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**RESEARCH**

# Learner-internal and learner-external predictors of Willingness to Communicate in the FL Classroom

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Willingness to Communicate (WTC), defined as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (MacIntyre, Dörnyei, Clément & Noels, 1998, p. 547), is influenced by a complex interplay of interacting learner-internal variables (including sociobiographical, emotional and macro intergroup variables) and learner-external variables (i.e. teacher-centred) in the foreign language (FL) classroom. The present study attempts to identify the strongest predictors of WTC from 189 British pupils in two high-achieving London secondary schools studying mostly French, German and Spanish as FLs. Correlation analyses followed by multiple regression analyses showed that the strongest predictors of WTC were FL classroom anxiety, frequent FL use by the teacher, a positive attitude towards the FL (a neglected macro intergroup dimension in recent research), followed by high levels of social FL Enjoyment and age. The pedagogical implication is that FL teachers can boost learners’ WTC by creating a positive emotional classroom climate where pupils can overcome their anxiety. Moreover, by generating a genuine interest in the FL and using the FL a lot, teachers can increase their pupils’ levels of WTC.

**Keywords:** Willingness to Communicate; Foreign Language Classroom Anxiety; Foreign Language Enjoyment; learner-internal variables; learner-external variables

## 1. Introduction

Willingness to Communicate (WTC) in SLA research has been defined as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (MacIntyre, Dörnyei, Clément & Noels, 1998, p. 547). Recent research has emphasized a more dynamic view of WTC with its transient and enduring characteristics (MacIntyre, 2007).

The increased emphasis of the dynamic aspects of WTC has shed new light on some crucial questions about the predictors of WTC: to what extent is WTC predicted by learner-internal variables (which range from stable factors like language learning history, sociobiographical variables like age, gender, education level, personality, to factors like attitudes and emotions that are determined by the educational, political and historical context), by learner-external variables (the classroom situation with teachers and peers), and by the volatile interaction between learner-internal and learner-external variables?<sup>1</sup>

Metaphorically, the L2 learner or user about to say something in the L2 could be compared to a swimmer standing near the edge of the water, adopting the correct posture and body position to dive into the water. An uncomfortable awareness might creep in of being

watched – and soon judged- by observers. Reaching that point presupposes a long string of previous observations, experiences, reflections and decisions in the individual’s life, as well as contextual factors, about the ability to perform and maybe enjoy the planned action. The decision to go or not will be preceded by a brief final checklist about the individual’s skills to actually float or swim -with or without a flotation device. The L2 user/swimmer will recall previous swimming experiences, including how enjoyable it was, and what dangers were faced, before dipping his/her toe in the water, and checking that their bathing suit is well-attached – no-one wants to face the public ridicule of resurfacing naked. The swimmer will have decided that the temperature is acceptable to jump in, and that the water looks clean. Of course, the context matters too: is this going to be a leisurely splash in the local pool? Is it the final race for an Olympic medal or the only escape from a ship about to disappear under the waves? The learning of a FL itself has been compared with diving into a lake, leaving the comfort of the L1 behind: “To know a new language, to immerse yourself, you have to leave the shore. Without a life vest. Without depending on solid ground” (Lahiri, 2016, p. 5).

Not surprisingly, FL teachers have been found to rate students’ WTC as the second most important construct in the FL class after motivation (Gkonou, Mercer & Daubney, 2017). Boosting WTC has thus become an important goal of L2 pedagogy (MacIntyre & Doucette, 2010) as student silence in FL classroom contexts can easily be interpreted

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as learner disengagement and is deadly for the motivation of both students and teachers. A better understanding of variation in WTC might have important pedagogical consequences, as it could help L2 learners and users cross the threshold of L2 communication (Gregersen & MacIntyre, 2014).

In the present study, we propose a quantitative analysis of the effect of 11 interacting learner-internal variables and learner-external variables on WTC of 189 FL learners in two London secondary schools.<sup>2</sup> These include three emotional variables that have not yet been researched simultaneously in relation to WTC: private and social Foreign Language Enjoyment (FLE), and FL classroom anxiety (FLCA) (Dewaele & MacIntyre, 2014, 2016). The literature review will briefly present the seminal study by MacIntyre et al. (1998) before focusing on some recent, mostly quantitative, studies on WTC that investigated the interacting effects of learner-internal and learner-external variables. After that, we will present the research questions, before going on to explain the methodology of the study. The results of the statistical analyses will be presented next and they will be interpreted and linked to previous research in the discussion section. We will conclude with some pedagogical implications of the findings.

## 2. Literature review

### 2.1. The pioneering study on WTC

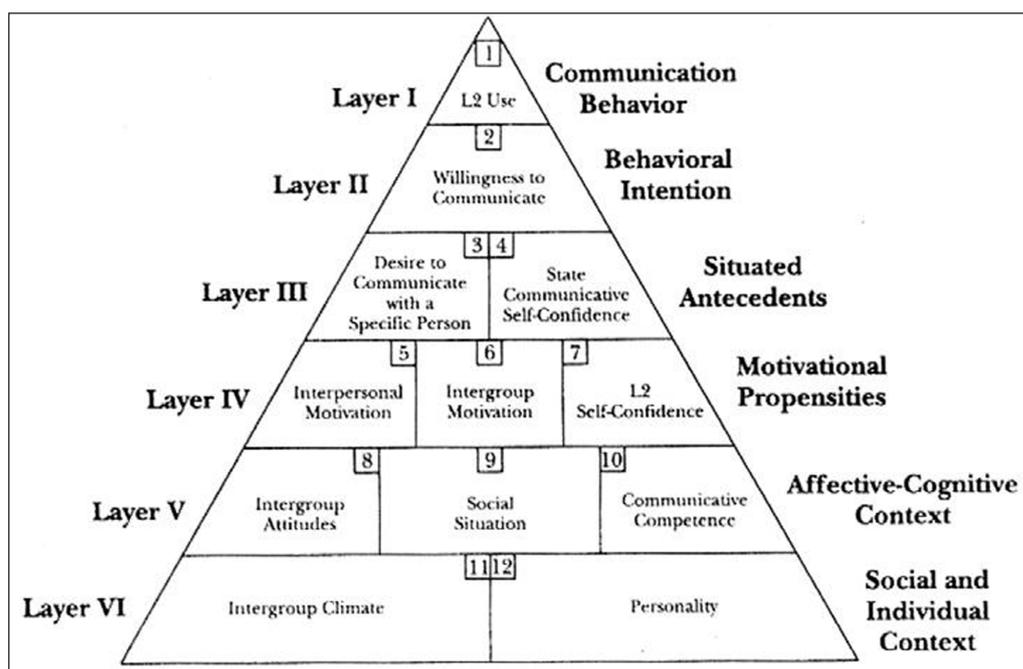
MacIntyre et al. (1998) gave WTC research a new impulse. The authors argued that WTC in an L2 involves many uncertainties and complexities which are absent in WTC in an L1, and proposed a heuristic model to capture the range of potential variables affecting the volitional process to initiate communication in the L2, in a particular situation, with a particular person, at a particular moment in time (see **Figure 1**). The predictors of WTC include linguistic, psychological, and social variables, organized in

the form of a pyramid, with L2 use at the top and WTC just underneath. Variables at the bottom of the pyramid are more stable and enduring than those higher up that focus on the here and now. Also, variables to the left of the bottom layers are more related to a macro intergroup perspective, while those to the right are more focused on the psychology of individual L2 learners and users.

The basis of the pyramid (Layer VI) captures enduring intergroup and genetic influences.<sup>3</sup> Individuals have little influence over these factors, and generally they play a somewhat indirect role in language behaviour (MacIntyre, 2007, p. 567). The next layer (V) of the pyramid refers to the individual's typical affective and cognitive context. MacIntyre explains that this layer sets "the tone for motivation to learn the L2", namely "the tension between a desire to approach the target language group and a sense of hesitation or fear of the implications of doing so" (p. 567). It could be argued that this context is shaped within schools and FL classrooms in particular. The next level (Layer IV) "Motivational Propensities" marks a transition from more stable contextual characteristics to more variable and individual ones:

Roles and motives combine with L2 self-confidence; perceptions of communicative competence coupled with a lack of anxiety (p. 568).

The mention of "lack of anxiety" suggests that this is the level where the emotions are situated. Layer III of the pyramid refers to the individual in specific situations: "At this level of the pyramid model is the desire to communicate with a specific person as well as a state of self-confidence" (p. 568). Emotions are present at this level too (self-confidence in a specific situation). The next layer (II) refers to the behavioural intention to speak if one has the opportunity, or to remain quiet. Layer II,



**Figure 1:** MacIntyre, Clément, Dörnyei and Noels's (1998) pyramid model of WTC.

the WTC layer, “represents the final psychological step in preparation for L2 communication” (p. 568), while the top of the pyramid represents the actual communication in the L2. The pyramid model has been extremely influential in applied linguistics.

Since research in this area relies on self-report, WTC values reflect subjective self-evaluations of L2 users’ ability to communicate rather than objective measures (Gregersen & MacIntyre, 2014, p. 214).

## 2.2. Recent WTC research (from 2010)

Recent research is characterized by an interest in the stable and dynamic characteristics of WTC, and the complex interactions of the independent linguistic, situational and psychological variables. Interestingly, it often leaves out macro interethnic variables such as attitudes towards the FL or its speakers. The studies included in this section have been grouped in two categories: firstly, studies focused on identifying multiple sources of individual differences in WTC, organised chronologically, and, secondly, intervention studies where the aim was to test pedagogical practices that boost WTC.

Peng and Woodrow (2010) adopted the pyramid model as their theoretical basis in their investigation of WTC among 579 Chinese EFL learners. They used structural equation modelling to identify the best predictors of WTC. Predictor variables included communication anxiety in English, perceived communication competence in English, intrinsic and extrinsic motivation to learn English, learner beliefs, and classroom environment. In other words, they did not include variables linked to the bottom layer of the pyramid and focused more on the right side of the pyramid, and did not include attitudinal variables. Communication confidence (a combination of perceived competence and a lack of anxiety) was the strongest predictor of variance in WTC (54%), followed by motivation (14%) and learner beliefs (11%), which was itself predicted by classroom environment (p. 858).

MacIntyre and Doucette (2010) adopted Kuhl’s (1987) theory of action control. The authors adopted Kuhl’s three key concepts, preoccupation, volatility, and hesitation, arguing that these form part of the base from which L2 WTC is built. They investigated WTC, both inside and outside of the FL class, of 238 Anglo-Canadian high school learners of French. Using path analysis, they found that WTC inside class was negatively predicted by language anxiety and positively predicted by perceived competence. A negative third predictor emerged, volatility, characterized as a tendency to abandon tasks and remain silent. Less volatile learners typically engaged in tasks with more persistence and were more willing to speak in the L2.

Cao (2011) took the MacIntyre et al. (1998) paper as a starting point to develop an “ecological perspective” in WTC research, where the notion of context is central, namely “a web of intertwining relationships between students, teachers and their surrounding micro classroom contexts and macro institutional environments” (p. 469). In her multiple case study approach, she observed a total of 18 advanced Chinese and Korean EFL students in New Zealand during classroom interactions, complemented

by stimulated-recall interviews and data from reflective journals. She lists “self-confidence, personality, emotion and perceived opportunity to communicate, classroom environmental conditions such as topic, task, interlocutor, teacher and group size, together with linguistic factors” as affecting her participants’ WTC (p. 468). Her conclusion is that while all these factors can contribute to WTC, their influence depends on the occasion as some may override others at certain times during classroom interactions.

Denies, Yashima and Janssen (2015) compared the predictors of classroom WTC with those of societal WTC in a representative sample of 1117 Dutch L1 Grade 12 students studying French L2 in Flanders. Using structural equation modelling, the authors found that classroom WTC is a strong predictor of WTC outside the classroom. Integrativeness and perceived competence emerged as positive predictors of classroom WTC while anxiety had a small negative impact (p. 730). Similar patterns were found for WTC outside the classroom, with a smaller role for integrativeness. The authors conclude that MacIntyre et al.’s (1998) WTC model seems “to be generalizable to the specific context of French L2 learning in Flemish secondary schools” (p. 734). They encourage FL teachers to bolster students’ sense of perceived competence in French and reduce their anxiety in using the language.

Teimouri (2017) expanded the range of WTC research by including concepts from motivation research and from emotion in SLA studies. Combining factor analysis, partial correlational analyses and multiple regression analyses, he investigated the WTC of 524 Iranian EFL high school students, linking it to L2 selves and anxiety, joy and shame. He considered WTC and intended effort as two qualitatively different forms of motivation (p. 6). The analyses revealed that Ideal L2 self (“the attributes that someone would ideally like to possess”, Dörnyei & Ryan, 2015, p. 87) predicted WTC. However the Ought-to-L2 self (“the attributes that one believes one ought to possess”, Dörnyei & Ryan, 2015, p. 87) was not a predictor. Ideal L2 self and Ought-to-L2 self predicted joy but only Ought-to-L2 self predicted anxiety and shame. Teimouri argued that learners with strong Ideal L2 self have a more preventional focus which plays a facilitative role as it keeps them alert to the presence of possible negative outcomes. However, these same learners have a predominant promotional focus and are very much aware of positive outcomes. Joy best fits their motivational orientation while anxiety represents a misfit, as it weakens motivation.

Khajavy, MacIntyre and Barabadi (2017) did not include motivation concepts in their research design to investigate WTC, but did include emotions and classroom environment. They used the advanced quantitative procedure of doubly latent multilevel analysis. Their participants were 1528 secondary school students (aged 12–18) in Iran who reported moderate levels of WTC and higher levels of enjoyment than anxiety. The researchers found that positive classroom environment (teachers’ support, students’ cohesiveness, and task orientation) was positively linked to WTC and enjoyment, and led to reduced anxiety among students. Moreover, enjoyment was found to be an important factor in increasing WTC

at both student level and classroom level, while anxiety reduced WTC only at the student level (p. 14). Girls were found to be slightly more anxious and more willing to communicate in English.

The effect of the classroom social climate on WTC was also central in the study by Joe, Hiver and Al-Hoorie (2017) on 381 Korean learners of English L2. The researchers used structural equation modelling to consider the link between classroom social climate (teacher academic support, teacher emotional support, classroom mutual respect), the satisfaction of learners' basic psychological needs (autonomy, competence, and relatedness), autonomous forms of motivation (identified regulation and intrinsic motivation) and their combined effect on levels of WTC (with friends, acquaintances and strangers) and achievement (exam results). WTC was found to be predicted directly and indirectly by satisfaction of basic psychological needs, followed by classroom social climate, prior achievement and identified regulation, but not by intrinsic motivation (p. 139). The authors conclude that "WTC and L2 achievement are determined both individually (...) as well as situationally (...)" (p. 140).

The two final studies are intervention studies based in Japan that sought to boost learners' WTC in English. Munezane (2015) recruited 373 Japanese university EFL learners, which were divided into a control group that received no treatment, and two experimental groups. The first experimental group combined visualization (i.e. seeing themselves as future specialists in their field) with goal setting (i.e. articulation of speaking goals in each class). The second experimental group engaged in the visualization exercises without goal setting. The three groups had the same amount of communicative activities. The combination of visualisation and goal setting group had significantly higher levels of WTC.

Yashima, MacIntyre and Ikeda (2018) carried out an interventional study over a semester with 21 Japanese EFL students in Japan. The intervention consisted of avoiding Initiation–Response–Feedback (IRF) patterns during discussion sessions in English in order to encourage students to initiate communication. The analysis of data from three participants showed how the frequency of self-initiated turns was linked to personality, proficiency, and group behavior.

### **2.3. Studies on Foreign Language Enjoyment and Anxiety**

Dewaele and MacIntyre (2014) introduced the concept of FLE, which they combined with FLCA in order to catch both positive and negative emotions of a heterogeneous group of 1740 FL learners about the learning experience, peers and teacher. Higher levels of FLE and lower levels of FLCA were associated with older learners, a high level of multilingualism, FL proficiency, self-confidence, and education level. Female participants reported significantly more FLE and FLCA. Narrative feedback pointed to the crucial role of the classroom environment, including peers and teachers.

Delving into the same dataset, Dewaele and MacIntyre (2016) used a Principal Components Analysis to reveal three dimensions explaining nearly half of the variance,

with two separate dimensions for the 21 FLE items, namely social and private FLE.

A final study on the same database looked more specifically at the gender differences in FLE and FLCA at item-level (Dewaele, MacIntyre, Boudreau & Dewaele, 2016). Female participants reported having significantly more fun in the FL class, agreed more strongly that they learned interesting things, and were prouder than the male peers of their FL performance. However, they worried significantly more than their male peers about mistakes and lacked confidence in using the FL.

In order to compare the influence of learner-internal and learner-external variables on levels of FLCA and FLE within a single national and educational context, Dewaele, Witney, Saito and Dewaele (2017) collected data from 189 secondary school pupils in London (the same corpus on which the present study is based) who were mostly studying French as a FL. Older pupils reported more FLE than younger ones. Female pupils scored higher on both FLE and FLCA. FLCA turned out to be much less related to teacher and teacher practices than FLE. Indeed, lower levels of FLCA were linked to positive attitudes towards the FL, higher relative standing among peers in the FL, and being more advanced in the FL. In contrast, higher levels of FLE were linked to more positive attitudes towards the FL, the FL teacher, frequent use of the FL by the teacher, more time spent by pupils on speaking, a higher relative standing among peers and being more advanced in the FL. The conclusion was that an effective teacher needs to focus on learners' enthusiasm and enjoyment while creating a friendly low-anxiety classroom atmosphere.

In a final paper using the same database, Dewaele and Dewaele (2017) used a pseudo-longitudinal design to investigate how FLE and FLCA of FL pupils evolved over time. A comparison of FLE and FLCA values among 12–13 year olds, 14–15 year olds and 16–18 year olds showed little change in FLCA and a slight increase in FLE. Multiple regression analyses revealed that fewer independent variables predicted FLE and FLCA at the start and at the end of the secondary education compared to the middle phase. Levels of FLE and FLCA in the youngest group were linked to relative standing in the group and the level of mastery in the FL. In the middle group, FLE was predicted by attitude towards the FL, attitude towards the teacher, the teacher's predictability (a negative predictor) and the number of languages known by the pupils. FLCA was predicted by relative standing in the group and the level of mastery in the FL. In the oldest group, FLE was only predicted by attitude towards the teacher while FLCA was predicted by relative standing in the group (a negative predictor) and teacher's predictability. It thus seems that the causes of positive and negative emotions in the FL classroom are dynamic and change over time.

What emerges from the literature review is that there are many sources of WTC that can be situated at various levels in MacIntyre et al.'s (1998) multi-layered "pyramid". The relative influence of the different layers may differ according to the geographical, political and historical contexts. The view of WTC as a stable personality trait has shifted to acknowledge its dynamic character, namely

the interaction between learner-internal and learner-external variables. The role of learners' emotions on WTC is also increasingly being investigated. No research so far has linked the three concepts of private FLE, social FLE, and FLCA to WTC, and looked at the combined effects of learner-internal and learner-external variables. This is exactly what we aim to do in the present study.

### 3. Research questions

We will investigate the following research questions:

1. Which learner-internal and learner-external variables are the best predictors of WTC?
2. Does gender have an effect on WTC?

## 4. Methodology

### 4.1. Foreign languages in UK secondary schools

The study of a FL is compulsory for 11 to 14 year olds in UK public-sector-maintained schools. For older pupils, FL classes have to be offered by the school but are no longer compulsory (<https://www.gov.uk/national-curriculum/key-stage-3-and-4>). FL pupils in British secondary school system take the national General Certificate of Secondary Education (GCSE) at ages 15 and 16. Good results are required for admission into the Sixth Form (final two years of school) and universities. Students who wish to pursue the study of FLs can do so at Advanced Level (A-Level), as part of the three or four elected subjects in the last two years of school, for which they usually sit the national A-level exams at the end of their schooling, aged 18. Universities typically make conditional offers to secondary school students who are in their final year, based on students' personal statement, GCSE results, predicted A-level results and sometimes university entrance tests and interview performance. The competition is fierce as students aim for the most prestigious universities. A conditional offer for a language or linguistics degree from a high-calibre university is typically "AAA" or "A\*AA".

### 4.2. Participants

A total of 189 secondary school pupils (49 females, 140 males) participated in the study in 2015. They came from two schools based in Greater London: 63 pupils were from Dame Alice Owen's, a semi-selective state school in Potters Bar, and 126 pupils were from Westminster School, an independent boarding and day school within the precincts of Westminster Abbey, which is selective and fee-paying. Both schools are amongst the top performing schools in the UK.

A majority of pupils were British ( $n = 156$ ), often with double nationalities. One hundred and sixty-nine pupils reported having English as a first language (L1), which was often combined with other L1s. Close to a third of participants ( $n = 57$ ) reported growing up with more than one language from birth.

Most participants were studying French as a FL ( $n = 144$ , 68%), while others were studying Spanish ( $n = 21$ ), German ( $n = 15$ ), with smaller numbers studying other FLs.

Participants were also asked about the point they had reached in their FL journey. These included "low

intermediate" ( $n = 22$ ), "intermediate", ( $n = 76$ ), "high intermediate" ( $n = 71$ ), and "advanced" ( $n = 20$ ).

Students compared their own FL performance with that of their peers in their FL class (ranging from "far below average" ( $n = 1$ ), "below average" ( $n = 12$ ), "average" ( $n = 58$ ), "above average" ( $n = 92$ ), and "far above average" ( $n = 26$ ). The categories of "far below average" and "below average" were merged. These values were positively correlated with self-reported results on their last major FL test ( $r(187) = .50, p < .0001$ ). These test scores ranged from 49% to 100%, with a mean of 87.7% ( $SD = 10$ ). In other words, these were excellent FL students.

### 4.3. The instrument

The questionnaire opened with a demographics section from which the above information was retrieved. Following this, participants were asked to respond to an item on their attitude towards their first modern FL (as some pupils learned two FLs simultaneously), on a 5-point Likert scale. Because very few reported "very unfavourable" attitudes, this level was merged with the next level, i.e. "unfavourable" attitudes (2), followed by "neutral" (3), "favourable" (4) and "very favourable" (5) attitudes. Mean score was 3.1 ( $SD = 0.9$ ).

The next question asked about attitudes towards the FL teacher using a 5-point Likert scale (ranging from "very unfavourable" (1), "unfavourable" (2), "neutral" (3), "favourable" (4), to "very favourable" (5) attitudes. Mean score was 4.0 ( $SD = 1.0$ ).

The following question focused on frequency of use of the FL in class by the FL teacher. Answers ranged from "Hardly ever" (1) to "Not very often" (2), "Sometimes" (3), "Usually" (4) and "All the time" (5). Mean score was 3.9 ( $SD = 1.0$ ).

Pupils were then invited to complete 10 items, which were extracted from the FLE questionnaire (Dewaele & MacIntyre, 2014) (see appendix). They were chosen to capture the reliability of the original scale without sacrificing the reliability of the measurement. They included items reflecting the two FLE dimensions: Social FLE and Private FLE (Dewaele & MacIntyre, 2016). They were based on standard 5-point Likert scales with the anchors "Strongly disagree" = 1, "Disagree" = 2, "Neither agree nor disagree" = 3, "Agree" = 4, "Strongly agree" = 5. All items were positively phrased. A scale analysis of the Social FLE and Private FLE scales revealed high internal consistency (Cronbach alpha = 0.81 and 0.78 respectively). Mean score was 4.0 ( $SD = 0.6$ ) for Social FLE and 3.8 ( $SD = 0.7$ ) for Private FLE.

Another 8 items were extracted from the FLCAS and reflected physical symptoms of anxiety, nervousness and lack of confidence (Horwitz, Horwitz & Cope, 1986) (see appendix). They also captured the reliability of the original scale (Dewaele & MacIntyre, 2014). Two FLCA items were phrased to indicate low anxiety and six were phrased to indicate high anxiety. The low anxiety items were reverse-coded so that high scores reflect high anxiety for all items on this measure. A scale analysis of the whole dataset revealed high internal consistency (Cronbach alpha = 0.85). Mean score was 2.4 ( $SD = 0.8$ ).

A final section contained 8 items about the likelihood to start a conversation in the LX in hypothetical scenarios with known and unknown interlocutors in a range of different situations (see appendix).<sup>4</sup> Likert scales had anchors ranging from “Almost never willing” = 1, “Sometimes willing” = 2, “Willing half of the time” = 3, “Usually Willing” = 4, to “Almost always willing” = 5. Internal reliability was good (Cronbach alpha = .80). The mean score was 2.9 ( $SD = 0.6$ ). Although a one-sample Kolmogorov-Smirnov test showed that the distribution was not normal because of slight skew toward the high end of the scale ( $KS Z = .074$ ,  $p < 0.013$ ), a Q-Q plot (quantile-quantile plot) showed a distribution that was close enough to normal (see **Figure 2**). We thus decided to use the more powerful parametric statistics.

The questionnaire was totally anonymous. After the research design and questionnaire obtained ethical approval from the first author’s institution, the headmasters of the two schools were contacted to obtain their approval. Consent was obtained in two stages: parents were contacted by the school to explain that their children would be invited to participate in a survey on affective variables in the FL classroom. They were invited to contact the researchers to obtain extra information. A couple of parents did so, and none opted out of the survey. Next, the parents received an email in which they were asked to invite their child to participate in the study. The pupils’ individual consent was obtained at the start of the survey. The questionnaire was posted online using GoogleDocs.

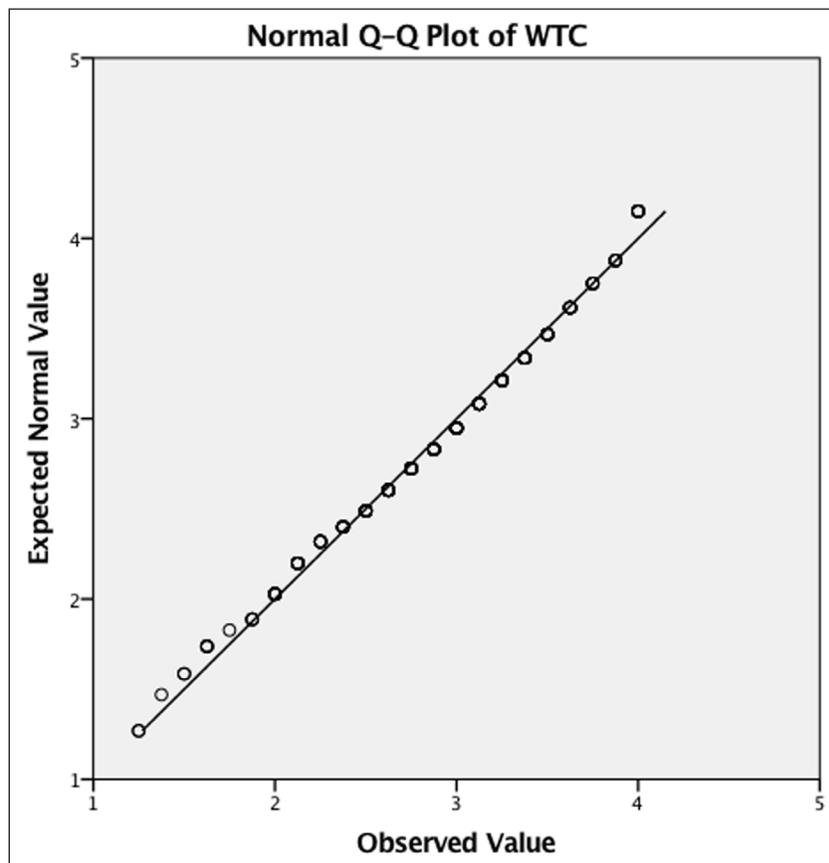
## 5. Results

A preliminary Pearson correlation analysis revealed that 10 out of 11 independent variables were significantly linked to WTC ( $p < .0045$ ) with a Bonferroni correction (see **Table 1**). FLCA was the only variable to be negatively correlated with WTC.

The intercorrelations between the independent variables revealed that none were highly correlated, which means there is no danger of multicollinearity in the regression analysis (see **Table 2**). Green (1991) suggests that the minimum sample size for any regression should be 50, with an additional 8 observations per term. This means the minimum sample size for 10 independent variables is 130, which is well below our sample size of 189.

Multiple regression analysis (enter) was used to test if the independent variables that were significantly correlated with WTC in the correlation analyses (to avoid multicollinearity) significantly predicted WTC. A significant regression equation was found indicating that six variables predicted 42% of the variance (Adjusted  $R^2 = 41.6$ ,  $F(10, 176) = 14.2$ ,  $p < .0001$ ). The strongest predictors were FLCA, language level, attitude towards the FL, Social FLE, teacher’s FL use and age (see **Table 3**). On the other hand, attitude toward the teacher, relative standing in the group and Private FLE were not significant predictors of WTC (see **Table 3**). No evidence of strong multicollinearity was observed ( $VIF < 1.77$ ).

The partial regression plots for the significant predictors are presented below (**Figures 3, 4, 5, 6, 7 and 8**).



**Figure 2:** Normal Q-Q plot of WTC.

**Table 1:** Pearson correlation analyses between independent variables and WTC.

Independent variable	Pearson <i>r</i>	<i>p</i>
Private FLE	.46	.0001
Attitude FL	.45	.0001
Language Level	.45	.0001
FLCA	-.41	.0001
Teacher's FL use	.33	.0001
Social FLE	.30	.0001
Attitude teacher	.29	.0001
Relative standing	.25	.0001
Test results	.24	.001
Age	.24	.001
Number of languages	.20	.006

**Table 3:** Multiple regression analysis with WTC as dependent variable (sorted according to Beta value).

	<i>B</i>	<i>SE</i>	<i>Beta</i>	<i>t</i>	<i>P</i>
FLCA	-.21	.05	-.26	-4.0	.0001
Language level	.17	.05	.23	3.4	.001
Teacher's FL use	.12	.04	.18	2.9	.005
Attitude FL	.11	.05	.18	2.4	.019
Social FLE	.14	.07	.14	1.9	.060
Age	.06	.03	.13	2.4	.018
Private FLE	.07	.08	.08	.86	.390
Attitude teacher	-.01	.04	-.01	-.17	.862
Relative standing	.00	.06	-.01	-.08	.890
Test results	-.01	.01	.00	.00	.990

**Table 2:** Inter-correlations between the independent variables (Pearson *r*).

Variable	2	3	4	5	6	7	8	9	10
1.Age	.07								
2.NumberLangs	1								
3.LangLevel	.16*	1							
4.RelatStanding	.12	.39**	1						
5.TestResults	.13	.30**	.49**	1					
6.AttitudeFL	.08	.29**	.26**	.31**	1				
7.AttitudeTeacher	.14	.15*	.01	.14*	.35**	1			
8.TeacherTLuse	.09	.13	.00	.11	.26**	.32**	1		
9.FLCA	-.19**	-.36**	-.42**	-.29**	-.22**	-.13	-.06	1	
10.PrivateFLE	.11	.26**	.26**	.31**	.55**	.46**	.37**	-.23**	1
11.SocialFLE	.07	.09	.01	.05	.20**	.42**	.18**	-.08	.60**

\*  $p < .05$ , \*\*  $p < .01$ .

An independent t-test was used to answer the second research question on the effect of gender on WTC. No significant difference was found (*Mean* Females = 2.91, *SD* = .69; *Mean* Males = 2.85, *SD* = .62;  $t(187) = -.48$ ,  $p = ns$ ).

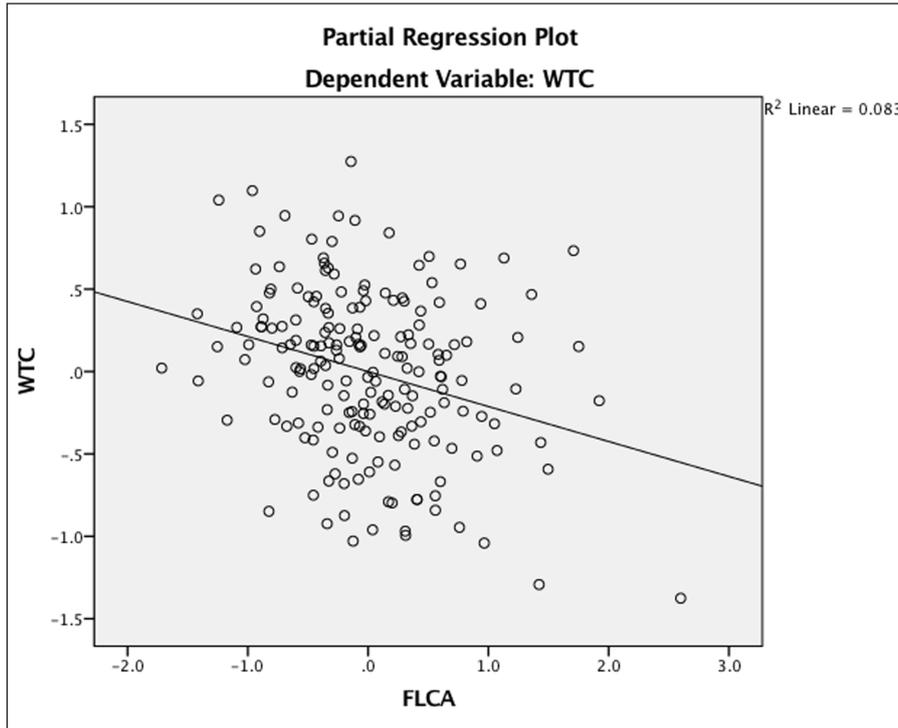
## 6. Discussion

The multiple regression analysis showed that six out of the original ten variables which were significantly correlated with WTC predicted 43% of variance in WTC. The strongest predictor turned out to be FLCA, which dampened WTC, followed by positive effects of the level of mastery of the FL, with more advanced learners having higher levels of WTC. The only teacher-centred variable was the amount of FL use by the teacher, with higher use corresponding with high WTC among pupils. Pupils who had more positive attitudes towards the FL were also much more likely to use it in a range of situations. Social FLE was a marginally significant positive predictor

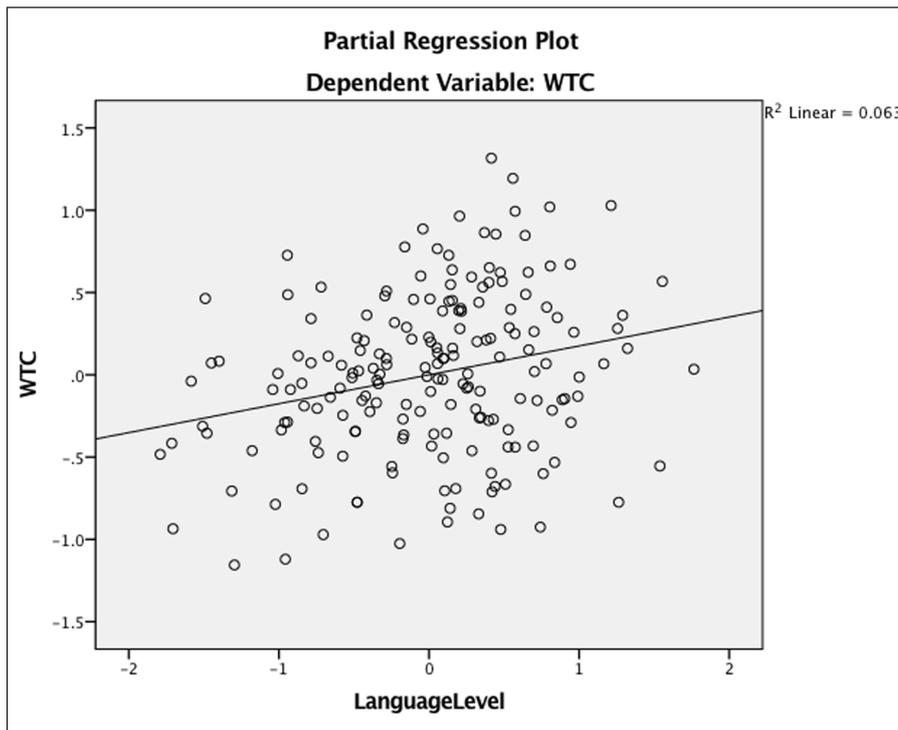
of WTC. Finally, older pupils were more willing to use the FL compared to their younger peers. Private FLE, attitude towards the teacher, test results and relative standing were not significant predictors of WTC.

**Table 4** presents an overview of the findings of the present study comparing them with the papers presented in the literature review.<sup>5</sup>

Recent research has highlighted the role of emotions on WTC (Cao, 2011; Joe et al., 2017; Khajavy et al., 2017; MacIntyre & Doucette, 2010; Peng & Woodrow, 2010). In the current study FLCA was found to have a strong dampening effect on WTC. Highly anxious pupils are less likely to use the FL, as this effect is not compensated by positive emotions. Social FLE, rather than Private FLE, turned out to predict a small amount of variance in WTC. This is not all that surprising, as it suggests that a low-threat positive classroom atmosphere is crucial to get students to talk (Cao, 2011; Dewaele & MacIntyre, 2014;



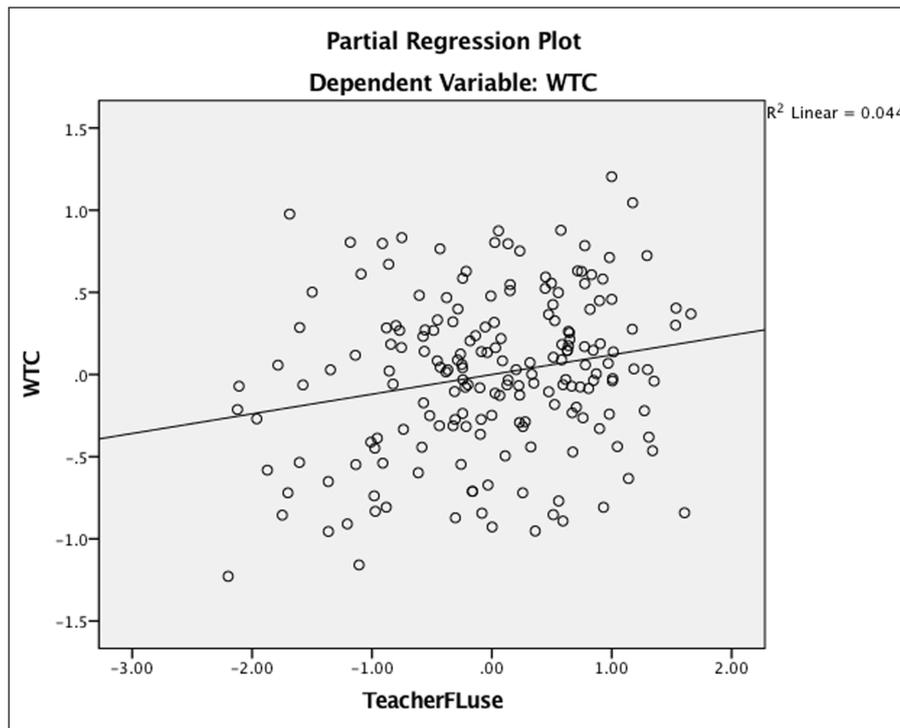
**Figure 3:** Partial regression plot for the effect of FLCA on WTC.



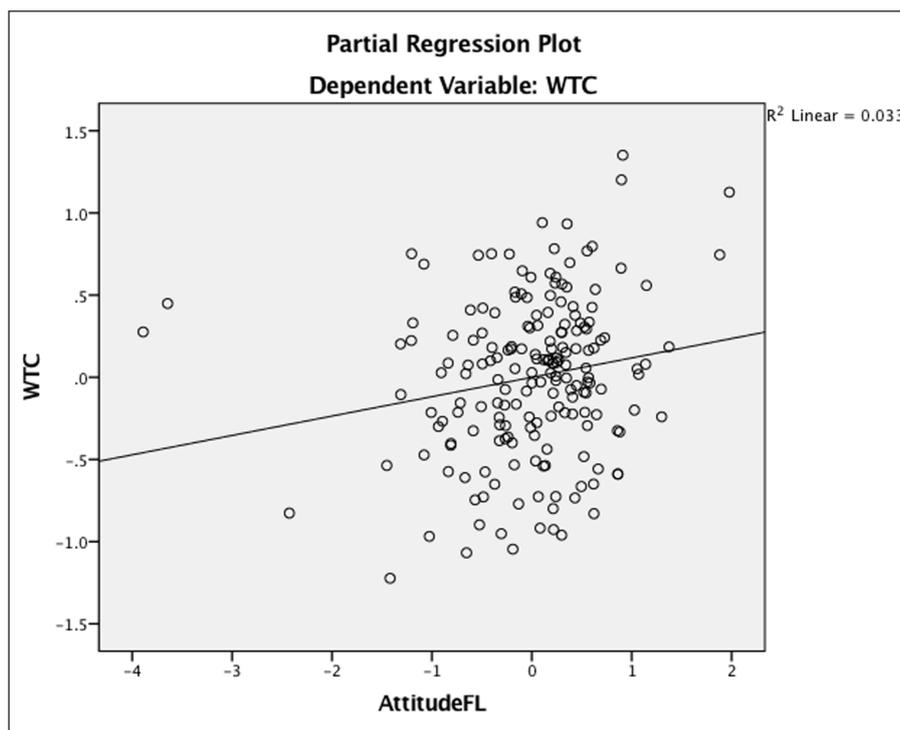
**Figure 4:** Partial regression plot for the effect of Language level on WTC.

Joe et al., 2017; Khajavy et al., 2017; Peng & Woodrow, 2010). Our concept of Social FLE, which refers to a good relationship between peers, is also close to Joe et al.'s (2017) concept of satisfaction of learners' basic psychological needs, including autonomy, competence, and relatedness (concepts which were originally proposed in Deci and Ryan's determination theory (Deci & Ryan, 1985, 2000). The authors explain the relationship between basic

psychological needs and WTC as follows: "(the finding) may be a result of individuals' greater engagement, well-being, and self-endorsement that are precursors to agentically committing oneself to volitional action such as L2 communication" (p. 139). The importance of these psychological needs for WTC also emerged in MacIntyre, Burns and Jessome's (2011) diary study of Canadian learners of French. It is slightly difficult to disentangle



**Figure 5:** Partial regression plot for the effect of Teacher FL use on WTC.



**Figure 6:** Partial regression plot for the effect of Attitude towards the FL level on WTC.

the effect of actual or perceived FL competence from other basic psychological needs. It could be argued that FL competence is not a psychological variable but a linguistic one, with an element of subjectivity in appraisal and having psychological consequences. Indeed, FL competence is highly correlated with low FLCA (see **Table 2**) and higher self-confidence. Students' perceptions of competence affected WTC in Cao (2011),

MacIntyre and Doucette (2010) and Peng and Woodrow (2010), but not in Joe et al. (2017), nor in the current study. Although test results and relative standing in the group were positively correlated with WTC, they failed to explain unique variance.

The level of mastery of the FL turned out to be a significant predictor of WTC. It seems logical that more advanced learners have a wider repertoire and more

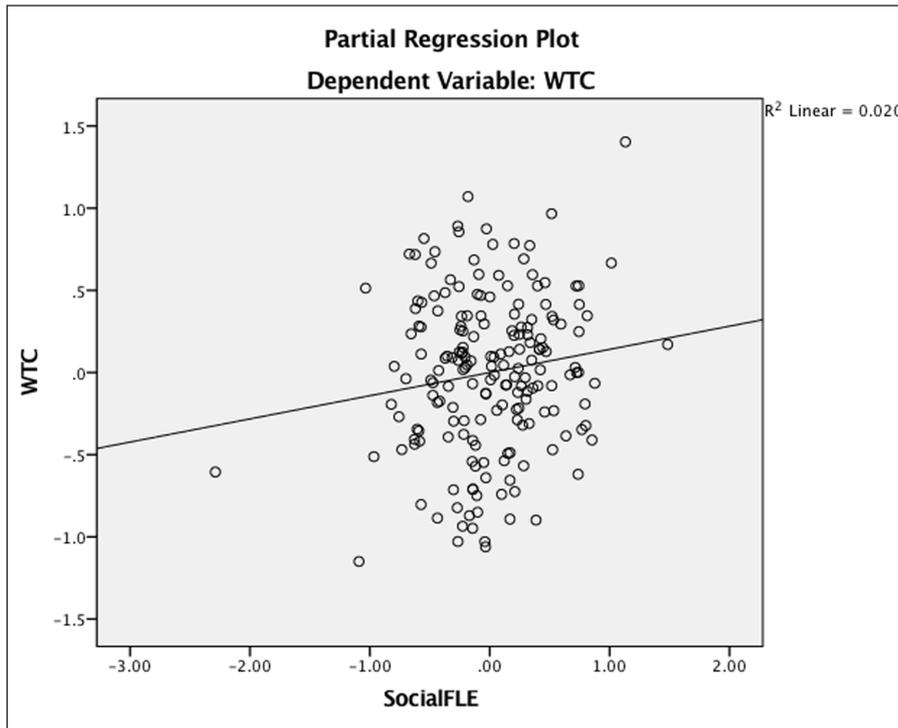


Figure 7: Partial regression plot for the effect of Social FLE on WTC.

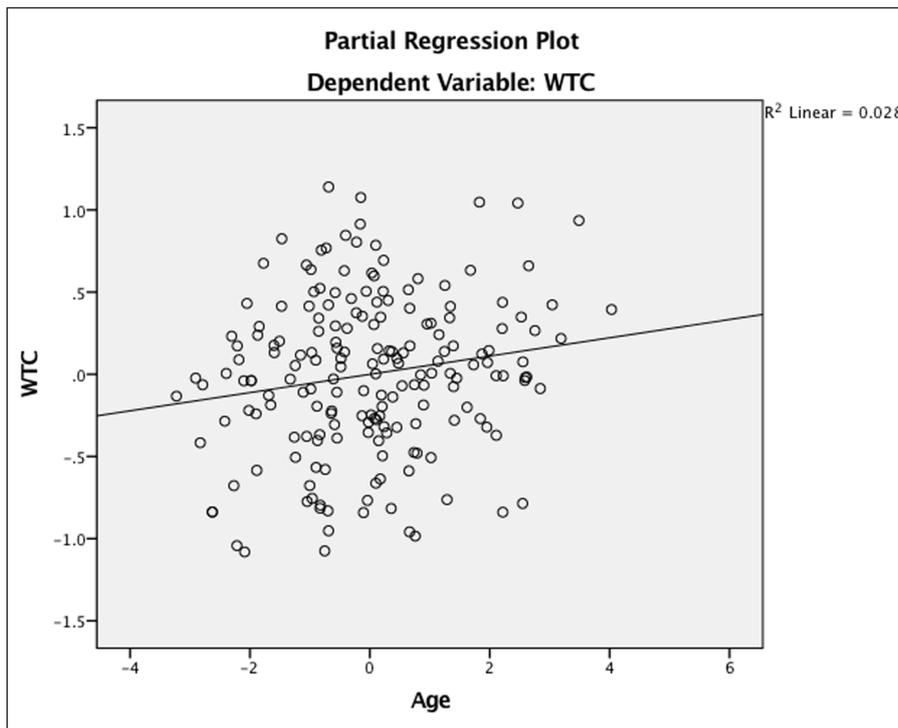


Figure 8: Partial regression plot for the effect of age on WTC.

experience in using the FL, which boosts their self-confidence in their ability to communicate successfully in the FLE. Dewaele and MacIntyre (2014) also found that more advanced FL learners suffered less from FLCA and reported higher levels of FLE.

The effect of teacher actions and behaviour on WTC is integrated in “classroom environment” in Joe et al. (2017), Khajavy et al. (2017), and Peng and Woodrow (2010),

where the strength of the effect varied according to the context. However, the teacher’s frequency of FL use was not included in their research designs. Our study shows that frequent use of the FL by the teacher boosted WTC. In other words, teachers who use the pupils’ L1 in the belief that it could benefit the classroom atmosphere, may in fact limit pupils’ WTC. Teachers’ frequent FL use had also been found to boost FLE without affecting FLCA (Dewaele

**Table 4:** Overview of the effects of independent variables on WTC (positive (+), negative (–) or not significant (ns)).

Independent variable	Present study	PW	MD	C	DYJ	T	KMV	JHA	
Attitude towards FL	+								
Attitude towards teacher	ns				+	ns			
Teacher FL use	+								
Language level	+								
Relative standing	ns								
Perceived competence		+	+	+	+			+	
Actual competence					+	ns		+	
Motivation		+				ns	+	+	
Integrativeness						+			
Learner beliefs		+ indirect							
Classroom environment	+	+			+	ns	+	+	
FLCA	–	–	–	–	–		–		
Social FLE	+	+			+		+	+	
Private FLE	ns				+		+		
Volatility			–						
Age	+								
Gender	ns						+		

PW: Peng & Woodrow (2010); MD: MacIntyre & Doucette (2010); C: Cao (2011); DYJ: Denies, Yashima & Janssen (2015); T: Teimouri (2017); KMV: Khajavy, MacIntyre & Barabadi (2017); JHA: Joe, Hiver and Al-Hoorie (2017).

et al., 2017). Previous research has shown that the way teachers act in class determines their students' WTC (Cao, 2011; Zarrinabadi, 2014).

Surprisingly, a separate item about attitude towards the teacher that was linked to our participants' WTC in the correlation analyses (Table 2) failed to explain unique variance in the regression analysis. In Dewaele et al. (2017) we had found that more positive attitudes towards the teachers were linked with higher levels of FLE.

An interesting finding is undoubtedly the effect of attitude towards the FL on WTC. Recent research has not included this variable, despite it being a cornerstone of social psychological research (Gardner, 1985). This is surprising as MacIntyre et al. (2008) included “intergroup climate” at the bottom of their WTC pyramid (layer 6), with “intergroup attitudes” one level above it. The explanation probably lies in the fact that most of the studies we reviewed had English as the FL, which is no longer closely associated with any particular group. French was the most frequently studied FL in the current study, which is most closely associated with France in the United Kingdom. Attitude towards a FL is not just shaped by the classroom environment but also by the broader societal, political and historical context. Attitudes towards languages are linked to the perception of the group speaking that language (Denies et al., 2015; Gardner, 1985; Mettewie, 2015), and this affects learners' WTC. In the case of French in the UK, French is generally regarded positively. It remains the most frequently studied FL in secondary education in the United Kingdom. As an academic subject it is considered

tough and it is highly recommended to students who wish to go to highly selective universities. France, its citizens and its language have an air of sophistication in love, food, culture, and fashion (Dewaele, 2010). These characteristics of the wider context outside the classroom are important. As Gardner pointed out: “students' attitudes towards the specific language group are bound to influence how successful they will be in incorporating aspects of that language” (1985, p. 6).

The final comments concern the effect of sociobiographical variables. The fact that older pupils scored higher on WTC could be linked to the finding in the same database that older learners experienced more FLE, which in turn predicts WTC (Dewaele et al., 2017). Dewaele and MacIntyre (2014) and Dewaele et al. (2016) had also found a positive link between age and FLE. The age variable is inextricably linked to pupils' language level in the current study, as the positive correlation in Table 2 shows. In other words, older pupils, who are typically more advanced in their FL, are more likely to be willing to communicate. Gender, on the other hand, had no effect on WTC in our study. This is in contrast with Joe et al. (2017), where female learners scored higher on WTC. The lack of a gender effect is also slightly surprising considering that female pupils were found to experience significantly more FLE and only slightly more FLCA than male peers (Dewaele et al., 2017), which are predictors of WTC. Finally, pupils' multilingualism was positively related to WTC in the correlation analysis (Table 2), but it failed to explain unique variance in the regression

analysis. Dewaele and MacIntyre (2014) had reported a positive relationship between number of languages known and FLE, though no such effect had been found in Dewaele et al. (2017), possibly because the cohort was highly multilingual (an average of 4 languages).

Research on WTC is motivated by a desire to understand its complexity, in order to offer teachers ways to bolster it. The pedagogical implications of the present study are that FL teachers need to help learners overcome their anxiety. One key way to achieve this is by creating a positive emotional classroom climate, where the teacher uses the FL and creates an interest in the language and culture, and where pupils feel they are valued members of a community with a similar goal.

We are perfectly aware of the limitations of the present study. The first limitation is linked to self-selection. Only a fraction of pupils in both schools filled out the questionnaire. This may have been caused by a lack of interest from the parents, or by pupils who did not feel strongly enough about their FL classes to spend time on a detailed questionnaire about their FL classroom experiences. The upside is that volunteers provide better quality data (Wilson & Dewaele, 2010); the downside is that we cannot claim that our participants constitute a representative sample of the FL learners in these two schools, let alone in British secondary education. Finally, we need to be cautious in interpreting the findings, whose theoretical underpinning was developed primarily in the Canadian context. British FL learners' WTC may be less influenced by intergroup relationships, as the number of French, German and Spanish speakers are small enough not to represent any perceived threat at group level. However, EFL learners in countries where the English-speaking world is viewed with a degree of suspicion might be more strongly influenced by the bottom layer of the WTC pyramid.

## 7. Conclusion

We started the paper with the metaphor of the FL learner on the verge of using the FL as a swimmer about to enter the water. In both cases the decision reflects a volitional act and is preceded by a quick but complex computation of the individual's skills and the immediate and wider context. There are obvious limits to the metaphor, as the swimmer could face drowning while the FL user could at most experience social embarrassment for not being able to communicate clearly. The finding that FLCA dampens WTC, and that social FLE does not quite have the equivalent lifting power, fits with most previous research findings and highlights the crucial importance of creating an inclusive, positive classroom atmosphere (Dewaele & Li, 2018). Original findings of the study are that teachers' frequent use of the FL encourages pupils to follow suit and that pupils' attitude towards the FL predicted WTC. This is particularly important because in recent research on WTC this macro intergroup dimension has been left out of research designs. The pedagogical implication is that awakening FL learners' genuine interest in the FL culture and language – through actual use – is the best way to get them use the FL. Finally, older and more advanced learners have higher levels of WTC, which means that

younger, less advanced pupils need more gentle coaching and encouragement to find their voice in the FL. Finally, we would like to encourage researchers to focus on the acquisition of FLs other than English.

## Notes

- <sup>1</sup> The distinction learner-internal versus learner-external is not categorical but reflects a continuum with learner-internal variables at one end, a combination of learner internal and learner external factors in the middle, and purely learner-external factors at the other end (Dewaele, 2009).
- <sup>2</sup> The same group of participants whose data on FLE and FLCA were used in Dewaele, et al. (2017) and Dewaele and Dewaele (2017).
- <sup>3</sup> The WTC pyramid model was developed in the Canadian context where ethnicity or intergroup relations have an important meaning. This is not necessarily applicable to contexts where there is no fear of assimilation to the target language culture. The bottom layer of the pyramid may therefore exert much less influence in contexts where the TL group is not perceived as a threat, as is the case for French in the UK.
- <sup>4</sup> Provided by P. D. MacIntyre.
- <sup>5</sup> This can at best be a rough approximation as researchers used uniquely defined concepts that sometimes partly overlap with concepts used in other studies.

## Additional File

The Additional file for this article can be found as follows:

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## Competing Interests



[[COMPETING INTEREST STATEMENT TO BE PROVIDED]]

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