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## AGE AND GENDER EFFECTS ON MOTIVATION AND ATTITUDES IN GERMAN LEARNING: THE POLISH CONTEXT

The research investigates the German language learning motivations of Polish secondary school students and university students. Questionnaire data were collected from 247 students (126 from secondary school and 121 from university). The aim of this research was to examine the relationships among language attitudes, instrumental, cultural interest, integrative, L2 self and motivated learning. The results show the existence of age and gender difference in variables under consideration. Relationships were found between age and gender to the motivational attitudes: older and female students had a more integrative attitude than younger and male students and experienced more intensive motivation.

*Key words:* language learning, age, gender, second language motivation, language attitudes, German language

The analysis presented here aims to investigate the effect of age and gender on motivation to learn German as a second language. The paper is based on the assumptions of Gardner's model, known as the *Socio-Educational Model* (2010), and Dörnyei's model, known as the *Motivational Self System* (2005).

### **Review of literature**

A theory related to second language learning motivation was outlined by Robert C. Gardner in his *Socio-Educational Model* (Gardner, 1985). Gardner's model is hierarchical and promotes the idea of integrative motivation. It is based

on the assumption that learning a foreign language is different in many respects from learning other subjects because language helps build the social essence of human beings and is an important part of their identity (Gardner, 2001). Gardner's model concerns not only the desire to learn the language itself, but also to learn about the community linked to it and that community's culture, a desire to meet people and make contact with them, readiness to join in the functioning of a given language community. It also accounts for other factors that affect motivation, such as the attitude toward communities that use a given language, and even a general interest in foreign languages.

Gardner's research also encompassed the following aspects of motivation: instrumental orientation, attitude toward learning situation, parental encouragement and language anxiety (Gardner, 2007, 2010). Besides motivation, the model also considers learning factors that can have a direct impact on language acquisition achievements.

A model that tries to account for different factors affecting motivation in second language learning is the concept of Motivational Self System in Dörnyei's approach (Dörnyei, 2005, 2009). The Motivational Self System contains three important aspects: Ideal L2 Self (seeing oneself as an effective user of the second language), Ought-to Self (believing that one ought to be able to use a second language) and L2 Learning Experience (an aspect related to the learning environment).

Numerous studies on second language acquisition have analyzed different factors and mechanisms linked to age in L2 learning. One example of such research is a comparison of Hungarian secondary school students, university students and adults in terms of their motivation to learn a second language (Kormos and Csizér, 2008). Similar studies on motivation in foreign language learning were conducted by Xu and Case (in press) in three age groups: Chinese elementary, middle, and high school students.

Many studies on differences in motivation to learn foreign languages have shown stronger motivation among female than male learners. A slightly higher level of motivation among girls than boys has been established by research in different countries, including Canada (Kissau, 2006; Kissau et al., 2010), China (Ahåt, 2013), the United Kingdom (Williams et al., 2002), Hungary (Dörnyei et al., 2006), Korea (Kim & Kim, 2011), Poland (Okuniewska et al., 2010), Sweden (Henry, 2009), Turkey (Öztürk & Gürbüz, 2013; Polat, 2011) and the United States (Brantmeier et al., 2013; Chavez, 2014). Males were less motivated than females when learning various languages, for example English (Dörnyei et al., 2006; Henry, 2009; Kim & Kim, 2011; Ahåt, 2013; Öztürk & Gürbüz, 2013), French (Williams et al., 2002, Kissau, 2006; Dörnyei et al., 2006), German (Williams et al., 2002, Dörnyei et al., 2006; Chavez, 2014), Hebrew (Okuniewska et al., 2010), Italian (Dörnyei et al., 2006), Kurdish (Polat, 2011), Russian (Dörnyei et al., 2006) and Spanish (Kissau et al., 2010; Brantmeier et al., 2013).

Table 1. Demographic data

	Public school students in Warsaw	Private school students in Warsaw	University of Warsaw students	Warsaw School of Economics students	Total	
N	108	18	62	59	247	
Mean age	16;7	17;0	21;1	20;7	18;8	
Gender	Male (N)	65	7	24	32	128
	Female (N)	43	11	38	27	119
Mean time of learning German (number of semesters)	7.52	9.00	15.39	16.76	11.81	

## Problem

In the study presented below we consider the effect of age and gender on the motivation of Polish speakers learning German as an additional second language (English was the mandatory L2).

## Method

### Participants

In total, 247 students of German participated in the study (119 females and 128 males). The study was conducted in Warsaw at general secondary schools (public and private) and also at universities (University of Warsaw and Warsaw School of Economics). The study included 126 school students (54 female and 72 male) from two general secondary schools, ranging in age from 15 to 18 years, and 121 university students (65 female and 56 male) ranging in age from 19 to 25 years. They all took German as an additional second language (besides the obligatory English). The participants from general secondary schools started to learn German between the age of 7 and 15, and from universities between the age of 6 and 18. Table 1 summarizes the participants' characteristics.

### Materials and procedure

Data were collected with the help of a questionnaire adapted (partially) from (1) the *Attitude/Motivation Test Battery* (Gardner, 2004) and (2) the *Language Disposition Questionnaire* (Dörnyei et al., 2006). The questionnaire used in this study contained 54 items for secondary school and university students. The expanded scope of the study on factors in second language learning motivation also includes two new variables: ideal L2 self and ought-to L2 self. For items, students

had to indicate on a 6-point scale to what extent they agreed or disagreed with statements. The statements were intended to cover the following variables:

*Attitudes to the international status of German* (4 statements) – the extent to which students are willing to learn German as a foreign language. Example: “German is taught to many people around the world.”

*Milieu – the attitude of people in the students’ immediate environment* (4 statements) – the attitude of persons in the students’ immediate environment concerning the importance of learning German. Example: “Many of my close friends also learn German.”

*German use anxiety* (4 statements) – the level of anxiety felt by students when they use German in everyday life. Example: “I still have the impression that the other students speak German better than I do.”

*Instrumental orientation* (4 statements) – interest in learning German in order to achieve utilitarian benefits such as better jobs or higher social status. Example: “Learning German is important to me because it will be useful in getting a good job.”

*Attitudes to German language communities* (4 statements) – statements concerning the Austrian, German and Swiss communities’ role in today’s world. Example: “I would like to know more native German speakers.”

*Parental encouragement* (4 statements) – the extent to which parents encourage their children to learn German. Example: “My parents encourage me to practice my German as much as possible.”

*Cultural interest – attitudes to German cultural products* (4 statements) – attitudes to German culture, cultural products and events. Example: “German-speaking countries have a rich cultural heritage.”

*Integrative orientation* (4 statements) – interest in learning German in order to interact, meet and socialize with members of German language communities. Example: “Learning German is important to me because it will enable me to better understand and appreciate the German way of life.”

*Interest in foreign languages* (4 statements) – the extent to which students are interested in using foreign languages. Example: “I would like to be able to speak various foreign languages fluently.”

*Ideal L2 self* (6 statements) – beliefs of students regarding the successful use of a second language. Example: “I can imagine that I am talking in German like a native speaker.”

*Ought-to L2 self* (6 statements) – students’ perceptions of how important learning German is in the opinion of significant others. Example: “I learn German because my close friends think it is very important.”

*Motivational intensity* (6 statements) – persistence in language study, intended learning effort, enjoyment derived from learning German. Example: “If German was not taught in my school, I would try to take German lessons somewhere else.”

Table 2. Reliability coefficients for the questionnaire scales, means and standard deviations

Scales	Secondary school students		University students	
	<i>Cronbach's <math>\alpha</math></i>	<i>Mean / SD</i>	<i>Cronbach's <math>\alpha</math></i>	<i>Mean / SD</i>
<i>Attitudes to the international status of German</i>	0.89	3.89 / 0.91	0.82	4.37 / 0.83
<i>Milieu – the attitude of people in the students' immediate environment</i>	0.89	3.03 / 0.84	0.81	3.40 / 0.87
<i>German use anxiety</i>	0.94	3.16 / 1.10	0.89	3.16 / 0.98
<i>Instrumental orientation</i>	0.89	3.88 / 1.16	0.82	4.85 / 0.72
<i>Attitudes to German language communities</i>	0.89	3.59 / 1.09	0.82	4.57 / 0.79
<i>Parental encouragement</i>	0.90	3.06 / 1.09	0.84	3.47 / 1.08
<i>Cultural interest – attitudes to German cultural products</i>	0.90	2.98 / 0.83	0.82	3.99 / 0.84
<i>Integrative orientation</i>	0.89	3.38 / 1.22	0.80	4.27 / 1.00
<i>Interest in foreign languages</i>	0.90	4.69 / 0.83	0.82	5.30 / 0.61
<i>Ideal L2 self</i>	0.89	3.10 / 1.19	0.82	4.29 / 1.03
<i>Ought-to L2 self</i>	0.90	2.64 / 0.93	0.82	3.11 / 0.91
<i>Motivational intensity</i>	0.89	3.09 / 1.08	0.81	3.94 / 0.94

An official letter about the research questionnaire was submitted to the managements of the secondary schools and university language learning centers. The questionnaire was conducted personally in the presence and under the control of German teachers. Students participated in the study voluntarily. The questionnaires were completed during class time and the respondents were given as much time as they needed to fill in the data.

Table 2 presents the Cronbach's Alpha reliability coefficients of the scales based on the data collected from the study.

## Results

The relationship between attitudes in the two age and gender groups was analyzed by using one-way ANOVA with repeated measurements. The results of the within-group comparison show considerable attitude differences between

Table 3. Descriptive statistics concerning the results of the two age groups

Scales	Age of students	N	Mean / SD	F
Attitudes to the international status of German	Secondary school	126	3.89 / 0.91	17.961***
	University	121	4.37 / 0.83	
Milieu – the attitude of people in the students' immediate environment	Secondary school	126	3.03 / 0.84	11.635**
	University	121	3.40 / 0.87	
German use anxiety	Secondary school	126	3.16 / 1.10	0.003
	University	121	3.16 / 0.98	
Instrumental orientation	Secondary school	126	3.88 / 1.16	62.002***
	University	121	4.85 / 0.72	
Attitudes to German language communities	Secondary school	126	3.59 / 1.09	64.905***
	University	121	4.57 / 0.79	
Parental encouragement	Secondary school	126	3.06 / 1.09	8.986**
	University	121	3.47 / 1.08	
Cultural interest – attitudes to German cultural products	Secondary school	126	2.98 / 0.83	91.252***
	University	121	3.99 / 0.84	
Integrative orientation	Secondary school	126	3.38 / 1.22	38.988***
	University	121	4.27 / 1.00	
Interest in foreign languages	Secondary school	126	4.69 / 0.83	43.065***
	University	121	5.30 / 0.61	
Ideal L2 self	Secondary school	126	3.10 / 1.19	69.820***
	University	121	4.29 / 1.03	
Ought-to L2 self	Secondary school	126	2.64 / 0.93	16.477***
	University	121	3.11 / 0.91	
Motivational intensity	Secondary school	126	3.09 / 1.08	43.355***
	University	121	3.94 / 0.94	

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

age groups and also gender groups. Significant results have been established in terms of the overall study variable.

A comparison of the data from remarks on the five main components with reference to age groups contains the results between younger students from secondary school and slightly older students from university. These results, as well as their significance levels, are provided in Table 3. A distinct advantage was found in most slightly older university students over younger secondary

school students in almost all five main components: motivation (motivational intensity), attitudes toward the learning situation (attitudes to the international status of German, attitudes to German language communities, interest in foreign languages), orientation in language learning (integrative orientation, instrumental orientation), certain social relations of interest in foreign language learning (parental encouragement, milieu – the attitude of people in the students' immediate environment, cultural interest – attitudes to German cultural products) and specific aspects of the second language (ideal L2 self, ought-to L2 self). The only factor which did not yield higher results in either of the two groups is the question concerning anxieties, uncertainty and a certain fear (German use anxiety) when using the foreign language during learning.

The next results, pertaining to the impact of gender, were considered in two sections: the two gender groups among secondary school students and the two gender groups among university students. Data from these two analyses are presented in Table 4.

Interestingly, differences in the range analysis of the secondary school student gender groups are almost identical as the results concerning age groups. With respect to almost all the orientations, males reported significantly lower scores than females: motivation (motivational intensity), attitudes toward the learning situation (attitude to the international status of German, attitude to German language communities, interest in foreign languages), orientation in language learning (integrative orientation, instrumental orientation), certain social relations of interest in foreign language learning (parental encouragement, milieu – the attitude of people in the students' immediate environment, cultural interest – attitudes to German cultural products) and specific aspects of the second language (ideal L2 self, ought-to L2 self). Similarly to the age-group analysis, in the question on anxieties, uncertainty and fear (German use anxiety) neither of the gender groups had a significantly different result.

A second finding shows some significant differences between the university student gender groups. In this analysis, some of the results of females are still higher than males, but the two gender groups have several equally positive attitudes regarding some of the factors. The following variables yielded higher scores among females than males: motivation (motivational intensity), attitudes toward the learning situation (attitude to the international status of German, attitude to German language communities, interest in foreign languages), orientation in language learning (integrative orientation), certain social relations of interest in foreign language learning (milieu – the attitude of people in the students' immediate environment) and specific aspects of the second language (ideal L2 self, ought-to L2 self). Slight and irrelevant differences in the decisions of men and women were found for the following four variables: anxieties, uncertainty and fear (German use anxiety), interest in learning German (instrumental orientation), encouraged learning of foreign languages (parental encouragement) and

Table 4. Gender differences in motivation to learn German

Scales	Gender	N	Mean / SD	F	N	Mean / SD	F
<i>Attitudes to the international status of German</i>	Male	72	3.69 / 0.93	8.632**	56	4.19 / 0.89	4.689*
	Female	54	4.16 / 0.82		65	4.52 / 0.75	
<i>Milieu – the attitude of people in the students' immediate environment</i>	Male	72	2.82 / 0.76	11.349**	56	3.18 / 0.84	7.223**
	Female	54	3.31 / 0.86		65	3.60 / 0.86	
<i>German use anxiety</i>	Male	72	3.18 / 1.02	0.044	56	3.15 / 1.06	0.006
	Female	54	3.14 / 1.21		65	3.16 / 0.91	
<i>Instrumental orientation</i>	Male	72	3.61 / 1.17	9.389**	56	4.72 / 0.69	3.515
	Female	54	4.23 / 1.05		65	4.96 / 0.73	
<i>Attitudes to German language communities</i>	Male	72	3.31 / 1.03	12.728**	56	4.39 / 0.84	5.534*
	Female	54	3.97 / 1.05		65	4.72 / 0.71	
<i>Parental encouragement</i>	Male	72	2.97 / 0.93	1.076	56	3.27 / 1.07	3.709
	Female	54	3.18 / 1.28		65	3.65 / 1.06	
<i>Cultural interest – attitudes to German cultural products</i>	Male	72	2.80 / 0.86	7.728**	56	3.85 / 0.91	3.183
	Female	54	3.21 / 0.74		65	4.12 / 0.76	
<i>Integrative orientation</i>	Male	72	3.03 / 1.12	15.366***	56	3.96 / 0.98	10.818**
	Female	54	3.85 / 1.20		65	4.53 / 0.94	
<i>Interest in foreign languages</i>	Male	72	4.47 / 0.88	12.556**	56	5.14 / 0.63	7.453*
	Female	54	4.98 / 0.66		65	5.43 / 0.56	
<i>Ideal L2 self</i>	Male	72	2.78 / 1.08	13.888***	56	4.00 / 1.09	8.402*
	Female	54	3.54 / 1.19		65	4.53 / 0.92	
<i>Ought-to L2 self</i>	Male	72	2.47 / 0.86	6.250*	56	2.93 / 0.84	4.479*
	Female	54	2.87 / 0.96		65	3.27 / 0.94	
<i>Motivational intensity</i>	Male	72	2.85 / 0.98	8.788**	56	3.56 / 0.97	19.850***
	Female	54	3.41 / 1.13		65	4.27 / 0.79	

Note: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

attitudes to cultural products and events (cultural interest – attitude to German cultural products).

Another analysis considered the data by type of school. The first comparison was between public school and private Catholic school students. Nonparametric statistics (Mann-Whitney  $U$  test) was used for this analysis that compared interest in learning German in these two types of schools. The two groups were not statistically different on attitudes toward the foreign language:

- attitudes to the international status of German (public school students –  $Mean = 3.94$ ,  $SD = 0.86$ , private school students –  $Mean = 3.63$ ,  $SD = 1.14$ ;  $U = 811.50$ ,  $p = 0.261$ );
- milieu – the attitude of people in the students' immediate environment (public school students –  $Mean = 3.01$ ,  $SD = 0.75$ , private school students –  $Mean = 3.18$ ,  $SD = 1.27$ ;  $U = 944.50$ ,  $p = 0.847$ );
- German use anxiety (public school students –  $Mean = 3.21$ ,  $SD = 1.07$ , private school students –  $Mean = 2.86$ ,  $SD = 1.26$ ;  $U = 749.00$ ,  $p = 0.119$ );
- instrumental orientation (public school students –  $Mean = 3.94$ ,  $SD = 1.03$ , private school students –  $Mean = 3.49$ ,  $SD = 1.73$ ;  $U = 878.50$ ,  $p = 0.513$ );
- attitudes to German language communities (public school students –  $Mean = 3.63$ ,  $SD = 1.04$ , private school students –  $Mean = 3.35$ ,  $SD = 1.35$ ;  $U = 851.50$ ,  $p = 0.399$ );
- parental encouragement (public school students –  $Mean = 3.07$ ,  $SD = 0.93$ , private school students –  $Mean = 3.00$ ,  $SD = 1.82$ ;  $U = 822.00$ ,  $p = 0.294$ );
- cultural interest – attitudes to German cultural products (public school students –  $Mean = 3.00$ ,  $SD = 0.82$ , private school students –  $Mean = 2.86$ ,  $SD = 0.91$ ;  $U = 859.00$ ,  $p = 0.428$ );
- integrative orientation (public school students –  $Mean = 3.39$ ,  $SD = 1.15$ , private school students –  $Mean = 3.35$ ,  $SD = 1.64$ ;  $U = 943.00$ ,  $p = 0.839$ );
- interest in foreign languages (public school students –  $Mean = 4.72$ ,  $SD = 0.75$ , private school students –  $Mean = 4.49$ ,  $SD = 1.18$ ;  $U = 920.50$ ,  $p = 0.718$ );
- ideal L2 self (public school students –  $Mean = 3.12$ ,  $SD = 1.09$ , private school students –  $Mean = 3.03$ ,  $SD = 1.70$ ;  $U = 882.00$ ,  $p = 0.530$ );
- ought-to L2 self (public school students –  $Mean = 2.65$ ,  $SD = 0.89$ , private school students –  $Mean = 2.56$ ,  $SD = 1.13$ ;  $U = 894.50$ ,  $p = 0.588$ );
- motivational intensity (public school students –  $Mean = 3.07$ ,  $SD = 0.96$ , private school students –  $Mean = 3.22$ ,  $SD = 1.64$ ;  $U = 928.00$ ,  $p = 0.759$ ).

Another analysis demonstrated some differences between the two university groups. The University of Warsaw (UW) group comprised students of the humanities while the Warsaw School of Economics (SGH) group comprised students of economic and technical sciences. The subject of studies affected the results for different factors. The results of SGH students were higher for interest in learning German (instrumental orientation: UW students –  $Mean = 4.68$ ,

$SD = 0.70$ , SGH students –  $Mean = 5.03$ ,  $SD = 0.70$ ;  $F = 7,688$ ,  $p < 0.01$ ) and perceptions of how important learning a foreign language is (ought-to L2 self: UW students –  $Mean = 2.85$ ,  $SD = 0.82$ , SGH students –  $Mean = 3.40$ ,  $SD = 0.92$ ;  $F = 12,026$ ,  $p < 0.001$ ). UW students had higher outcomes for attitudes to cultural products and events (cultural interest – attitudes to German cultural products: UW students –  $Mean = 4.15$ ,  $SD = 0.87$ , SGH students –  $Mean = 3.83$ ,  $SD = 0.79$ ;  $F = 4,233$ ,  $p < 0.05$ ). The other results of the two groups were not statistically different:

- attitudes to the international status of German (UW students –  $Mean = 4.36$ ,  $SD = 0.84$ , SGH students –  $Mean = 4.37$ ,  $SD = 0.83$ ;  $F = 0.009$ ,  $p = 0.927$ );
- milieu – the attitude of people in the students' immediate environment (UW students –  $Mean = 3.34$ ,  $SD = 0.88$ , SGH students –  $Mean = 3.47$ ,  $SD = 0.87$ ;  $F = 0.600$ ,  $p = 0.440$ );
- German use anxiety (UW students –  $Mean = 3.19$ ,  $SD = 1.00$ , SGH students –  $Mean = 3.12$ ,  $SD = 0.96$ ;  $F = 0.123$ ,  $p = 0.726$ );
- attitudes to German language communities (UW students –  $Mean = 4.50$ ,  $SD = 0.84$ , SGH students –  $Mean = 4.64$ ,  $SD = 0.73$ ;  $F = 1,013$ ,  $p = 0.316$ );
- parental encouragement (UW students –  $Mean = 3.53$ ,  $SD = 1.12$ , SGH students –  $Mean = 3.42$ ,  $SD = 1.04$ ;  $F = 0.331$ ,  $p = 0.566$ );
- integrative orientation (UW students –  $Mean = 4.31$ ,  $SD = 1.05$ , SGH students –  $Mean = 4.23$ ,  $SD = 0.94$ ;  $F = 0.182$ ,  $p = 0.670$ );
- interest in foreign languages (UW students –  $Mean = 5.26$ ,  $SD = 0.59$ , SGH students –  $Mean = 5.33$ ,  $SD = 0.63$ ;  $F = 0.425$ ,  $p = 0.515$ );
- ideal L2 self (UW students –  $Mean = 4.15$ ,  $SD = 1.13$ , SGH students –  $Mean = 4.44$ ,  $SD = 0.89$ ;  $F = 2,427$ ,  $p = 0.122$ );
- motivational intensity (UW students –  $Mean = 3.81$ ,  $SD = 1.03$ , SGH students –  $Mean = 4.09$ ,  $SD = 0.82$ ;  $F = 2,748$ ,  $p = 0.100$ ).

## Conclusions

The study presented here shows the psychological applicability of the models of Gardner and Dörnyei in research on motivation to learn German as a (non-mandatory) second language among secondary school and university students whose L1 is Polish. Five main components were analyzed: motivation (motivational intensity, German use anxiety), attitudes toward the learning situation (attitudes to the international status of German, attitudes to German language communities, interest in foreign languages), orientation in language learning (integrative orientation, instrumental orientation), certain social relations of interest in foreign language learning (parental encouragement, milieu – the attitude of people in the students' immediate environment, cultural interest – attitudes to German cultural products) and specific aspects of the second language (ideal L2 self, ought-to L2 self). In total 12 specific factors were analyzed as those influ-

encing second language motivation. Age and gender differences were found in the motivation to learn German as an additional L2. Older and female students had a more integrative attitude than younger and male students and experienced more intensive motivation.

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