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Comparison of Psychometric Properties of Foreign Language Learner Strategy Inventories: SILL, LSUS, and LASSI in their Czech Adaptation

Katerina Vlckova, Iva Hudeckova, and Katerina Svejdikova (Institute for Research in School Education, Faculty of Education, Masaryk University, Brno, Czech Republic)

vlckova@ped.muni.cz

Foreign language learning strategies (FLLS)

- Important concept in theory, research of SLA, language learning and teaching since 1960s:
  - Capture a wide range of linguistic behaviours.
  - Operations to acquire, retain, retrieve information or perform (Rigney, 1978).
  - Ways in which the learner selects, acquires, or integrates new knowledge (Weinstein, Mayer, 1986).
  - Sets of conscious thoughts and actions that a learner takes to achieve a learning goal (Chamot, 2004).
- Connected concepts :
  - Self-regulation, metacognition, learning styles, cognitive style.
- Strategy classification:
  - Most often classified according to psychological functions - cognitive, metacognitive, and socio-affective (O'Malley, Chamot 1990),
  - or 4 language skills (Cohen, Weaver 2006).
- Strategy choice and use is influenced by different variables:
  - e.g. gender, experience, motivation, language proficiency.

Taxonomy of language learning strategies (R. L. Oxford 1990)

Direct strategies			Indirect strategies		
Memory	Cognitive	Compensation	Metacognit.	Affective	Social
Creating mental linkages	Practising	Guessing intelligently	Centering your learning	Lowering your anxiety	Asking questions
Applying images, sounds	Receiving, sending messages	Overcoming limitations in speaking and writing	Arranging and planning your learning	Encouraging yourself	Cooperating with others
Reviewing well	Analysing, reasoning		Evaluating your learning	Taking your emotional temperature	Empathising with others
Employing action	Creating structure for input and output				

Examples of invertory items
„To understand unfamiliar words, I make guesses.“
„I first skim an English passage (read over the passage quickly) then go back and read carefully.“
„I find the meaning of an English word by dividing it into parts that I understand.“

Research question

- For measuring declared FLLS use, inventories based on previous inductive research from early stages of FLLS research were developed.
- It is important to know how precisely these instrument measure strategies, if and how the instruments are inter-correlated and which is better in predicting achievement.
- This study compares psychometric properties of 3 mainly used FLLS inventories:
  1) SILL - Strategy Inventory for Language Learning (Oxford, 1990).
  2) LSUS - Language Strategy Use Survey (Cohen, Oxford & Chi, 2002).
  3) LASSI - Learning and Study Strategies Inventory (Weinstein, Schulte & Palmer, 2002).

Method

- Translation and adaptation of the 3 inventories for the Czech conditions (SILL: Vlčková, 2007; LASSI: Hudečková, 2012)
- Partial standardization (LSUS: Vlčková & Přikrylová , 2011).

Data collection

- All 3 inventories were completed in a random order one week after each other by the same 126 students .
- Non-random sampling.
- Students reported their strategies of their preferred FL .

Research sample

Year of sampling	2012
N	126
Schools level	upper secondary
Schools type	comprehensive
Students´age	17-18
Female	69 %
Preffered FL	English 73 %
Years of preffered FL learning	mostly 8-10

Results

Declared FLLS use

	Average	SD	Scale (points)
SILL	3.02	.41	5
LSUS	2.66	.31	4
LASSI	2.77	.28	5

Reliability coefficient Cronbach's alpha

	α	α male	α female	No. items	Scale (points)
SILL	.91	.92	.89	72	5
LSUS	.91	.92	.91	89	4
LASSI	.82	.87	.79	80	5

Combination of administration order of the inventories		Number of students
ABC	SILL-LASSI-LSUS	20
ACB	SILL-LSUS-LASSI	23
BAC	LASSI-SILL-LSUS	15
BCA	LASSI-LSUS-SILL	18
CAB	LSUS-SILL-LASSI	19
CBA	LSUS-LASSI-SILL	25

Concurrent instruments´ validity

	R
SILL/LSUS	.66
LASSI/LSUS	.43
LASSI/SILL	.41

Scores of strategy use of all 3 inventories inter-correlated at $p < .05$.

Correlation of strategy use scores with achievement indicators

	R School mark	R Self-assessment of FL competence
SILL	- .20	.12
LSUS	- .20	- .01
LASSI	.22 (negative)	.34

Significant at $p < .05$.

Effect of administration order on reliability

The *order of administration* of inventories affected the reliability:

- LSUS – the lowest reliability when administered as first inventory.
- LASSI – the lowest reliability when administered as the last one.
- SILL – reliability was the highest when administered as the last one.

Discussion

- The *FLLS use* was highest at LSUS, than SILL and lowest by LASSI.
- Regarding *concurrent validity*, the scores of strategy use of all 3inventories were inter-correlated. The strongest correlation were between SILL and LSUS.
- *Reliability* coefficient Cronbach´s alpha reached an acceptable level for all the inventories. In all inventories, the reliability for men was slightly higher.
- The *order of administration* of inventories affected the reliability of each instrument.
- *Predictive power* of the inventories for *students´ achievement* was very low, though statistically significant in all cases. Self-assessment correlated best with LASSI scores and school mark correlated best with LASSI, but negatively – students with worse marks used strategies measured by LASSI more.

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