

# HEALTH CARE AND SPORT STUDENT ENGLISH LANGUAGE LEARNING STRATEGIES IN A LATVIAN HEI

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**Abstract.** *The aim of the research is to find out the characteristics of the English language learning strategy use in the students of two study Programs – Sport Science and Healthcare (Physiotherapy) in a Latvian higher education institution, using LLSU Inventory, developed in CARLA Center, University of Minnesota.*

*The results show that both Program students are aware of the strategies and quite use them, mean = 2.63 for Listening Strategy and Vocabulary learning Strategy use, SD= .36 and .40 respectively. However, Physiotherapy student, e.g., use Listening Strategies more than the researched Sport Science students (Sig. (2-tailed) = .02, i.e., < .05)). Physiotherapy students more often “Plan out what to say or write in my own language and then translate it into the target language” (t=-2.12, Sig. (2-tailed) <.001).*

*Although statistically significant small differences between both Program student languages learning strategy use were found, yet the strategy use of both Program students is generally the same. Program developers should consider the differences of student learning strategies; need to know which they students prefer, and which are still to develop.*

**Keywords:** *Language Learning Strategy Use Inventory (LLSU Inventory), higher education institutions (HEIs), Sport Science students, Healthcare students/*

## Introduction

The aim of the research is to find out what are the characteristics of foreign language learning strategy use in the students of two study Programs – BA in Sport Science and Health care (Physiotherapy) in a Latvian higher education institution. Health care and sports students learn foreign languages to engage in study internationalisation, work abroad, increase their self-efficacy, read and write scientific articles in foreign languages. Lack of foreign language proficiency is among key factors hindering qualitative engagement in the activities, mentioned above.

For assessing LLS currently most frequently used instrument embraces six categories: memory, cognitive, compensation, metacognitive, affective and

social. Other possible approaches to strategy classification include developing a task-based strategy inventory.

At CARLA Center, University of Minnesota was developed Language Learning Strategy Use Inventory (LLSU Inventory; Kappler et al., 2009), which might not be useful for every language learning task, many of them have some value, depending on learning style preferences and the learning contexts. Using LLSU Inventory, strategy use in foreign language learning in different cultural environments has been discussed by Rudzinska and Khampirat (Rudzinska & Khampirat, 2018). Present research will focus on the use of LLSU Inventory to compare Sport and Health-care student foreign language learning strategy use in a Latvian HEI.

### **Literature review**

Health care and sports students learn foreign languages to study and work abroad, increase their self-efficacy, be able to read and write scientific articles in foreign languages (Marshall, 2017; Brown et al., 2016; Rudzinska & Jakovleva, 2014; Pepe & Kozan, 2013; Button et al., 2005). Study internationalisation is one of the aspects that reflect the changing global reality, the European Commission Erasmus exchange programme is one of the means addressing it. Internationalisation has the potential to increase students' employability within Europe and beyond, among key barriers being language issues.

Gorges (Gorges, Kandler, & Bohner, 2012) researched internationalization at student home universities in Germany from the aspect of the language, and concluded that students having good language proficiency are more open to foreign language teaching at their universities. Furthermore, it has been found that study abroad programs increase students' self-efficacy perception in the specific domains of communication, foreign language learning, and cultural adaptation self-efficacy (Cubillos & Ilvento, 2012).

Another important factor, emphasizing the importance of learning foreign languages, mainly the English language, is its prevalence in scientific literature in many subject fields, including the ones of Physiotherapy and Sports. Although Shiwa in 2013 (Shiwa et al., 2013) asserted that language of publication has a small influence on the quality of reports of controlled trials of physiotherapy interventions, more recent evidence suggests (Yamato et al., 2018) that the fact that article was published in English, predicted the number of its accesses in Physiotherapy Evidence Database from August 2014 to January 2015, the research embracing 29,313 articles.

The British Council UK has found that among the reasons why UK and US students avoid learning abroad is not being confident about speaking another language (British Council, 2015). Language remains a significant barrier for

going abroad even when generous bursaries are available, as with the Erasmus program (Brown et al., 2016). Kent-Wilkinson and Pepe and Kozan researched Sport and Healthcare student internationalization (Kent-Wilkinson et al., 2015; Pepe & Kozan, 2013), Kent-Wilkinson identified the lack of foreign language skills in healthcare students, and Pepe and Kozan – in Physical Education and Sports students.

Language learning strategies (LLS) are operations used by learners to help in the acquisition, storage and retrieval of information, better language learners generally use a variety of strategies, appropriate to their style of learning. Language learning strategies are key to learner autonomy; higher strategy use can be associated with higher proficiency in a foreign language, the broader the repertoire of strategies a learner has, the greater the likelihood of success. Cohen (Cohen, 2014) viewed strategies as the ability to do something vs just learning, and in terms of their role in operationalizing both the receptive skills of listening and reading, and the productive skills of speaking, and writing.

At University of Minnesota, in Center for Advanced Research on Language Acquisition (CARLA Center) was developed Language Learning Strategy Use Inventory (LLSU; Kappler et al., 2009), consisting of four language skills (listening, speaking, reading, writing), vocabulary development, translation strategy use. The authors emphasize that not all strategies might be useful for all language learning tasks, but many of them are thought to have some value, depending on your style preferences and the learning contexts. Using LLSU Inventory, strategy use in foreign language learning in different cultural environments has been discussed by Khampirat and Rudzinska (Rudzinska & Khampirat, 2018). Pepe & Kozan (Pepe & Kozan, 2013) compared Physical Education and Sports and Classroom Teaching department student strategy use, calling them learning styles. In the article we will adhere to the more widely accepted terminology, and call them learning strategies. They found statistically significant differences between both department student strategy use at 0.05 significance level, indicating that there exists only a 5% risk of concluding that is a difference between the results in both Departments. The authors concluded, however, that the learning strategies of both Program students were found to be generally the same. Their conclusions were that faculty members should consider the differences of departments, and need to know which learning strategies the students prefer, and prepare course programs related to learning preferences.

## Methodology

### Participants

In the study participated 141 undergraduate students from Sport Science and Healthcare (Physiotherapy) Programs, 101 represented Sport Science and 40 – Physiotherapy. The basic demographic characteristics of participants explored in this study were: gender, age, year of study in higher education institution, study Program, and study Department (full time/part time). Respondents were from 19 to 50 years old, the majority - between the age of 20 and 23. Female students (N=76) were slightly more than male students (N=59). The researchers obtained all the necessary information about respondent study year, because the questionnaire was administered during the classes. The same refers to the response about full-time and part-time students.

Majority of the respondents were from Year 2 (N=58) and Year 4 (N=44). There are only a few respondents from Year 1. Full-time students were overwhelmingly more than part-time students. The more detailed information of participant's characteristics is summarized in Table 1.

*Table 1 Profile of participant characteristics*

Demographic characteristics/ Type	Sport Science	Healthcare	Total
	N	N	N
<b>Gender</b>			
Male	46	13	59
Female	49	27	76
Declined to respond		-	6
<b>Age</b>			
19 years	3	0	3
20 years	22	10	32
21 year	28	9	37
22 years	19	3	22
23 years	11	2	13
24 years	4	4	8
25 years	2	1	3
26 years	1	1	2
27 years	2	1	3
28 years	1	0	1
29 years	1	2	3
32 years	1	1	2
33 years	0	3	3
34 years	0	1	1
35 years	1	0	1
39 years	1	0	1
41 year	0	1	1

Demographic characteristics/ Type	Sport Science	Healthcare	Total
	N	N	N
50 years	0	1	1
N/A			4
<b>Year of study</b>			
<b>Study Year</b>			
Year 1	5	0	5
Year 2	34	24	58
Year 3	18	16	34
Year 4	44	0	44
<b>Study Department</b>			
Full-time	95	25	120
Part-time	6	15	21
Total	101	40	141

### Research instrument

The questionnaire, developed by CARLA center, contains 6 strategies, 90 items (Kappler et al., 2009). Listening Strategy Use is measured with the help of 5 indicators (26 items), namely (a) Strategies to increase my exposure to the target language; (b) Strategies to become more familiar with the sounds in the target language; (c) Strategies to prepare to listen to conversation in the target language; (d) Strategies to listen to conversation in the target language; (f) Strategies for when I do not understand some or most of what someone says in the target language.

Vocabulary Strategy Use is measured with the help of 4 indicators (18 items), namely (a) Strategies to learn new words; (b) Strategies to review vocabulary; (c) Strategies to recall vocabulary; (d) Strategies to make use of new vocabulary. Speaking Strategy Use is measured with the help of 3 indicators (18 items), namely (a) Strategies to practice speaking; (b) Strategies to engage in conversation; (c) Strategies for when I can't think of a word or expression. Reading Strategy Use is measured with the help of 2 indicators (12 items), namely (a) Strategies to improve my reading ability; (b) Strategies for when words and grammatical structures are not understood. Writing Strategy Use is measured with the help of 3 indicators (10 items), namely (a) Strategies for basic writing; (b) Strategies for writing an essay or academic paper; (c) Strategies to use after writing a draft of an essay or paper. Translation Strategy Use is measured with the help of 2 indicators (6 items), namely (a) Strategies for translation; (b) Strategies for working directly in the target language as much as possible.

Each item was rated on a four-point Likert scale (1-4) from 1, standing for: not true of me at all, to 4, standing for: very true of me. Khampirat has obtained a written Permission to use it; Rudzinska and Khampirat have used it to compare

language strategy use differences in different cultural backgrounds (Rudzinska & Khampirat, 2018).

#### Analytical methods

The statistical analysis was performed with SPSS Statistics 20.0. To assess the reliability of the CARLA scale, the internal consistency of the questionnaire was evaluated using the standardized Cronbach's alpha reliability coefficient (Cronbach's  $\alpha$ ), which provides an indication of the average correlation among all of the items that make up a scale. The internal consistency is the degree to which the items that make up the scale are all measuring the same attribute. Cronbach's  $\alpha$  values range from 0 to 1, with higher values indicating greater reliability. Values above .7 are considered acceptable, however, values above .8 are preferable

Descriptive statistics was used to summarize the characteristics of the data. Mean, Standard Deviation, Mode were used to describe central tendencies and variation of the data. To tap the most striking differences in both Program student responses, was used Mode – the most often occurring response.

Kolmogorov-Smirnov test was used to check the normality of the data. Having checked that the data have normal distribution, Independent samples t-tests were performed to test hypotheses comparing the mean differences between Sport science and Healthcare program student strategy practice indicators and items. Statistical significance level, as usually in healthcare sciences, was settled at 10% (Sig  $\leq 0.10$ ).

### **Research results**

Reliability analysis showed that Cronbach's alpha of the CARLA scale (90 items) was 0.92. This result testifies that the reliability of the scale is high, all the indicators measure the same construct – foreign language learning strategies.

#### **Listening (LS) and Vocabulary learning (VS) Strategy use**

Listening Strategy and (LS) scale Vocabulary learning (VS) Strategy use analysis showed that (Table 2) – both for LS and VS the mean value was 2.63, std. dev. was 0.36 and .40 respectively. Since the scale of responses was from 1 to 4, conclusion can be drawn that both Program students are aware of the strategies and quite use them.

**Table 2 Descriptive statistics of two Language Learning Strategies**

Strategies (Abbreviations)	N	Valid N (listwise)	Minimum	Maximum	Mean	SD
Listening Strategies (LS)	141	141	1.77	3.46	2.63	.36
Vocabulary learning Strategies (VS)	141	141	1.44	3.89	2.63	.40

Before comparing differences in the means of Listening Strategy use between both Program students, was performed One-Sample Kolmogorov-Smirnov Test (Table 3).

**Table 3 Listening Strategy (LS) scale One-Sample Kolmogorov-Smirnov Test**

One-Sample Kolmogorov-Smirnov Test		
N		141
Normal Parameters a	Mean	2.63
	Std. Deviation	.36
Kolmogorov-Smirnov Z		.87
Asymp. Sig. (2-tailed)		.43
a. Test distribution is Normal.		

Test revealed (Sig.= 0.43, i.e. >0.05) that LS data distribution is normal, and for data analysis can be used parametrical methods, including t-test for Independent Samples. To compare the mean values of both Program LS use was performed Independent Samples t-Test (Table 4).

**Table 4 Descriptive statistics of Listening Strategy, independent t-Test**

Strategies (Abbreviations)	N_ Sport Science	N_ Physiotherapy	Sport Science		Physiotherapy		t-Test
			Mean	SD	Mean	SD	
Listening Strategies (LS)	101	40	2.58	0.34	2.70	0.70	- 2.44*

Listening Strategy Independent Samples t-Test showed that there is statistically significant difference between Sport Science and Physiotherapy student Listening Strategy use - Sig. (2-tailed) = .02, i.e., < .05, Physiotherapy students use them more than Sport Science students.

To find common characteristics in both Program student responses, were found the modes - the most commonly occurring numbers (Table 5, Table 6). To

reveal marginal student responses, we focused on modes for the choices 4 – Very true of me and 1 – Not true of me at all.

*Table 5 Listening (LS) Strategy (VS) item mode*

Listening learning Strategy (VS) item mode														
S1	S2	S4	S5	S6	S10	S11	S12	S13	S14	S15	S16	S17	S18	S20
2	4	2	2	3	3	3	3	2	2	2	2	3	4	4

Table 5 clearly shows that from LS Answer 4 (very true of me) most often was provided as the response to the Items S2 “Listen to talk shows on the radio, watch TV shows, or see movies in the target language”, S18 and S20 “Ask speakers to repeat what they have said if it wasn’t clear for me”. These strategies both Program students use most often. Therefore, we analyzed them further, wanting to know if both Program students differ as to their responses to these statements. It was found that but both Program students do not differ as to the frequent use of “Listening to talk shows on the radio, watching TV shows, or seeing movies in the target language” (Sig.=0.50, i.e. >0.10).

**Vocabulary learning (VS) Strategy use**

From VS Answer 4 (very true of me) most often was provided (Table 6) to the Item S27 „Pay attention to the structure of the new word” and S29 “Group words according to parts of speech”, and answer 1 (not true of me at all) - to the Item S38 “Review words periodically, so that I don’t forget them”.

*Table 6 Vocabulary learning Strategy (VS) item mode*

		S27	S28	S29	S30	S31	S32	S33	S34	S35	S36	S37	S38	S39	S40	S41	S42	S43	S44
N	Valid	140	139	140	141	139	138	139	133	137	138	138	137	138	139	140	139	139	139
	Missing	1	2	1	0	2	3	2	8	4	3	3	4	3	2	1	2	2	2
Mode		4	3	4	3	3	2	3	3	3	2	2	1	3	3	3	2	3	2

This result shows that both Program students often discover the new word meaning by relying on their knowledge of word building – paying attention to the word structure in the terms of prefixes, suffixes, etc., and by grouping words according to parts of speech, e.g., nouns, verbs, adjectives, etc. The students, however, are not eager to pay enough attention to shifting the words from short term to long term memory - they tend not to revise them from time to time, once they have been learned. Further, we explored the differences of means of the mentioned items between both Program student responses (Table 7). Independent Samples t-Test (Table 6) revealed that Physiotherapy students less “Group words according to parts of speech” (t=-1.76, Sig. (2-tailed) <0.05), but



Sport Science students less “Review words periodically, so that I don’t forget them” ( $t= 1.76$ , Sig. (2-tailed)  $<0.10$ ). therefore, conclusion can be drawn that Sport Science students pay less attention to memorizing what has been learned, but Physiotherapy students make less effort to classify new words in order to better understand their meaning, or the results might imply that Physiotherapy students are learning to remember and use the new words that have been learned, but Sport students are more concerned about their present language learning necessities.

Table 7 Descriptive statistics of Vocabulary learning Strategy Items, independent t-Test

Vocabulary Learning Strategy Items (Abbreviations)	N		Sport Science		Physiotherapy		t-Test
	Sport Science	Physiotherapy	Mean	SD	Mean	SD	
Pay attention to the structure of the new word (S27)	100	40	3.32	.70	3.30	.82	.15
Group words according to parts of speech (S29)	100	40	3.37	.81	3.10	.84	-1.76*
Review words periodically, so that I don’t forget them (S 38)	98	39	2.01	.95	2.33	1.03	-1.76*

Notes: \* =  $p < .10$   $p < .05$ , \*\* =  $p < .01$ \*\*\* (two-tailed test), scale scores ranged from 1 to 4

**Speaking Strategy (SS), Reading Strategy (RS), Writing Strategy (WS)** and

**Translation Strategy (TS)** use

From Speaking Strategies answer 4 (very true of me) most often was provided to the Item S57 „Ask for help from conversational partner” and answer 1 (not true of me at all) most often occurred to the Item S59 “Use the words from my own language, but say it in a way that sounds like words in the target language and S60 „Make up new words or guess if I don’t know the right ones”. Physiotherapy students more rarely than Sport Science students “Ask speakers to repeat what they have said if it wasn’t clear for me” (Sig.= 0.08, i.e.  $<0.10$ ).

From Reading Strategies answers 1 and 4 were not provided, were given only answers 2 and 3, implying that RS use by both Program students is neither very true of them, nor not true of them at all. They are aware of these strategies, but do not use them very often. Similarly, there are no Writing Strategies, the use of which is very true of the students – no answers 4. However, there is one WS item, the use of which is not true of most of the students at all (answer 1) - „Practice writing the alphabet and/or new words in the target language”. Independent Samples t-Test revealed that both Program students equally rarely

“Practice writing the alphabet and/or new words in the target language”, because there is no statistically significant difference found ( $t=.18$ , Sig.  $> .10$ ).

To Translation Strategy Items most often given answer modes were 2 and 3, implying that TS use by both Program students is neither very true of them, nor not true of them at all. They are aware of these strategies, but do not use them very often. Further analysis of some of TS with the help of Independent Samples t-Test revealed that Physiotherapy Program students more often “Plan out what to say or write in my own language and then translate it into the target language” ( $t=-2.12$ , Sig. $<.001$ ) and “Translate parts of a conversation into my own language to help me remember the conversation” ( $t=-1.71$ , Sig. (2-tailed)  $<.005$ ).

### **Conclusions and implications**

The results show that both Program students are aware of the strategies and quite use them, mean value of Listening Strategy (LS) and Vocabulary learning (VS) Strategy use was 2.63, SD - 0.36 and .40 respectively. However, Physiotherapy student use Listening Strategies more that the researched Sport Science students (Sig. (2-tailed) = .02, i.e.,  $< .05$ ).

Considering Vocabulary learning strategies, was observed that Physiotherapy students less “Group words according to parts of speech” ( $t=-1.76$ , Sig. (2-tailed)  $<0.05$ ), but Sport Science students less “Review words periodically, so that I don’t forget them” ( $t= 1.76$ , Sig. (2-tailed)  $<0.10$ ), the result can imply that they worry less about their future needs, and are more concerned about their present language use necessities.

Physiotherapy students more rarely “Ask speakers to repeat what they have said if it wasn’t clear for me” (Sig. (2-tailed) = .02, i.e.,  $< .05$ ), but both Program students do not differ as to the use of “Listening to talk shows on the radio, watching TV shows, or seeing movies in the target language” (Sig. (2-tailed)  $=0.50$ , i.e.  $>0.10$ ).

Reading Strategies use by both Program students is neither very likely of them, nor not likely at all. They are aware of these strategies, but do not use them very often. Speaking strategy analysis shows that both Program students often “Ask for help from conversational partner” and rarely “Use the words from my own language, but say it in a way that sounds like words in the target language” and “Make up new words or guess if I don’t know the right ones to use” (Sig. (2-tailed)  $>.0.10$ ).

The researched students are not very likely to use any of the writing strategies, but most of the students are not likely at all to “Practice writing the alphabet and/or new words in the target language”.

Physiotherapy Program students more often “Plan out what to say or write in my own language and then translate it into the target language” ( $t=-2.12$ , Sig. (2-tailed)  $<.001$ ) and “Translate parts of a conversation into my own language to help me remember the conversation”. Although statistically significant small differences in both Program student languages learning strategy use were found, yet the strategy use of both Program students is generally the same. Program developers should consider the differences of student learning strategies; need to know which they students prefer, and which are still to develop.

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