

The effects of gender and achievement on foreign language anxiety in Austrian upper secondary education

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Abstract: *The study aims to investigate how gender and achievement affect foreign language anxiety (FLA) scores among 379 Austrian students in upper secondary education. The analysis revealed that the majority of students display moderate levels of overall foreign language anxiety, a compound variable of general foreign language anxiety, foreign language reading, writing and listening anxiety. A two-way ANOVA showed a significant main effect of both gender and achievement on the participants' overall foreign language anxiety scores, but no significant interaction effect. Moreover, a two-way MANOVA proved that both gender and achievement had a significant main effect on the combined variables with large effect sizes. The interaction effect of gender X achievement on the combined variables was significant, albeit with a much smaller effect size. Gender and achievement thus emerged as influencing factors in the creation of FLA in Austrian upper secondary education, in particular with regard to the productive language skills.*

Keywords: *Foreign language anxiety, foreign language acquisition, language achievement, gender.*

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1. INTRODUCTION

Foreign language anxiety (FLA) was conceptualized by Horwitz, Horwitz and Cope (1986) as a distinct phenomenon specific to the language learning context. It refers to a situation-specific type of state-anxiety, to feelings of nervousness or unease, which many foreign language learners experience when studying and using the foreign language, especially in test situations. FLA as originally defined by Horwitz, Horwitz and Cope (1986) is unanimously considered a general type of anxiety about learning a second or foreign language with a strong emphasis on the speaking skill (Cheng, Horwitz & Schallert, 1999). This particular construct will be referred to as “general foreign language anxiety” in the remainder of this article in order to distinguish it from related types of foreign language anxiety associated with listening, reading and writing (Aida, 1994; Chang, 2008; Cheng, Horwitz & Schallert, 1999; Kim, 2000; MacIntyre & Gardner, 1994; MacIntyre, Noels & Celement, 1997; Saito, Giza & Horwitz, 1999; Young, 1990).

Generally speaking, FLA has been extensively researched over the last few decades, albeit with a clear focus on tertiary education (Horwitz, Horwitz & Cope, 1986; MacIntyre, 1999; Young, 1991, 1999). As concerns FLA and achievement, their potential interplay has been suggested to be much more appropriately explored by investigating FLA and the four language skills separately (Young, 1990). Accordingly, the overall aim of the present paper is to examine whether the four distinct foreign language anxieties, namely general foreign language anxiety (Horwitz, Horwitz & Cope, 1986), foreign language reading anxiety (Saito, Garza & Horwitz, 1999), foreign language writing anxiety (Cheng, Horwitz & Schallert, 1999; Daly & Miller, 1975) and foreign language listening anxiety (Kim, 2000) are significantly affected by achievement and gender as well as their interaction.

2. LITERATURE REVIEW

There is a considerable number of correlational studies that found high levels of FLA negatively correlating with low levels of academic performance, predominately measured in terms of the language learners' final average grades in the respective language (Aida, 1994; Al-Shboul & Nordin, 2013; Awan, Anwar & Naz, 2010; Coulombe, 2001; Ghorbandordinejad & Ahmadabad, 2016; Horwitz, 1986, 2001; MacIntyre & Gardner, 1989, 1991, 1994; Saito & Samimy, 1996; Young, 1986). With regard to specific language skills, studies by Phillips (1992), Stephenson (2006) as well as Hewitt and Stephenson (2012) all found oral performance to be negatively correlated with general foreign language anxiety. As concerns writing, Cheng et al. (1999) found a negative correlation between writing anxiety and achievement, whereby their participants' self-reported

abilities in English correlated more with their anxiety levels than their actual grades. With regard to the receptive skills, Saito et al. (1999) found preliminary evidence in their study that reading anxiety is negatively related to performance measured in terms of final grades. Likewise, Elkhafaili (2005) reported on a negative relationship between listening anxiety and listening comprehension grades with university students of Arabic. Notwithstanding these findings, high-levels of anxiety are not always necessarily related to poor performance, as anxiety has also been shown to have a strong relationship with perfectionism (Gregersen & Horwitz, 2002). Moreover, there is also evidence that anxiety of a facilitative nature can have a positive influence on language achievement (Brown, Robson & Rosenkjar, 2001; MacIntyre & Gardner, 1994).

Above all, the question still remains whether poor performance in a foreign language causes anxiety or vice versa. In other words, according to Horwitz, the “challenge is to determine the extent to which anxiety is a cause rather than a result of poor language learning” (Horwitz, 2001, p. 118). In response to this apparent dilemma, Yan and Horwitz (2008) explored the potential causal relationship between anxiety and achievement in a qualitative study with a focus on speaking. Their findings indicated a negative impact of anxiety on achievement and supported the claim of FLA being “one of the best predictors of success” (MacIntyre & Gardner, 1991, p. 96) in learning a foreign language. Likewise, investigating the possible causal relationship between foreign language listening anxiety and English listening, Zhang’s (2013) study concluded that listening anxiety can influence listening performance, but foreign language listening performance does not appear to affect foreign language listening anxiety systematically. Similarly, in Wu and Lee’s study (2017), anxiety turned out to be the most powerful and negative predictor of performance.

Interestingly, FLA has also been shown to strongly correlate with self-perceived rather than actual performance. For example, Sultan (2012) found FLA to be negatively correlated with self-perceptions, i.e. perceived competence. Likewise, MacIntyre and Noels (1994) as well as Cheng et al. (1999) discovered that the students’ self-reported language competence had a higher correlation with anxiety than their actual performance measured in terms of course grades. These findings were confirmed by Onwuegbuzie and Daley (1999), who supplied further evidence of high anxiety being related to expectations of poorer course grades. Maturanec (2015) validated this strong relationship between FLA and self-perceptions of competence and also provided evidence of anxious students underestimating their competence. Above all, in Cheng’s (2002) study with university students, the participants’ self-perceptions concerning their writing performance predicted anxiety better than actual performance.

As regards the link between gender and FLA, there are conflicting results. Female students were found to display higher levels of general language learner anxiety in some studies (Abu-Rabia, 2004; Cheng, 2002; Elkhafaifi, 2005). Such

results are aligned with other research suggesting that girls are generally more anxious, irrespective of their language proficiency levels (Koul, Kaewkuekool, & Ploisawaschai, 2009; Piechurska-Kuciel, 2008; Mahmood & Iqbal, 2010). However, other studies found no significant differences based on gender (Aida, 1994; Chang, 1996; Onwuegbuzie & Daley, 1999; Yan, 1998). As concerns anxiety related to specific skills, no significant relationship was found between gender and foreign language reading (Shariati & Bordbar, 2009) and listening anxiety (Elkhafafi, 2005; Kimura, 2008). Likewise, Matsuda and Gobel (2004) found no gender differences in scores on the foreign language reading anxiety scale (Saito, Garza & Horwitz, 1999) and the foreign language classroom anxiety scale (Horwitz et al., 1986) with Japanese university students. Kitano (2001) looked at American learners of Japanese and reported that their self-perceptions of language skills affected anxiety of male students but not of female students. Kimura (2008) thus calls for caution and argues that “gender is one of the mediating factors” (Kimura, 2008, p. 177), but a variety of variables is at work when it comes to determining anxiety levels.

In conclusion, despite the fact that FLA has been investigated in different contexts, it seems to have remained a largely unexplored topic in Austria, with only few empirical studies concerning university students (Kostić-Bobanović, 2009). As concerns secondary education in particular, the exploration of FLA appears to have been restricted to Austrian language instructors’ personal observations of their students’ apparent feelings of unease or distress when using the foreign language, which have yet to be scientifically proven. At any rate, further investigation of FLA in an Austrian context seems worthwhile, as there is clear empirical evidence of a negative relationship between FLA and achievement, which might potentially decrease students’ success rate, especially in exam situations. This seems of particular interest in Austrian students’ final year of secondary education, at the end of which they are required to take a standardized written or oral final English exam (Bundesministerium für Bildung, Wissenschaft und Kultur, 2019).

What is more, the majority of studies on FLA and achievement quoted above are either of correlational nature or use achievement, mostly defined as the learners’ final English grades, as a dependent variable rather than a factor. One of the few exceptions is Wu and Lee’s study (2017) with Taiwanese university students, which found that participants with lower levels of English proficiency were more sensitive to the pressure of tests and more likely to experience anxiety than others. Such results indicate that proficiency or rather the grades that students have received may impact the learners’ FLA scores and should thus be taken into account. On the other hand, in an Austrian context, there is anecdotal evidence of some students, in particular males, “unexpectedly” excelling in their final English oral exams, irrespective of their previous overall English grades. While this phenomenon might be explained by the situation-specific nature of FLA, it raises other questions about a possible interaction effect of gender and

achievement, measured in terms of the students' final English average grades, on FLA. The examination of this potential interaction effect may offer some new insights into the complex construct of FLA and help language instructors to better understand their students as well as to cater to their individual needs.

3. METHOD

The design employed in the current study is what differentiates it from previous discussions of the same issue in predominately correlational studies. In contrast, this paper investigates how the factors gender and achievement act and interact simultaneously to affect the development of foreign language anxiety. In an attempt to gain a more holistic picture of this construct, the present study investigates a common influence of gender and achievement on diverse FLA types: general foreign language anxiety (FLCA), foreign language reading anxiety (FLRA), second language writing anxiety (SLWA), foreign language listening anxiety (FLLA) as well as their compound variable overall foreign language anxiety (OFLA). Thus, the study aims to answer the following question: do gender and achievement (final English grades 2017/18) significantly interact to affect the students' foreign language anxiety scores at the end of Austrian upper secondary education? The following hypotheses are tested:

Hypothesis 1: There is a significant main effect of gender and achievement on the students' OFLA at the end of Austrian upper secondary education.

Hypothesis 2: Gender and achievement (final English grades 2017/18) do not significantly interact in the effect on the students' OFLA at the end of Austrian upper secondary education.

Hypothesis 3: There is a significant main effect of gender and achievement on the students' FLCA, FLRA, SLWAT and FLLA at the end of Austrian upper secondary education.

Hypothesis 4: Gender and achievement (final English grades 2017/18) do not significantly interact in the effect on the students' FLCA, FLRA, SLWAT and FLLA at the end of Austrian upper secondary education.

3.1. INSTRUMENTS

To measure the participants' anxiety levels, four different instruments were used: the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz, Horwitz & Cope, 1986); the Foreign Language Reading Anxiety Scale (FLRAS), inspired by

the FLCAS and developed by Saito, Garza and Horwitz (1999), the Second Language Writing Apprehension Test (SLWAT) (Cheng, Horwitz & Schallert, 1999; Daly & Miller, 1975) and the Foreign Language Listening Anxiety Scale (FLLAS) (Kim, 2000). All instruments employ 5-point Likert-type scales from “strongly agree” (5) to “strongly disagree” (1). Negative statements are reverse-scored; the higher the score obtained means a higher level of foreign language anxiety. As concerns scoring, Bollinger’s (2017) method was used: the number of standard deviations above or below the mean for each individual FLA score was considered to determine the respective anxiety level. Low anxiety means that the scores were one or more standard deviations below the mean. Students in the high anxiety group displayed scores one or more standard deviations above the mean. The remaining students were placed in the moderate level of anxiety group.

All instruments were translated into German and back-translated into English. Apart from the translation, the instruments were slightly adapted in order to tailor the questionnaire to the specific target group and its context. However, this adaptation only concerns minor lexical changes such as transforming “language class” in all items to “English class”. The questionnaire also included a background questionnaire to gather socio-demographic data such as gender. Furthermore, the students’ overall final English grades of the previous academic year (2017/18) were collected.

3.2. PARTICIPANTS

The study discussed in this paper was carried out at the beginning of the academic year 2018/19. The research sample comprised 379 students from 22 classes in 10 different schools. The students had just started their final year at two types of secondary business colleges (Handelsakademie HAK and Höhere Lehranstalt für wirtschaftliche Berufe HLW) in the Austrian province Burgenland. The business colleges concerned offer higher vocational education, cover five grades and are designed to acquire higher economic education and training for all economic sectors. The great majority of students ($n = 301$) were 18 years old, there were 128 (33.8%) male and 251 (66.2%) female participants. According to the curriculum requirements, the participants were supposed to have a level of proficiency of approximately B2 according to the Common European Framework of Reference for Languages.

Figure 1 shows the general distribution of the participants’ final English grades; Figure 2 offers a comparison of the grades of the male ($n = 128$) and female ($n = 251$) participants. The marks are in line with the Austrian grading system, ranging from “Sehr gut - very good - 1”, “Gut - good - 2”, “Befriedigend

- satisfactory - 3", "Genügend - adequate - 4", to "Nicht genügend - unsatisfactory - 5".

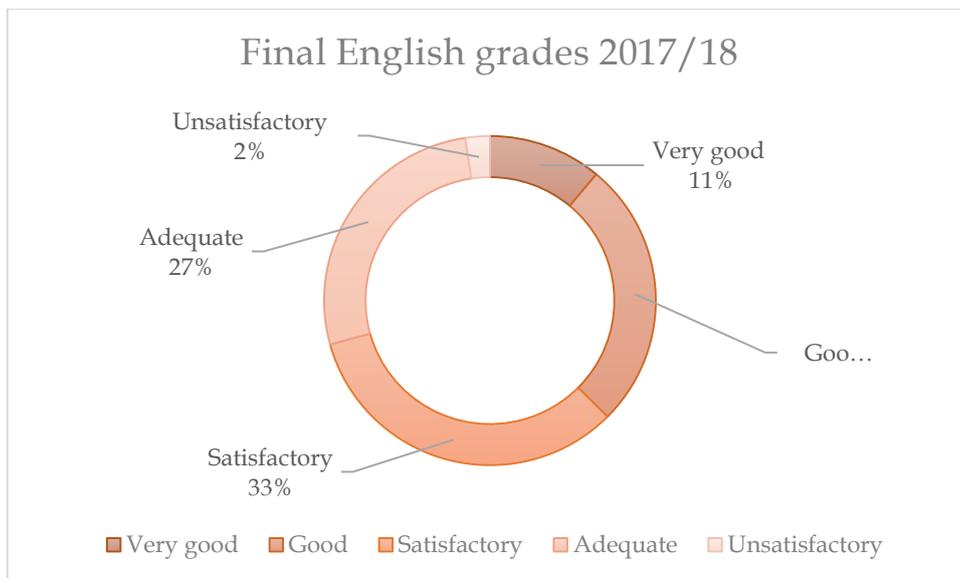


Figure 1. Final English grades 2017/18 of participants in %

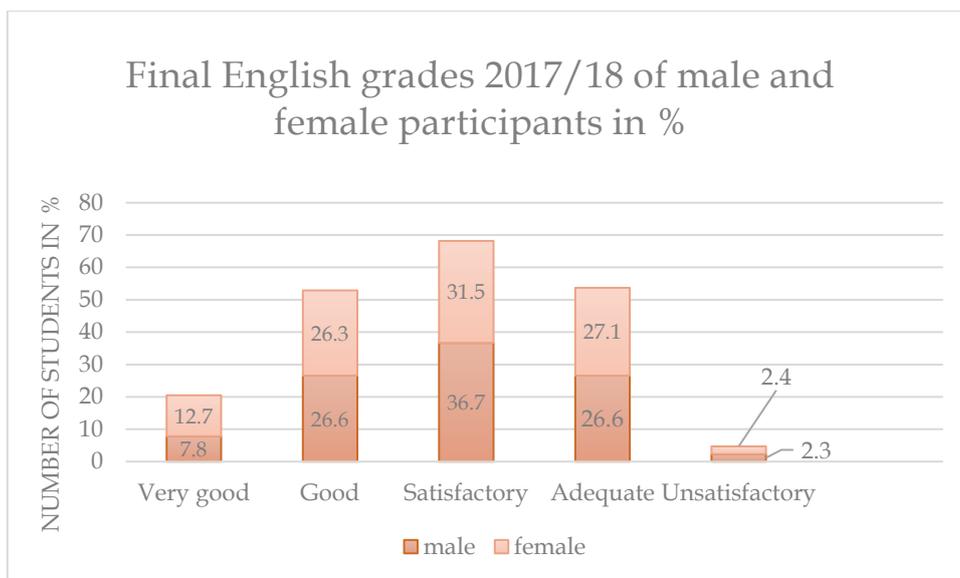


Figure 2. Final English grades 2017/18 of male and female participants in %

In addition, the students were asked to self-assess their competence in their receptive and productive language skills. They were required to describe their reading, writing, listening and speaking skills by selecting an ability level in line with the Austrian grading system (“Sehr gut”/very good 1, “Gut”/good 2, “Befriedigend”/satisfactory 3, “Genügend”/adequate 4, “Nicht Genügend”/unsatisfactory 5) for each skill. Generally speaking, female students displayed a tendency of assessing all language skills worse than their male counterparts (Table 1).

Table 1. Self-assessment of skills of male (n = 128) and female (n = 251) participants

	Female		Male	
	M	SD	M	SD
reading	2.63	1.06	2.32	0.99
speaking	2.63	1.07	2.40	0.08
writing	2.70	1.00	2.61	0.08
listening	3.10	1.15	2.70	0.10

As concerns the participants’ exposure to English outside the classroom, the background questionnaire revealed that the female participants are far less exposed to English than their male peers on a scale from 1 - 5 (“5 - every day or almost every day” - “4 - once or twice a week” - “3 - once or twice a month” - “2 - rarely” - “1 - never or hardly ever”) (Table 2).

Table 2. Exposure to English outside the classroom (N = 379)

	Total	SD	Male M	Female M
watching English films, series, etc.	3.85	1.265	4.05	3.75
reading texts in English	3.39	1.343	3.78	3.19
communication on social networks	3.09	1.489	3.49	2.89
speaking English with friends or relatives	2.08	1.223	2.27	1.98
communicating in online games	1.94	1.363	1.42	2.97
overall exposure to English	2.87	0.980	3.31	2.65

3.3. DATA COLLECTION

Based on the principle of stratified random sampling, in the academic year 2017/18, the twelve HAKs and HLWs in the Austrian province Burgenland (secondary business colleges) were contacted and invited to participate in the research project. Ten of possible twelve schools and their respective teachers agreed to take part. The project was then officially authorized by the local school authorities and all of the 379 students, or their legal guardians for those under 18 years of age, gave their written consent, which clarified anonymity, confidentiality, and the volunteer nature of participation in the data collection. The participants completed the questionnaire in the period from 19 September to 2 October 2018 online in a computer room at their schools under the supervision of their respective teachers and the author herself. The average time spent on the questionnaires was 17 minutes. All of the data was collected online using the software Lime Survey.

3.4. DATA ANALYSIS

The Statistical Package for the Social Sciences Software (SPSS), version 25, was used to perform the statistical analysis. In order to investigate whether gender and achievement significantly interact in the effect on foreign language anxiety scores at the end of Austrian upper secondary education, a factorial MANOVA was performed. To be more precise, a two-way ANOVA was conducted to determine the effect of gender and achievement on the students' overall foreign language anxiety (OFLA), computed as a compound of the variables general foreign language anxiety (FLCA), measured by the FLCAS; foreign language reading anxiety (FLRA), measured by the FLRAS; second (or foreign) language writing apprehension (SLWA), measured by the SLWAT; and foreign language listening anxiety (FLLA), measured by the FLLAS. Furthermore, a two-way MANOVA was conducted to determine the influence of the two independent variables gender and achievement on the students' scores on a linear combination of these dependent variables and on each of them separately.

All 379 students in this study received four anxiety scores, that is an FLCA, an FLRA, an SLWA and an FLLA score (Table 3). Additionally, the variable "overall foreign language anxiety" (OFLA) was computed from all these measures, which were found to highly correlate (Table 3).

Table 3. Foreign language anxiety scores of male (n = 128) and female (n = 251) participants (N = 379)

	M total	SD	M male	SD	M female	SD	FLRAS	SLWAT	FLLAS
FLCA	2.43	0.80	2.13	0.64	2.58	0.83	.849**	.785**	.829**
FLRA	2.24	0.76	2.03	0.68	2.34	0.77		.766**	.869**
SLWA	2.65	0.90	2.43	0.74	2.76	0.95			.740**
FLLA	2.58	0.84	2.24	0.80	2.75	0.81			
OFLA	2.47	0.76	2.21	0.66	2.61	0.78			

** $p < 0.01$

Based on Bollinger's (2017) method of grouping students into three anxiety levels, the majority of the participants (over 60%) displayed moderate levels of FLCA, FLRA, SLWA and FLLA. The same is true for their OFLA levels, which are illustrated below in Figure 3.

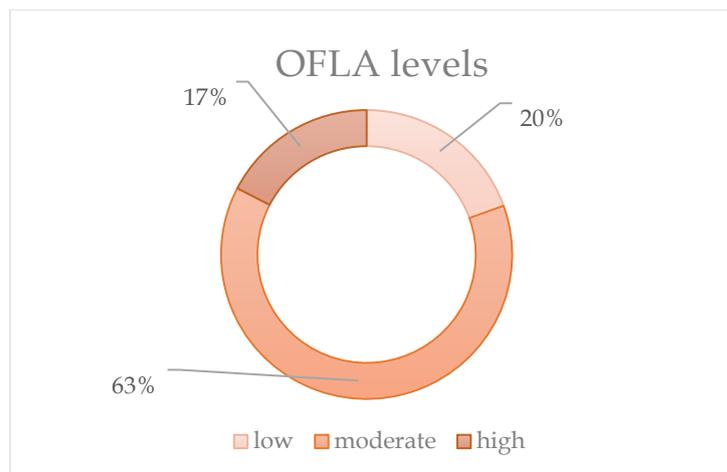


Figure 3. Number of students in % per OFLA level

As can be seen in Table 3, the female participants displayed higher scores on all FLA measures than their male counterparts. Figure 4 illustrates this difference between the male and female participants' OFLA levels.

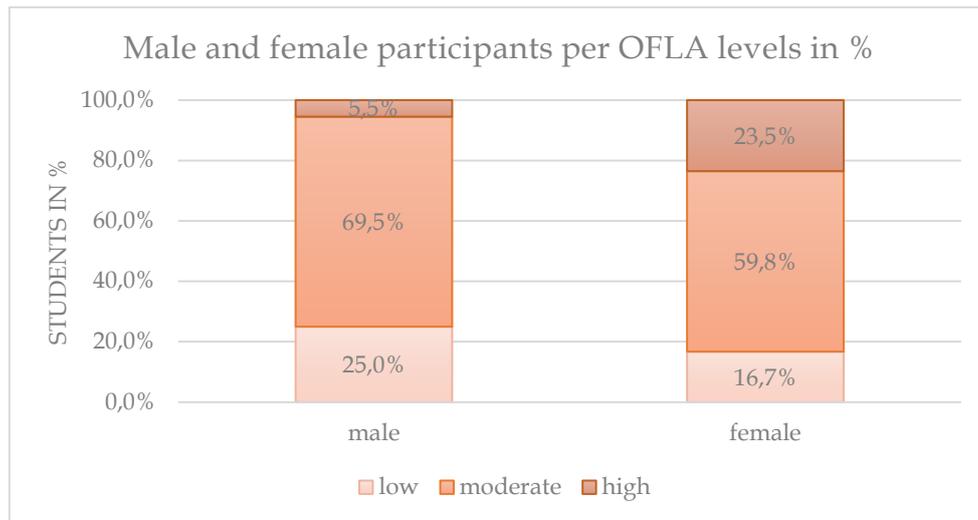


Figure 4. OFLA levels and gender

4. RESULTS

A two-way ANOVA was conducted to determine the effect of gender and achievement, measured in terms of the students' final English average grades (2017/18), on their overall foreign language anxiety (OFLA). A further aim was to establish a possible interaction effect of gender and achievement on the participants' OFLA scores. Both main effects, i.e. the main effect of gender and of achievement on OFLA were found to be statistically significant. To start with, the main effect for gender yielded an F ratio of $F(1, 369) = 15.6850, p = .000, \eta^2 = .041$, suggesting an almost medium effect of gender on OFLA, with female participants ($M = 2.61, SD = 0.78$) displaying higher OFLA scores than their male counterparts ($M = 2.21, SD = 0.66$).

To measure the main effect of achievement on OFLA, the sample was divided into five groups according to the participants' final average English marks (2017/18): achievement group "Sehr gut 1" ($n = 42$), achievement group "Gut 2" ($n = 100$), achievement group "Befriedigend 3" ($n = 126$), achievement group "Genügend 4" ($n = 102$), achievement group "Nicht genügend 5" ($n = 9$). The main effect for achievement on OFLA yielded an F ratio of $F(4, 369) = 47.387, p = .000, \eta^2 = .339$. The estimates of the effect size revealed a large effect of achievement on OFLA scores, suggesting that achievement has a considerable influence on OFLA scores. Post-hoc comparisons using the Tukey HSD test indicated that the biggest difference is between the achievement groups "Sehr gut" ($M = 1,78, SD = 0.46$) and "Nicht genügend" ($M = 3.38, SD = 0.53$), followed by "Gut" ($M = 2,04, SD = 0.52$) and "Nicht genügend" ($M = 3.38, SD = 0.53$). That is to say, the better the mark, the lower the OFLA scores. The interaction effect

between gender and achievement was insignificant, $F(4, 369) = 2.147, p = .075, \eta^2 = .023$. Table 4 summarizes these findings, which are further illustrated in Figure 5. As can be seen, the female participants receive higher OFLA scores than their male counterparts in all achievement groups.

Table 4. OFLA scores by gender and achievement groups

OFLA scores	<i>M</i> <i>total</i>	<i>SD</i>	<i>M</i> <i>male</i>	<i>SD</i>	<i>M</i> <i>female</i>	<i>SD</i>
“Sehr gut”	1.78	0.46	1.56	0.29	1.86	0.49
“Gut”	2.04	0.52	1.92	0.49	2.10	0.53
“Befriedigend”	2.54	0.71	2.16	0.58	2.76	0.69
“Genügend”	3.02	0.62	2.65	0.62	3.20	0.54
“Nicht genügend”	3.48	0.53	3.25	0.59	3.60	0.51

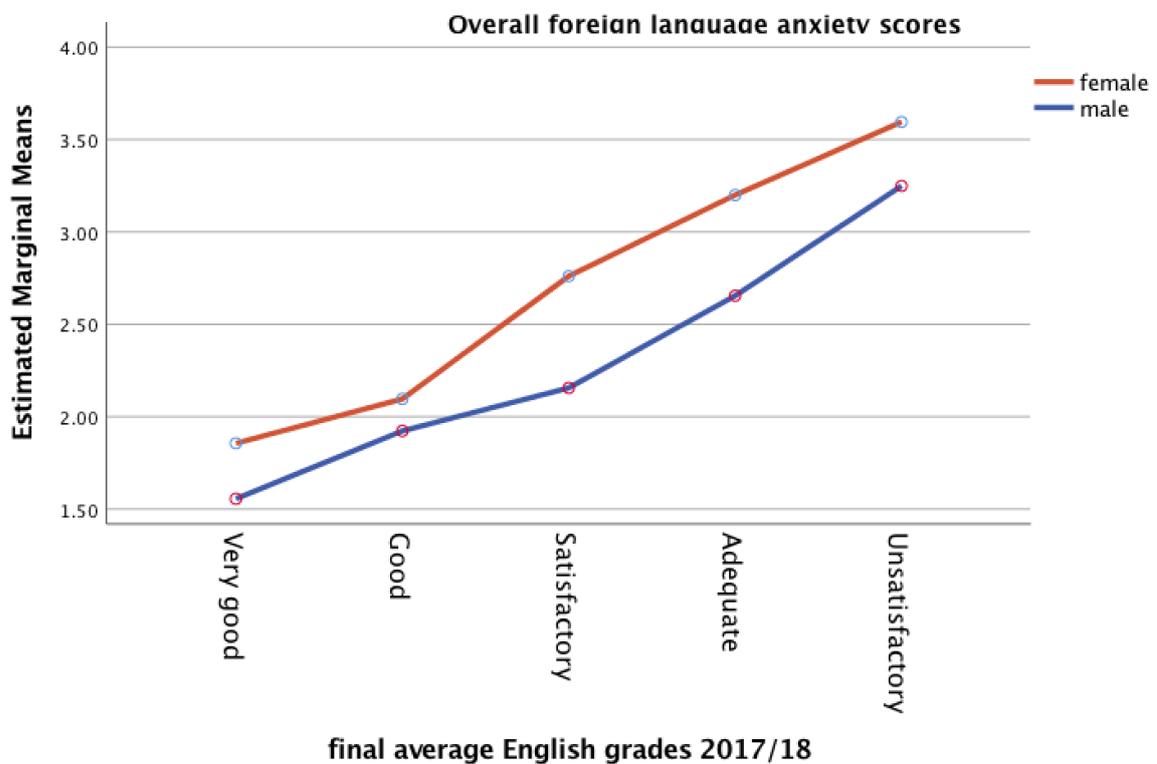


Figure 5. Gender differences between achievement groups on OFLA

Furthermore, a two-way MANOVA was conducted to determine the influence of the two independent variables gender and achievement on the students' scores on a linear combination of the following dependent variables: FLCA, FLRA, SLWAT and FLLA scores. For this purpose, the subjects were divided into three achievement groups: low, moderate, high. Students with final average English grades (2017/18) of either "Sehr gut" or "Gut" were put in the high-achievement group. Students with a final average of "Befriedigend" were put in the moderate-achievement group. Finally, students with final average grades of "Genügend" and "Nicht genügend" were put in the low-achievement group. This regrouping of the participants was deemed necessary, as factorial MANOVA requires to have more cases in each cell than dependent variables, which would not have been the case when using five achievement groups as in the two-way ANOVA above. Moreover, with the new achievement groups formed, the sample size in each cell now exceeds 35, which should guarantee relative robustness to any violations of normality or equality of variance (Pallant, 2007).

The two-way MANOVA revealed that both gender [Wilks's Lambda $\lambda = 0.841$, $F(4, 370.000) = 17.52$, $p = .000$, $\eta^2 = .159$] and achievement [Wilks's Lambda $\lambda = 0.638$, $F(8, 740.000) = 23.341$, $p = .000$, $\eta^2 = .201$] significantly affect the combined dependent variables of FLCA, FLRA, SLWA and FLLA. The multivariate effect sizes were both large. Additionally, the interaction effect for gender and achievement on the combined variables was significant [Wilks's Lambda $\lambda = 0.941$, $F(8, 740.000) = 2.83$, $p = .004$, $\eta^2 = .030$], albeit with a much smaller effect size. When the results for the dependent variables were considered separately, a Bonferroni adjusted alpha level of .0125 was applied, following Pallant's (2007) suggestion. Significant main effects of gender on the FLCA scores [$F(1, 373) = 52.887$, $p = .000$, $\eta^2 = .124$], the FLRA scores [$F(1, 373) = 24.817$, $p = .000$, $\eta^2 = .062$], the SLWA scores [$F(1, 373) = 24.453$, $p = .000$, $\eta^2 = .062$] and the FLLA scores [$F(1, 373) = 52.210$, $p = .000$, $\eta^2 = .123$] could be identified. Compared to their male counterparts, the females display higher scores on all four anxiety scales, with almost large multivariate effect sizes with regard to FLCA and FLLA scores, whereas the effect sizes with regard to the SLWA and the FLRA scores are smaller.

Moreover, large multivariate effect sizes could be found for the main effects of achievement on all anxiety scores investigated: FLCA scores [$F(2, 373) = 82.815$, $p = .000$, $\eta^2 = .308$], FLRA scores [$F(2, 373) = 59.335$, $p = .000$, $\eta^2 = .241$], SLWA scores [$F(2, 373) = 78.793$, $p = .000$, $\eta^2 = .297$] and FLLA scores [$F(2, 373) = 56.226$, $p = .000$, $\eta^2 = .232$]. An inspection of the mean scores indicated that the higher the achievement, the lower the anxiety level for all anxiety measures (Table 5).

Table 5. Multivariate ANOVA between three achievement groups (low, moderate, high) on FLA scores

	low		moderate		high		<i>P</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
FLCAS	3.06	0.71	2.43	0.75	1.93	0.01	.000	.308
FLRAS	2.73	0.65	2.32	0.77	1.78	0.51	.000	.241
SLWAT	3.31	0.76	2.76	0.80	2.03	0.64	.000	.297
FLLA	3.11	0.72	2.64	0.82	2.11	0.66	.000	.232

Furthermore, the interaction effect for gender and achievement was significant on the FLCA scores [$F(2, 373) = 6.498, p = .002, \eta^2 = .034$] and the SLWA scores [$F(2, 373) = 5.517, p = .004, \eta^2 = .029$], albeit with small multivariate effect sizes. In contrast, there was no significant interaction effect for gender and achievement on the anxiety measures related to the receptive skills: FLRA [$F(2, 373) = 1.725, p = .180$] and FLLA [$F(2, 373) = 2.520, p = .082$] scores. Table 6 displays the FLCA and SLWA scores per gender and achievement group.

Table 6. FLCA and SLWA scores per gender and achievement group (low, moderate, high)

	low		moderate		high	
	<i>male</i>	<i>female</i>	<i>male</i>	<i>female</i>	<i>male</i>	<i>female</i>
	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>	<i>M</i>
FLCA	2.65	3.27	2.00	2.68	1.82	1.98
SLWA	2.92	3.51	2.43	2.96	2.01	2.04

5. DISCUSSION

The present study aimed to analyze the main and interaction effects of gender and achievement, measured in terms of final English grades, on the participants' foreign language anxiety scores FLCA, FLRA, SLWA and FLLA as well as their compound variable OFLA. The hypotheses stating that there are significant main effects of the factors gender and achievement individually on the students' foreign language anxiety scores could be confirmed. Statistically significant differences were found in the male and female participants' foreign language

anxiety scores (FLCA, FLRA, SLWA, FLLA, OFLA), which were all higher for female than for male participants. These results are fully in line with previous research in different language learning contexts (Abu-Rabia, 2004; Cheng, 2002; Maturanec, 2015, Piechurska-Kuciel, 2012), but diverge from some other studies that found no gender-based differences with regard to the foreign language classroom anxiety scale (Aida, 1994; Chang, 1996; Matsuda & Gobel, 2004; Onwuegbuzie & Daley, 1999; Yan, 1998), the foreign language reading anxiety scale (Matsuda & Gobel, 2004; Shariati & Bordbar, 2009) or the foreign language listening anxiety scale (Elkhafaifi, 2005; Kimura, 2008). On closer inspection, however, the studies that show no gender-related differences share at least one of the following attributes: they are concerned with university students; they examine students studying another language than English; they were conducted in an Asian educational context. Arguably, these circumstances might account for the divergence in the results of the present study, which is concerned with young adults learning English within a European secondary educational system.

Consequently, it seems appropriate to further explore similar studies in the context of secondary education, of which there are only a few. In this context, Piechurska-Kuciel (2012) found the female participants in her study to display higher levels of FLCA than their male peers in a comparable sample of 621 Polish secondary grammar students of English between 15 and 18 years. Drawing on sociologists such as Ferrante (2010), who define gender as “socially created and learned distinctions that specify the ideal physical, behavioral, and mental and emotional traits characteristic of males and females” (Ferrante, 2010, p. 268), Piechurska-Kuciel (2012) attributed the higher FLCA levels of the female participants in this particular age group not only to physical developmental patterns, but also to gender socialization processes and related classroom practices. As concerns biological differences between male and female adolescents, Piechurska-Kuciel (2012) argues that the latter are generally more prone to affective disorders such as anxiety than their male counterparts due to changes in the female brain structure and fluctuating hormone levels. Actually, this claim is supported by empirical evidence of generally higher levels of school stress for girls in some studies (Bryne, 2000; Ginsburg & Silverman, 2000), which might also be applicable to the female learners in the present study.

Even more importantly, classroom practices, which generally emerge as an influencing factor from all the studies on FLA quoted so far, appear to be detrimental to the female students’ language learning progress as well as their anxiety levels (Piechurska-Kuciel, 2012). To be more precise, according to Piechurska-Kuciel (2012), teachers in secondary education tend to have greater expectations of female students, who they believe to be generally more mature and who they attribute with taking greater care and being more concerned about the quality of their work than their male classmates. In the present study, the teachers concerned may even see this belief confirmed by the females’ better final grades. Male adolescents might thus be left with a “more detached attitude to that ‘girly’ subject” (Piechurska-Kuciel, 2012, p. 240), and possible failure may

not be regarded as a threat to the male ego. Moreover, teachers seem to display a tendency of giving their male students more attention and opportunity for interaction, confronting them with more challenging tasks in order to arouse their interest in a seemingly “unmanly” subject and to avoid disruption in their lessons (Piechurska-Kuciel, 2012).

Besides gender, achievement, measured in terms of the students’ final overall English grades of the preceding academic year (2017/18), emerged as a significant factor in the existence of all types of foreign language anxiety. These results are fully aligned with the findings of similar studies, where statistically negative correlations between foreign language anxiety scores and final average grades were found (Aida, 1994; Cheng, 2002; Rodríguez, 1995; Saito and Samimy, 1996; Saito et al., 1999). Interestingly, however, in the present study, the female participants ($M = 2.80$, $SD = 1.05$) reported slightly better overall final English marks than their male counterparts ($M = 2.89$, $SD = 0.97$). In other words, based on these grades of the preceding academic year, one may arguably attribute the female participants with a higher level of overall language competence in comparison with their male peers. However, given the female participants’ higher FLA levels, this does obviously not mean that they can manage their FLA levels more efficiently. One may, of course, argue that girls are generally more anxious, irrespective of their proficiency levels (Abu-Rabia, 2004; Koul, Kaewkuekool, & Ploisawaschai, 2009; Mahmood & Iqbal, 2010; Piechurska-Kuciel, 2008). Be that as it may, a clearer picture emerges when not only considering achievement in terms of final grades, but also achievement in terms of the learners’ perceptions of their language competence. As Table 1 shows, the female participants assessed their competence in all four language skills worse than their male counterparts. This tendency towards poorer self-assessment appears to provide a better potential reason for the female higher anxiety levels despite their slightly better final grades. Moreover, this finding confirms previous research that found self-perceptions of competence to predict anxiety better than actual competence (Cheng, 2002; Cheng et al., 1999; MacIntyre & Noels, 1994; Matsuda & Gobel, 2004).

What is more, the students’ self-perceptions of their competence may also explain the variations in the FLA scores in the three achievement groups in Table 5. To be more precise, in both the low and the moderate achievement group, the highest FLA scores are displayed for the SLWAT scores, followed by the FLLA scores. In contrast, in the high achievement group, the participants scored highest on the FLLA scores. Generally speaking, the elevated SLWAT and FLLA scores in all achievement groups are in line with the students’ self-assessments, in which writing ($M = 2.67$, $SD = 0.981$) and listening ($M = 2.97$, $SD = 1.144$) received the worst marks. Listening actually emerged as the skill that all participants feel less confident about, but that female participants ($M = 3.10$, $SD = 1.15$) assessed worse than their male classmates ($M = 2.70$, $SD = 0.10$). Not surprisingly, the majority

of participants in the high achievement group ($N = 142$) are girls ($n = 98$, 69%), which might account for this group displaying higher FLLA than SLWAT scores. In fact, in the present study, the hypotheses that there are no interaction effects of gender and achievement on foreign language anxiety scores could only be partly confirmed. That is to say, gender and achievement did not significantly interact to affect OFLA scores. However, these two factors interacted to affect the combined variables FLCA, FLRA, SLWA and FLLA, albeit with a relatively small effect size. On closer inspection, an interaction effect of gender and achievement of a small multivariate effect size on the foreign language anxiety scores related to the productive language skills, i.e. FLCA and SLWA, could be identified. As can be seen in Table 6, there is a difference between male and female students across all three achievement groups. In line with these findings, the participant in the lowest achievement group and the highest FLCA score (4.39) is female. Similarly, the person in the lowest achievement group with the highest SLWA score (4.77) is female. In contrast, the person with the lowest FLCA score (1.09) and the best possible mark is male. Interestingly, the biggest differences between the male and the female participants' FLCA and SLWA scores could be found in the low and moderate achievement groups, whereas a much smaller difference was discernable in the high achievement group. Gender therefore seems to influence FLCA and SLWA levels less, when the students have had the experience of receiving good marks, which confirms the established link between FLA and self-confidence (Williams, Mercer & Ryan, 2016). Moreover, in terms of practical implications, this study might actually provide an explanation of some teachers' observations commented on at the beginning of this paper: male participants in low or moderate achievement groups seem to have greater chances of performing "better than expected" in oral exams and thus "surprising their teachers" due to their lower FLA levels.

Finally, the finding that gender interacts with achievement on the anxiety types related to the productive skills only can be supported by the notion of skill-specific language learning mindsets, which Mercer and Ryan (2010) found language learners to hold. Especially in their final year, students will be inevitably forced to produce language in either a written or oral final exam, situations in which they can potentially lose face. Here, the relationship between FLA and self-confidence, which is potentially more threatened by producing language rather than by listening and reading, is made apparent (Williams, Mercer & Ryan, 2016). In this context, it seems note-worthy that within the present study male and female students were detected to differ in their exposure to English outside the classroom (Table 4), which might be a further conceivable reason for or a cause of the latter's lower anxiety scores.

6. CONCLUSION

To conclude with, the present research revealed that the effect of gender on FLCA and SLWA depends on achievement, whereas there is no such interaction effect when it comes to FLRA and FLLA. Consequently, the findings in the present study indicate that especially students in low and moderate achievement groups, that is learners who have had experience of receiving low to average marks in English, seem to suffer from higher levels of FLA, in particular if they are female and have to produce language. Consequently, teachers should reconsider their classroom practices and distribute their attention equally between male and female participants. Besides, this particular group, i.e. young female adult learners of low to moderate achievement, appears to be at a double disadvantage and needs to be given special support in the language learning process, in particular in preparation of their final standardized English exam at the end of upper secondary education. At the same time, however, Austrian schools are faced with stagnating financial resources for additional English language courses in the form of elective subjects, remedial English classes or specific Matura preparation lessons. This seems detrimental to language learning, as FLA has been found to be generally lower when students are provided with increased opportunities for practice (Gregersen & MacIntyre, 2014), which especially Austrian female students in the age group investigated do not seem to seek as often as boys outside the formal educational context. Consequently, it seems appropriate to consider alternative ways to additionally support students in exam preparation, e.g. through the provision of online practice materials. Further investigations within the context of the author's PhD research will examine whether such measures can actually support students and decrease their potential foreign language anxiety, in particular test anxiety.

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