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Validation of self-regulatory capacity in vocabulary learning scale in Turkish

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Abstract

This paper presents the findings of an adaptation and validation study of a questionnaire designed to measure self-regulatory capacity in vocabulary to a Turkish English as a Foreign Language context. First, the instrument was translated into Turkish and back translated into English. It was then administered to 102 pre-intermediate high school students. Confirmatory factor analysis validated the original higher order model after the removal of all environment control items and two emotion control items. The findings suggest that the Turkish version of the questionnaire can be a reliable and valid measurement of self-regulated vocabulary learning in high school students.

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1. Introduction

Research into the concept of self-regulation in the field of teaching English as a Foreign Language (hereafter, EFL) became popular as a result of the lack of theoretical clarification about the nature of language learning strategies (Dörnyei, 2005). The educational psychologist Zimmerman (1998) defined self-regulation as self-generated thoughts, feelings, and actions for attaining academic goals. The purpose of the research on self-regulated learning has been to explain the efforts of students to identify their personal initiative, resourcefulness, persistence, and sense of responsibility on their own. Therefore, motivational variables such as goal-setting, self-beliefs, and intrinsic interest have been incorporated in

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most self-regulated learning models as central features. Rather than the use of specific learning strategies and the outcomes on learning, the main concern of research into self-regulated learning is how and why students choose to use a particular strategy (Zimmerman & Schunk, 2001).

In the field of EFL, Tseng, Dörnyei and Schmitt (2006) have outlined a new approach to conceptualizing and assessing strategic learning, based on the notion of self-regulation. Instead of focusing on the outcomes of strategic learning, they stress the importance of the learners' innate self-regulation capacity that fuels their efforts to search for is highlighted and personalized strategic learning mechanism. Hence, they named this concept the self-regulating capacity for vocabulary learning (hereafter, SRCVoc). What makes this approach different from other instruments measuring language learning strategy use is that it is situated in one particular language learning domain, vocabulary learning. The reason of this focus has partly been the significance of the mastery of vocabulary in second language acquisition process (see, e.g. Nation, 2005). The scale developed by Tseng et al. (2006) presents SRCVoc as an overriding factor consisting of five facets of control: commitment control, metacognitive control, satiation control, emotion control and environment control.

It should be emphasized that the marginalization of language learning strategy research in favor of self-regulation has been the focus of some criticism. Gao (2006), for example, argued that language learning strategies were not entirely incompatible with self-regulated learning. More recently, Rose (2011) has concurred with Gao, stating that the concept of SRCVoc is just as fuzzy as the previous models of strategic learning it has been claimed to replace.

To date, the SRCVoc scale (Tseng et al., 2006) has been little researched. A recent study was carried out with the instrument in a Japanese EFL setting (Mizumoto & Takeuchi, 2011). The results of the study suggested that SRCVoc was a valid measure as a 2nd order model, although none the items related to satiation control in the original scale were validated. Given this gap in the research, the aim of the current study is to investigate whether the SRCVoc scale is a reliable and valid instrument in a Turkish EFL setting.

2. Methodology

2.1. Participants

The participants were 14 year-old 9th graders (n=102, 47 female) enrolled at a private high school in the city of Ankara during the 2011-2012 academic year. A placement test administered by the school in the second week of the autumn term showed that the English language proficiency of the participants was pre-intermediate. They had been studying English for 5-14 years, and 5 of the students had lived in an English speaking country for 1-9 years.

2.2. Data collection instrument.

The data in the current study were collected by means a Turkish version of SRCVoc (Tseng et al., 2006). With permission from one of the authors of the instrument, the items were translated into Turkish by the second researcher. A bilingual Turkish-English speaker back translated the items to check for any ambiguities, and the first researcher confirmed the translation. The linguistic reliability of the instrument was thus ensured. A short background information questionnaire was added to the beginning of the SRCVoc to collect demographic information.

There are five subscales in the original SRCVoc (Tseng et al., 2006). The first is commitment control, which is related to goal setting (e.g. 'When learning vocabulary, I persist until I reach the goals I set for myself.');

metacognitive control is related to concentration and procrastination (e.g. 'When learning

vocabulary, I have special techniques to keep my attention focused.');

satiation control is concerned with controlling boredom (e.g. 'During the process of learning vocabulary, I am confident I can overcome any sense of boredom'); emotion control covers dealing with disruptive emotional states (e.g. 'When I feel stressed about learning vocabulary, I know how to reduce this stress.');

and finally, environment control refers to controlling negative environmental factors (e.g. 'When learning vocabulary, I know how to arrange the environment to make learning more efficient.').

Participants made their responses on a 6-point Likert-type scale (1= 'Strongly disagree, 6= 'Strongly agree.')

2.3. Data collection procedures

The data collection instrument was administered to the participants with the help of the colleagues who were teaching the different classes. The participants were reminded that participation was voluntary and that there were no right or wrong answers. They were also assured that the information collected from the questionnaire would be kept anonymous and would not in any way affect their overall assessment.

2.4. Data analysis procedures

The usual procedure to test the validity of an instrument which has been adapted to a new context is confirmatory factor analysis (hereafter, CFA), which is a theory driven technique in which it is possible to determine how well a set of data fits to a hypothetical model (Schreiber, Stage, King, Nora, & Barlow, 2006). In CFA, variables are fixed a priori to load on specific factors (Bandalos, 1996). Because of the small size of the current sample and that the data were not normally distributed, the Scale-Free Least Squares method was chosen. A number of indices can be used when assessing model fit. In the current study, the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Relative Fit Index (RFI), and Normed Fit Index (NFI) were calculated (see, e.g. Schreiber, et al., 2006). The minimum cut off point for model validation is $\geq .90$ for GFI, RFI and NFI respectively (Byrne, 2001). Cronbach alpha coefficient was calculated to test the internal reliability of the scale. Finally, the descriptive statistics for each of the items were calculated. All statistical tests were run with SPSS 13.0 and AMOS 16.0.

3. Results and discussion

CFA using Scale-Free Least Squares method was conducted to determine the construct validity of SRCVoc with the current sample. First, all the items which were related to environmental control and items 12 and 15 which were related to emotional control did not survive this process and were hence deleted from the scale. The indices showed that a 2nd order factor structure best explained the data set with all the values above the suggested minimum cut off points for model validation (Byrne, 2001) (GFI=.98, AGFI=.97, RFI=.97, NFI=.98). The Cronbach alpha for the scale was .89, which suggested that the scale had high internal reliability.

The results of the current study are in parallel with those of the original study (Tseng et al., 2006); however, not all the items of the original scale were validated. More specifically, two of the items related to emotion control and all of the items related to environment control had to be eliminated. The emotion control items were related to stress management when learning vocabulary, and interestingly when they were completing the questionnaire, the participants commented that they did not feel any stress when learning vocabulary. The fact that all the environmental control items were eliminated would suggest the lack of importance given by the participants to their learning environment, which could be due to their relatively young age. However, it is beyond the scope of the current study to make such a claim, and

further more in depth qualitative studies on this matter could be warranted. The study conducted by Mizumoto and Takeuchi (2011) in a Japanese context also supported the second order model, however none of the items related to satiation control or commitment control were validated.

The descriptive statistics are presented in Table 1. As the results show, all items have a mean score of above the mean of the scale (3.00), with a total mean of 4.01. These results are similar to those of Mizumoto and Takeuchi (2011).

Table1. Descriptive statistics for each item of SRCVoc surviving the CFA

	Min	Max	Mean	S.D
Com_7	1	6	4.68	1.51
Com_10	1	6	4.61	1.05
Com_13	1	6	4.29	1.35
Sat_8	1	6	4.29	1.47
Sat_1	1	6	4.26	1.39
Sat_19	2	6	4.16	1.19
Sat_18	1	6	4.06	1.39
Emo_6	1	6	4	1.67
Met_16	1	6	3.87	1.2
Emo_2	1	6	3.81	1.28
Com_4	2	6	3.71	1.57
Met_9	1	6	3.68	1.3
Met_5	1	6	3.39	1.41
Met_11	1	6	3.39	1.43
Total	1.86	5.29	4.01	0.9

Note. Com=commitment control, Sat=satiation control, Emo=emotion control, Met=metacognitive control

The results of the current study suggest that the Turkish version of SRCvoc is a reliable and valid instrument. However, it may be sensitive to cultural differences, and hence further studies need to be conducted in different cultural contexts with participants of different ages to shed more light on the concept. Future research could also be carried out using the instrument to investigate any existing relationships between SRCVoc, strategic learning and other individual learner differences in order to gain a more complete understanding of the concept.

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