Gender, Self- Motivating Strategies Use, Foreign Language Learning Motivation and Foreign Language Grade

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Abstract

There is a need to gather empirical data concerning gender differences in students` self-regulation of foreign language learning motivation. Therefore two research problems were formulated: do male and female foreign language learners differ in terms of self-motivating strategies use? Is foreign language grade related differently with foreign language learning motivation and self-motivating strategies use in men and women? Two instruments were constructed: Self-motivating Strategies Inventory consisting of 27 items measuring planning (alpha=0,77), focusing attention (alpha=0,73), generating positive emotions (alpha=0,73) and imagining consequences of actions (alpha=0,69) and Foreign Language Learning Motivation Inventory (alpha = 0,70). Data were collected from upper secondary school and university students (182 women and 113 men). It was found that men less frequently than women use self-motivating strategies such as: planning [t = - 3,58; p<0,001], focusing attention [t = - 2,93; p<0,010;] and visualizing consequences of actions [t= - 4,37; p<0,001]. Male students with low foreign language motivation who rarely used self-motivating strategies had lower average foreign language grade than male participants from the remaining three subgroups characterized by: high frequency of self-motivating strategies use and low foreign language motivation (p<0,01), low frequency of self-motivating strategies use and high foreign language motivation (p<0,01) as well as high frequency of self-motivating strategies use and high foreign language motivation (p<0,01). Practical conclusions concerning foreign language teaching will be presented.

1. Introduction

The aim of the article is to present the results of the study concerning the relationship between gender, self-motivating strategies use, foreign language motivation and foreign language grade. First, the differences between male and female foreign language learners in self-motivating strategies use were investigated. Next, between-groups comparisons were made to test the differences in the level of foreign language grade of foreign language learners varying in terms of gender, self-motivating strategies use and foreign language learning motivation.

The key concept for the research described in the article are self-motivating strategies defined as "student`s active efforts to intervene in order to sustain or improve their motivation" (Wolters, Benzon, & Arroyo-Giner, 2011, pp. 298-299). Regulation of motivation is listed as one of the aspects of learning self- regulation together with regulation of cognitive processes, behaviours and study environment (Pintrich, 2004). The use of self-motivating strategies is included in self-regulation models derived from Bandura`s socio-cognitive theory of learning. These models present learning self-regulation as a cyclical process consisting of forethought, performance, monitoring and reflection phases. Regulation of motivation is ascribed especially to performance stage (Zimmerman, 2011).

Motivational regulation demands the general knowledge concerning motivation and the ways in which it can be controlled. It also requires the awareness of personal attitudes towards the task to be performed as well as the ability to monitor one`s own motivational states and to use strategies which can alter these states (Wolters, Benzon, & Arroyo-Giner, 2011). One of the classifications of self-motivating strategies was presented by Z. Dörnei (2001). The Author distinguished strategies which facilitate:

- focusing attention on learning goal – such as imagining success or consequences of failure;
- focusing attention on learning tasks - for example, monitoring compliance to work plans and ignoring distractions;
- overcoming tiredness and boredom - this group of strategies includes introducing elements of fun and competition to the task being performed and changing types of learning activities and the way of performing them;
- control over emotions - including generating positive states of mind by means of affirmations, recalling past success and rewards as well as diverting attention from negative states of mind thanks to relaxation techniques;
- changing learning environment - for example, creating and caring for the relationships which are beneficial to learning.

Researchers use the term "affective strategies" to refer to students` behaviours aimed at controlling emotions and motivation which assist foreign language learning (Oxford, 1990). Studies provided contradictory results as far as gender differences in the use of these strategies is concerned. L. Ran and R. Oxford (2003) found no difference between Taiwanese boys and girls in the use of affective language strategies. Similarly, in the context of western culture, no differences between female and male European students learning modern Greek as a foreign language were found (Psaltou-Joycey, 2008). On the contrary, T. Ghee with coworkers (2010) gathered data showing that among Malasian students learning mandarin as a third language, women used affective language strategies more frequently than men. The need of

gathering empirical data concerning gender differences in the use of strategies which facilitate control over motivation and emotions is stressed also in the literature devoted to self-regulation of learning in general (Zeidner, Boekaerts, & Pintrich, 2000).

Self-regulation literature concerning self-motivating strategies use shows that not only gender differences in employing motivational regulation need further investigation. The link between self-motivating strategies use, learning motivation and learning outcomes needs to be supported by empirical data. Moreover, there is an need to construct instruments aimed solely to measuring the intensity of self-motivating strategies use (Wolters et al., 2011). Items or individual scales devoted to learning motivation and its management can be found in the inventories of learning self-regulatory strategies like Motivational and Learning Strategy Questionnaire (MSLQ), constructed by Pintrich, Smith, Garcia and McKeachie (1993) and Learning and Study Strategies Inventory (Weinstein & Palmer, 2002). However, these tools typically contain items concerning attitudes towards learning, learning goals and learning motivation rather than control over motivational and emotional processes accompanying learning (Brodeur & Mercier, 2006). Therefore Self-Motivating Strategies Inventory was constructed for the purpose of the research and the study was undertaken with the aim to obtain data concerning differences in male and female foreign language learners in terms of self-motivating strategies use and the relationship between self-motivating strategies use, foreign language motivation and foreign language grade.

2. Problem and hypotheses

The answers to the following research probems were sought:

1. Do male and female foreign language learners differ in terms of self-motivating strategies use?
2. Is foreign language grade related differently with self-motivating strategies use and foreign language learning motivation in men and women?

Eight hypotheses were formulated.

H1. There is a difference between men and women in terms of the general self-motivating strategies use.
H2. There is a difference between men and women in terms of the use of self-miotivting strategies facilitating:

a. planning,
b. focusing attention,
c. generating positive emotions,
d. imagining consequences of one`s actions.

It was also assumed that the use of self-motivating strategies may increase learning motivation which, in turn, may contribute to better learning effects. Hence hypotheses were formulated assuming differences in foreign language grade in the subgroups of participants different in terms of gender, self-motivating strategies use intensity and learning motivation.

H3. In a male group there is a difference in foreign language grade between the students with high and low frequency of self-motivating strategies use.
H4. In a male group there is a difference in foreign language grade between the students with high and low foreign language learning motivation.
H5. In a male group there is an interaction effect of foreign language learning motivation and the frequency of self-motivating strategies use on foreign language grade.
H6. In a female group there is a difference in foreign language grade between the students with high and low frequency of self-motivating strategies use.
H7. In a female group there is a difference in foreign language grade between the students with high and low foreign language learning motivation.
H8. In a female group there is an interaction effect of foreign language learning motivation and the frequency of self-motivating strategies use on foreign language grade.

3. **Method**

3.1. Instruments

Foreign language grade was treated as a dependent variable. Independent variables were: gender, self-motivating strategies use and language learning motivation. Information concerning the values of the dependent variable was collected from the participants` declarations concerning the foreign language grade they obtained the previous semester. To measure independent variables two inventories were constructed for the purpose of the research: Self-Motivating Strategies Inventory (SMSI) and Foreign Language Learning Motivation Inventory (FLLMI). The data concerning the third independent variable – gender – were collected in the form of participants` declarations.

Self-Motivating Strategies Use Inventory (SMSI) consists of 27 items formulated on the basis of self-motivating strategies classification presented by Z. Dörnei (2001). Principal components analysis of the responses to Inventory items (N= 292, KMO=0,83) was conducted. Four components were extracted, explaining 41,8% of the variance in the data. On the basis of Varimax rotation with Kaiser normalization, SMSI was divided into four scales, reflecting four groups of self-motivating strategies labeled as: planning, focusing on learning, generating positive emotions and imagining consequences of action. The characteristics of the scales is as follows:

- Planning - the scale with items like “I plan my learning in such a way that I do not have to do everything just before deadlines”. Internal consistency of the scale expressed by means of Cronbach alpha for the six scale items equals 0,77. Mean component loading is 0,62.
- Focusing attention – the scale consists of 10 items (Cronbach alpha= 0,73; mean component loading equals to 0,49) such as: “Before learning I usually do several habitual things which make concentrating and starting work easier”.
- Generating positive emotions – a six-item scale with Cronbach alpha value of 0,73 and mean component loading equal to 0,61. The exemplary item from the scale is “If I get in a bad mood after failure I try to find something that would raise my spirits and allow me to continue work”.
- Imagining consequences of actions– five items form the scale (Cronbach alpha=0,69; mean component loading equal to 0,59). One of the items which

belong to the scale is: "If during learning it is hard to me to concentrate on a task at hand I imagine unpleasant things which may happen to me due to the mistakes I may make".

Responses to the items of Self-Motivating Strategies Inventory are rated on a five-point scale ranging from "very rarely" (0 points) to "very frequently" (4 points). The general score for each participant is calculated as an arithmetic mean of the total sum of points for the answers to all Inventory items and is treated as an indicator of the general frequency of self-motivating strategies use. Scores for the Inventory scales are also calculated as an arithmetic mean of the sum of points for the responses to the items belonging to the scale. The general score and the scores of the scales may range from 0 to 4. The higher the result the higher the frequency of self-motivating strategies use.

Foreign Language Learning Motivation Inventory (FLLMI) consists of 6 items describing various reasons of foreign language learning. Foreign language learning motives reflected by the Inventory items range from the extrinsic ones ("Being able to speak a foreign language will make it possible for me help me to achieve high level of education and to find employment") to the intrinsic ones ("I enjoy mastering ability to speak a foreign language and using it"). The answers are given on a five-point scale ranging from " definitely no" (0 points) to "definitely yes" (4 points). The raw score is calculated as a sum of points for the answers to all Inventory items and may range from 0 to 24. The higher the score the higher foreign language learning motivation. The value of Cronbach alpha calculated for the six inventory items equals to 0,70.

3.2. Participants

Polish students from lower secondary school (mean age 16,89 years; sd=0,87) and university (mean age 20,45 years; sd=3,60) took part in the research. Altogether there were 305 participants, including 182 women and 113 men. Among lower secondary school students there were 143 girls and 93 boys. The subgroup of university students consisted of 39 women and 20 men. Ten persons did not provide data concerning their gender. Participants learned English, Czech, German, French and Russian as foreign languages.

3.3 Statistical analyses

Data analysis was performed by means of SPSS 19.0 Software. Low and high level of self-motivating strategies use and foreign language motivation was determined on the basis of median value.

4. Results

First, the differences between male and female foreign language learners in terms of the self-motivating strategies use will be presented. The second part of the section will be devoted to the level of foreign language grade in the groups of male and female participants with various levels of self-motivating strategies use and foreign language learning motivation.

4.1. Self – motivating strategies use by men and women

Differences between men and women in terms of Self-Motivating Strategy Inventory scores are shown in Table 1.

Table 1. Differences between men and women in self – motivating strategies use

Statistics	Self-motivating strategies use									
	general		planning		focusing attention		generating positive emotions		imagining consequences of actions	
	men	women	men	women	men	women	men	women	men	women
Number of participants	113	182	113	182	113	182	113	182	113	182
Arithmetic mean	1,57	1,81	1,56	1,91	1,47	1,71	2,00	1,99	1,31	1,70
Standard deviation	0,54	0,56	0,78	0,84	0,67	0,69	0,76	0,83	0,72	0,77
Difference of arithmetic means for men and women	-0,24		-0,35		-0,24		0,01		-0,39	
t test	-3,60		-3,58		-2,93		0,04		-4,37	
p	0,0004		0,0004		0,0040		0,9700; ns		0,0001	
Eta squared	0,012		0,012		0,001		0,0001		0,014	

As can be seen from the data presented in Table 1, the arithmetic mean of the total Self-Motivating Strategy Use Inventory score for women was 1,81 (sd=0,56), while for man it reached the value of 1,57 (sd=0,54). The value of t test calculated for the two arithmetic means (t= - 3,60) indicated statistically significant difference in the intensity of self-motivating strategies use between male and female foreign language learners. The registered effect was small. The result indicates more intense general self-motivating strategies use by women than by men. Therefore the first hypothesis assuming the difference between men and women in terms of the general self-motivating strategy use may be accepted.

The data in Table 1 also indicate that women in comparison to men are characterized by more intense use of self-motivating strategies from three out of four groups of the strategies considered in the research. Statistically significant difference between men and women was found in the scores of the following Self-Motivating Strategy Inventory scales: planning (t= -3,58; p =0,0004), focusing attention (t= -2,93; p=0,0040) and imagining consequences of actions (t= - 4,37; p= 0,0001). Therefore hypotheses H2a, H2b and H2d, respectively were confirmed. However, the observed effects were small. No significant difference was found in the scores of men and women in the scale of Self-Motivating Strategy Inventory labelled generating positive emotions (t= 0,04; p=0,97). Therefore hypothesis H2c which assumed the existence of such a difference had to be rejected.

4.2. Foreign language grade in men and women differing in terms of the self-motivating strategies use frequency and foreign language learning motivation

To test the hypotheses concerning the difference of foreign language grade in the groups of learners divided according to the level of foreign language motivation and self-motivating strategies use, a two-way between-groups ANOVA was used. Two independent variables in the analysis were: the level of foreign language learning motivation categorised either as high or low and the level of the general self-motivating strategies use with the values labelled also high and low. The dependent variable was foreign language grade. Table 2 presents the results of the ANOVA. Table 3 contains descriptive statistics of foreign language grade in the subgroups of male and female participants divided according to high or low level of frequency of self-motivating strategies use as well as for male and female subjects with high or low foreign language learning motivation. Post-hoc comparisons of foreign language grade level in the four groups of participants with various levels of foreign language learning motivation and various frequency of self-motivating strategies use were performed by means of Tuckey test. The results of these comparisons are shown in Table 4. The values of foreign languge grade arithmetic means in the subgroups of participants are depicted in Figures 1 and 2. All analyses of the two-way between-groups ANOVA and post hoc comparisons were performed separately in male and female subgroups.

Table 2. Gender, foreing language motivation, self-motivating strategies use and foreign language grade

Dependent variable	Independent variables	Men			Women		
		F test	F test significance level	partial eta squared	F test	F test significance level	partial eta squared
Foreign language grade	self-motivating strategies use	3,17	0,0800; ns	0,03	0,08	0,7800; ns	0,00
	foreign language learning motivation	5,48	0,0200	0,05	2,29,	0,1300; ns	0,01
	interaction of foreign language learning motivation and self-motivating strategies use	4,19	0,04	0,04	8,94	0,0032	0,05

The results of a two-way between-groups ANOVA with foreign language grade as dependent variable, which are presented in Table 2, show that the main effect of self-motivating strategies use was found to be insignificant both in men and in women. Therefore hypotheses H3 and H6 were considered false. The main effect of foreign

language learning motivation on foreign language grade was not significant in women but reached significance in men (the size of the effect was small). Therefore hypothesis H4 was confirmed, contrary to hypothesis H7, which had to be rejected. As can be seen from the data shown in Table 3, in male subgroup foreign language grade of the participants with high foreign language learning motivation (M= 4,22; sd =0,95) was higher than in the participants whose foreign language learning motivation was low (M= 3,51; sd=0,95). The interaction effect of self-motivating strategies use and foreign language learning motivation proved to be significant but small both in male and female participants. Hypotheses H5 and H8 were accepted.

Table 3. Descriptive statistics of foreign language grade in male and female participants divided according to the level of self-motivating strategies use frequency and foreign language learning motivation

Variable	Variable level	Foreign language grade					
		men			women		
		number of participants	arithmetic mean	standard deviation	number of participants	arithmetic mean	standard deviation
Self-motivating strategies use	low frequency	72	3,54	0,95	78	4,13	0,99
	high frequency	33	4,17	1,01	100	4,17	0,89
Foreign language learning motivation	low	71	3,51	0,95	96	4,09	0,93
	high	34	4,22	0,95	82	4,23	0,94

Tuckey Test was used to investigate thoroughly the interaction effect, in other words to test the differences in foreign language grade in participants with various levels of foreign language motivation and various intensity of self-motivating strategies use. Post hoc comparisons of foreign language grade were made between the participants characterized by:

- low frequency of self-motivating strategies use and low foreign language motivation;
- high frequency of self-motivating strategies use and low foreign language motivation;
- low frequency of self-motivating strategies use and high foreign language motivation;
- high frequency of self-motivating strategies use and high foreign language motivation.

The results of post-hoc analysis are presented in Table 4.

Table 4. The differences in foreign language grade in participants with various foreign language learning motivation and self-motivating strategies use levels.

Group number	Group characteristics		Foreign language grade					
			men			women		
	frequency of self-motivating strategies use	foreign langugae learning motivation	number of participants	arithmetic mean	standard deviation	number of participants	arithmetic mean	standard deviation
1	low	low	56	3,34	0,88	50	3,90	0,93
2	high	low	15	4,13	0,99	45	4,27	0,89
3	low	high	16	4,25	0,86	29	4,55	0,95
4	high	high	18	4,19	1,04	54	4,07	0,89
Tuckey test group comparison	group 1 vs group 2		p=0,002			p=0,207; ns		
	group 1 vs group 3		p=0,004			p=0,013		
	group 1 vs group 4		p=0,005			p=0,764; ns		
	group 2 vs group 3		p=0,985; ns			p=0,555; ns		
	group 2 vs group 4		p=0,998; ns			p=0,72; ns		
	group 3 vs group 4		p=0,998; ns			p=0,107; ns		

The results displayed in Table 4 show that in men the foreign language grade of the participants who use self-motivating strategies with low frequency and have low foreign language learning motivation is significantly lower than the foreign language grade of the participants with high frequency of self-motivating strategies use and low foreign language learning motivation. In male subgroup the foreign language grade of the participants with low frequency of self-motivating strategies use and low foreign language learning motivation is also lower than the foreign language grade of the participants with high foreign language learning motivation despite the frequency of self-motivating strategies use.

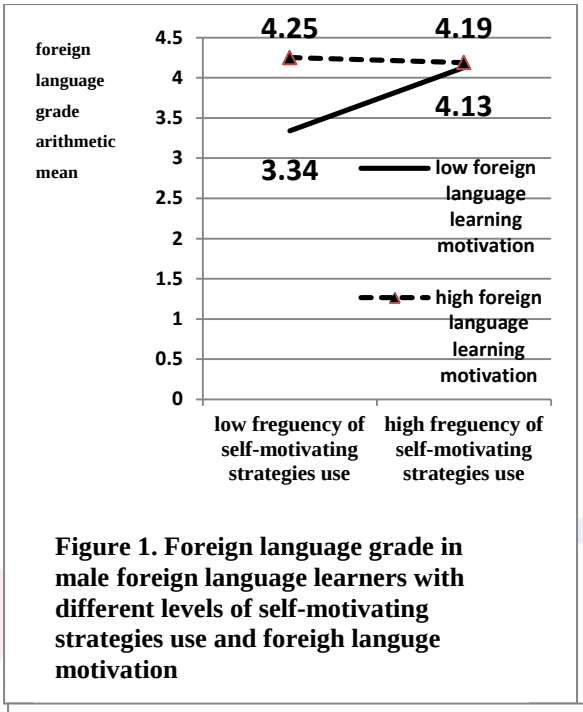

Figure 1. Foreign language grade in male foreign language learners with different levels of self-motivating strategies use and foreigh languge motivation

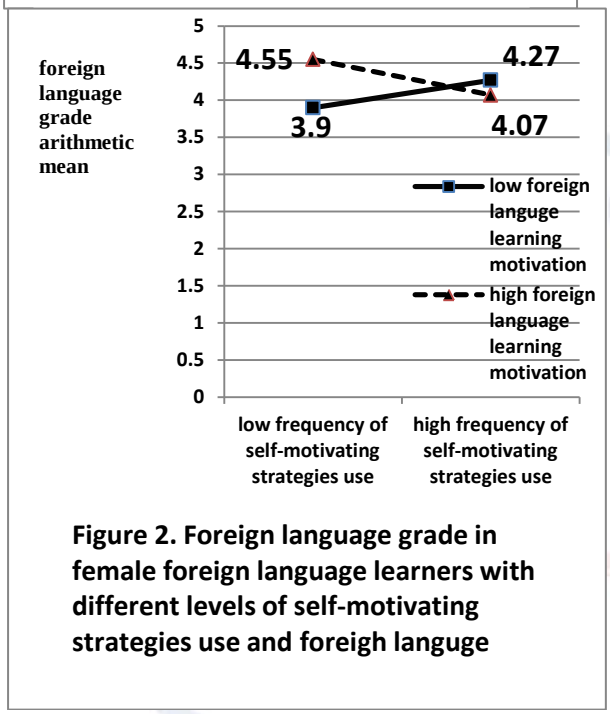

Figure 2. Foreign language grade in female foreign language learners with different levels of self-motivating strategies use and foreigh languge

The data from the Table 4 also show that in the female subgroup the highest relative average value of foreign language grade was found in a group with low frequency of self-motivating strategies use and high foreign language learning motivation. This value was equal 4,55 (sd= 0,95) and proved to be significantly higher than the average foreign language grade in a subgroup of female students with low frequency of self-motivating strategies use and low foreign language learning motivation (arithmetic mean equal to 3,90; sd=0,93). In women no other statistically significant differences in foreign langue grade between analysed four subgroups were found.

5. Conclusions

The research presented in the article aimed at answering two questions: do male and female foreign language learners differ in terms of self-motivating strategies use? Is foreign language grade related differently with foreign language learning motivation and self-motivating strategies use in men and women? It was hypothesized, that there would be a difference between men and women in the use of self-motivating strategies. Further hypotheses assumed, both for male and female students, the existence of the difference in foreign language grade in the participants with various:

- levels of frequency of self-motivating strategies use,
- levels foreign language learning motivation and
- combined low and high levels of self-motivating strategies use and foreign language learning motivation.

Students from Polish lower secondary school and university took part in the research, altogether 183 women and 113 men. To measure the frequency of self-motivating strategies use and foreign language learning motivation two instruments were constructed for the purpose of the research. The first one was Self-motivating Strategies Inventory with four scales: planning, focusing attention, generating positive emotions and imagining consequences of actions. The second instrument was Foreign Language Learning Motivation Inventory.

Seven out of eleven hypotheses found support in the empirical data gathered in the study.
More frequent use of self-motivating strategies by women in comparison to men was found in the case of the general use of these strategies. The results obtained in the study are consistent with research results indicating more intense use of strategies facilitating control over emotions and motivation in women (Ghee et al., 2010). The scores of female participants also indicate that women use more frequently than men particular groups of strategies, namely these which facilitate planning, focusing attention and imagining consequences. No difference in male and female foreign language learners was found in the frequency of controlling one`s learning motivation through generating positive emotions. The lack of the difference in foreign language grade was observed in the participants with low and high frequency of self-motivating strategies use in both male and female subgroups. In male subgroup foreign language grade was higher in the participants with high foreign language learning motivation than in the participants whose level of foreign language learning motivation was low. No such relationship was observed in female subgroup. Both in men and women a significant interaction effect of the levels of self-motivating strategies use and foreign language learning motivation on foreign language grade was found. Among men a subgroup characterized by low frequency of self-motivating strategies use and low foreign language motivation had lower foreign language grade than all other analysed subgroups. In women the highest relative level of foreign language grade was found in a subgroup with high foreign language learning motivation and low frequency of self-motivating strategies use.

The most important conclusions from the research, applicable to the students from western culture, may be formulated as follows:

1. Female foreign language learners use self-motivating strategies more frequently than their male counterparts.

2. Both for male and female foreign language students the prediction of foreign language grade on the basis of the levels of self-motivating strategies use and foreign language learning motivation must take into account combined levels of the two variables.
3. Procedures encouraging the use of self-motivating strategies by foreign language learners should be formulated.
4. The use of self-motivating strategies should be fostered especially in male foreign language learners.
5. The findings of the research should be verified in the context of eastern culture.

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