign language competence in the factor pre- and post-scores (Pre_RC_Score, Post_RC_Score) are displayed in Table 2. A statistically significant difference can be found between the levels of foreign language reading comprehension before the LIP and the level of foreign language reading comprehension after the LIP.

Table 3. Multiple comparison – Foreign language (EN(English), DE(German))

<table>
<thead>
<tr>
<th>Language</th>
<th>Mean</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE</td>
<td>29.55769 ****</td>
<td></td>
</tr>
<tr>
<td>EN</td>
<td>31.52500 ****</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language</th>
<th>LC</th>
<th>Mean</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE</td>
<td>Pre_LC_Score</td>
<td>19.38462 ****</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EN</td>
<td>Pre_LC_Score</td>
<td>27.12500 ****</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EN</td>
<td>Post_LC_Score</td>
<td>35.92500 ****</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td>Post_LC_Score</td>
<td>39.73077 ****</td>
<td></td>
<td></td>
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</tbody>
</table>
Statistically significant differences in the variable *foreign language competence* and the LIP were not related to the two foreign languages: German and English. In the variable *foreign language competence*, a statistically significant difference between the level of language comprehension of students studying German and students studying English after the intervention, was identified.

<table>
<thead>
<tr>
<th>Linguist/Non</th>
<th>DV_1</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Linguist</td>
<td>31,042</td>
<td>****</td>
<td></td>
</tr>
<tr>
<td>Linguist</td>
<td>51,294</td>
<td>****</td>
<td></td>
</tr>
</tbody>
</table>

The effect of the LIP on the variable *foreign language competence* was verified via comparisons on the level of *linguist – non-linguist*, verifying the effect of the LIP on learners studying the selected foreign language as their major (linguists) and learners studying the selected foreign language as their minor (non-linguists). A statistically significant difference was identified in pre- and post-score of linguists and non-linguists. A difference was also identified in the level of reading comprehension between the linguists and non-linguists.

### 4. Discussion

The aim of the current research study was to verify the efficacy of an intervention programme called LIP, to enhance the foreign language competence of the selected participants. The hypothesis supposing the positive effect of the LIP in the process of acquiring foreign language competence, was confirmed. After the implementation of LIP, foreign language competence significantly increased in both groups. This was noticed when students attained a higher accuracy in selection of sentence structures, connotations, syntactical forms or word order and they were found to not focus on primary meanings in analysis of morphological, syntactical, lexical, and semantic levels. Increasing foreign language competence was related to processing grammatical aspects of speech acts, foreign language texts and audio recordings in the various disciplines. Furthermore, the increase was also influenced by practicing vocabulary used for specific academic purposes and speech acts simulating social situations.

After gathering data, the dynamics of foreign language competence was analyzed via multiple comparison on levels of pre- and post-scores and foreign language. The hypothesis investigating the variable *foreign language competence* and its dependency on the scores in the pre- and the post-
measurement \( \text{Pre}_\text{RC}\_\text{Score}, \text{Post}_\text{RC}\_\text{Score} \) was confirmed. Pre-scores differed from the post-scores which highlighted that the LIP contributed to the statistical significance in foreign language competence. In this case, the LIP operated as a predictor of foreign language competence. The dynamics of foreign language competence, the process of automation on morphological, syntactical, lexical and semantic levels were proven to increase in relation to the application of the methods, procedures and techniques of the LIP. The simulation of selected social situations during the LIP demonstrated the enhancement of the procedural effect, especially the production and language use of declarative knowledge, specifically in the use of collocations and grammatical structures as well as the process of automation. As Johnson (1996) argues, declarative knowledge especially recognition of grammatical structures and use of grammatical structures are both involved in the process of automation in adults. In the case of total procedural competence after a long period of language learning, it is important to sustain declarative knowledge as a generative database for automatic speech production because there are also tasks in the process of speech production that require declarative knowledge. Lojová (2008) concurs with Johnson (1996) and considers the phase of procedural phase in the process of foreign language learning as insufficient and problematic. Moreover, it may result in situations when learners only produce declarative knowledge. Such learners are unable to use the memorised structures and rules in specific foreign language communication situations.

The dynamics of foreign language competence via the LIP in relation to foreign language competence was verified on the level of foreign language competence. It can be assumed that the variable foreign language competence depended on foreign language use, in this case, English or German. The hypothesis was confirmed as the effect of the LIP was proven in foreign language competence in both English and German. After the LIP intervention, foreign language competence showed statistically significant increases in both groups. The procedures and methods used in the LIP were shown to be effective in raising the foreign language competence in the two foreign languages, English and German.

The levels of foreign language competences attained in German and English differed as students of German and English showed different levels of foreign language competences before and after the intervention. Learners studying English displayed a higher foreign language competence in comparison to those studying German. This could be attributed to the fact that English was studied as a compulsory subject as opposed to German which is studied as a optional subject. Additionally,
English is the first foreign language young learners begin to acquire in elementary education. This may have contributed to the results in this study.

The study also sought to identify the efficacy of the LIP on the variable language comprehension on the level of linguist and non-linguist. It was demonstrated that the LIP was efficient in enhancing foreign language acquisition of non-linguists as well as linguists in the current research study. Furthermore, it was demonstrated that the effect of the LIP does not depend on selection of foreign languages, English or German as this study proved that students of both languages did better on the post tests after the LIP.

5. Conclusion
This study on the efficacy of the various techniques used in the LIP has been shown to be successful in enhancing foreign language competence in the processing of declarative knowledge, specifically, in accurate grammar forms use, sentence structures choice, collocations use, and in simulations of various authentic social communication situations. This is an important contribution to the body of research into identifying appropriate teaching methodologies that can enhance foreign language competence. Foreign language competence is a crucial 21st century skill that young people need to equip themselves with in order to expand their marketability and employability. The global and international nature and scope of the job market demands that prospective employees demonstrate competence in more than one language. As such, foreign language competences would secure a stronger footing in a worldwide market.

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