

The effects of executive WM, phonological WM, and foreign language anxiety on grammatical gender agreement in L2 French

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To explain the variability observed between second language (L2) learners of similar proficiencies, individual differences, including working memory (WM), and foreign language anxiety (FLA), are often cited. To date, previous research has examined each of these variables separately, but has not considered the possible interaction between them. Since FLA may block attention, thus diminishing WM capacity (MacIntyre & Gardner, 1994), the relationship between these two variables is of interest. The current study examines the effects of FLA and phonological and executive WM on grammatical gender agreement accuracy in L2 French.

Thirty Anglophone intermediate French learners will complete a spot the difference task where noun-adjective agreement accuracy is measured for 14 target adjectives with phonologically distinct masculine and feminine forms (e.g., sérieux-_M [sɛʁijø]/sérieuse-_F [sɛʁijœz] ‘serious’). The researcher uses one of three syntactic structures with a phonologically ambiguous adjective, prompting the participant to use the target adjectives with the same structure (1-3, below), thus modifying the distance between nouns and agreeing adjectives.

- (1) Adjective in NP: [Une histoire sérieuse]_{NP}
‘A serious story’
- (2) Adjective in VP: [L’histoire]_{NP} [est sérieuse]_{VP}
‘The story is serious’
- (3) Adjective in CP: [Une histoire]_{NP} [qui est sérieuse]_{CP}
‘A story that is serious’

FLA will be measured via the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz & Cope, 1986), while executive and phonological WM will be measured via a sentence span task (e.g., Waters, Caplan & Hildebrandt, 1987) and nonce word repetition task (Gathercole, Willis, Baddeley, & Emslie, 1994), respectively. Participants will also complete a general proficiency test and gender assignment. Both components are hypothesized to correlate significantly with gender agreement accuracy, as has been found in previous research (e.g., Martin & Ellis, 2012). Specifically, significant positive correlations are predicted between WM and agreement accuracy with complementizer phrase adjectives (as in 3, above), as has been found by previous studies examining sensitivity to gender agreement errors in L2 comprehension studies (e.g., Sagarra & Herschensohn, 2010). Finally, if FLA is in fact capable of interfering with WM capacity during L2 production, we should see a significant interaction between these variables and agreement accuracy. If, however, FLA only affects L2 production at a more global level, rather than affecting specific grammatical constructions, than no such interaction should be found.

Pilot results from 15 participants showed that learners were significantly more accurate with NP adjective agreement (as in 1,) than with CP agreement (as in 3), and that proficiency (as measured via the X-Lex French vocabulary test [Meara & Milton,

2003]) and executive WM were significantly correlated with overall gender agreement (i.e., agreement across all three syntactic structures in 1-3 above), while FLA was not.

Works Cited

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