

Supplementary Materials

Appendix SA

Table SA.1

Correlations between variables in the dominant and nondominant language and MINT scores, for English-dominant participants of Experiment 1 (n = 36). Participant information is listed in Table 1.

	MINT (D)	MINT (ND)	Self-rated proficiency (D)	Self-rated proficiency (ND)	Percent current use (ND)	MINT Index	Years in country (ND)	Age at MINT
MINT (ND)	-0.08							
Self-rated proficiency (D)	0.22	0.29						
Self-rated proficiency (ND)	-0.06	0.79***	0.47**					
Percent current use (ND)	-0.48**	0.37*	0.06	0.40*				
MINT Index	-0.25	0.98***	0.27	0.78***	0.45**			
Immersion years (ND)	0.09	0.49**	0.17	0.49**	0.27	0.45**		
Age at MINT	-0.31	0.20	0.03	0.22	0.20	0.25	0.13	
Education (yrs)	0.35*	0.16	0.44**	0.34*	-0.21	0.10	0.32	-0.07

Note: Values in italics are circular.

Table SA.2

Correlations between variables in the dominant and nondominant language and MINT scores, for Spanish-dominant participants of Experiment 1 (n = 32). Participant information is listed in Table 1.

	MINT (D)	MINT (ND)	Self-rated proficiency (D)	Self-rated proficiency (ND)	Percent current use (ND)	MINT Index	Years in country (ND)	Age at MINT
MINT (ND)	0.24							
Self-rated proficiency (D)	0.20	0.18						
Self-rated proficiency (ND)	0.08	0.74***	0.32					
Percent current use (ND)	-0.05	0.61***	-0.02	0.69***				
MINT Index	<i>0.06</i>	<i>0.98***</i>	0.16	0.75***	0.64***			
Immersion years (ND)	-0.44*	0.44*	-0.14	0.21	0.23	0.53**		
Age at MINT	-0.41*	-0.30	-0.17	-0.32	-0.31	-0.24	0.47**	
Education (yrs)	0.28	0.43*	0.28	0.61***	0.58***	0.38*	-0.28	-0.46**

Note: Values in italics are circular.

Appendix SB – Experiment 1

Table SB.1a.

Nondominant language naming accuracy predicted jointly from self-rated proficiency, years immersed and percent current use of the nondominant language.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.28	(0.46)	4.94	< .001
Self-Rated Proficiency	1.14	(0.15)	7.48	<.001
Immersion	0.02	(0.01)	3.01	.003
Percent use	0.03	(0.01)	1.38	.17

Note. Model: Nondominant correct ~ Self-Rated Proficiency + Immersion + Percent use + (1 | Participant) + (1+ Self-Rated Proficiency + Immersion + Percent use|Item)

Table SB.1b.

Nondominant language naming accuracy predicted jointly from self-rated proficiency and percent current use of the nondominant language, in bilinguals with no immersion experience.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	0.34	(0.52)	0.66	.51
Self-Rated Proficiency	0.95	(0.36)	2.60	.009
Percent use	0.02	(0.04)	0.57	.57

Note. Model: Nondominant correct ~ Self-Rated Proficiency + Percent use + (1 | Participant) + (1|Item)

Table SB.2.

Nondominant language naming accuracy predicted from self-rated proficiency, dominance group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.02	(0.43)	4.66	<.001
Self-Rated Proficiency	1.24	(0.13)	9.16	<.001
Dominance Group	-1.07	(0.40)	-2.67	.008
Self-Rated Proficiency: Dominance Group	0.17	(0.27)	0.62	.54

Note. Model: Nondominant correct ~ Self-Rated Proficiency * Dominance Group + (1 | Participant) + (1+ Self-Rated Proficiency:Dominance Group |Item)

Table SB.3.

Nondominant language naming accuracy predicted from immersion, dominance group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	3.28	(0.73)	4.48	<.001
Immersion	0.14	(0.04)	3.88	<.001
Dominance Group	4.15	(1.25)	3.31	<.001
Immersion: Dominance Group	0.17	(0.07)	2.37	.02

Note. Model: Nondominant correct ~ Immersion * Dominance Group + (1 | Participant) + (1+ Immersion:Dominance Group |Item)

Table SB.4.

Nondominant language naming accuracy predicted from immersion, dominance group, and their interaction, in bilinguals with 12 or more years of education.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	3.26	(0.68)	4.81	<.001
Immersion	0.14	(0.04)	4.06	<.001
Dominance Group	2.48	(1.09)	2.28	.02
Immersion: Dominance Group	0.16	(0.07)	2.11	.03

Note. Model: Nondominant correct ~ Immersion * Dominance Group + (1 | Participant) + (1+ Immersion:Dominance Group |Item)

Table SB.5.

Nondominant language naming accuracy predicted from percent use, dominance group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	1.98	(0.47)	4.26	<.001
Percent use	0.07	(0.02)	4.25	<.001
Dominance Group	0.40	(0.56)	0.72	.47
Percent use: Dominance Group	-0.02	(0.03)	-0.67	.50

Note. Model: Nondominant correct ~ Percent use * Dominance Group + (1 | Participant) + (1+ Percent use:Dominance Group |Item)

Appendix SC

Table SC.1

Correlations between variables in the dominant and nondominant language and MINT scores, for older adults in Experiment 2, collapsed across dominance groups (n = 41). Participant information is listed in Table 2.

	MINT (D)	MINT (ND)	Self-rated proficiency (D)	Self-rated proficiency (ND)	Percent current use (ND)	MINT Index	Years in country (ND)	Age at MINT
MINT (ND)	-0.16							
Self-rated proficiency (D)	0.06	0.11						
Self-rated proficiency (ND)	-0.15	0.52***	0.36*					
Percent current use (ND)	-0.55***	0.41**	-0.06	0.36*				
MINT Index	-0.45**	0.95***	0.09	0.53***	0.54***			
Immersion years (ND)	-0.41**	0.56***	0.09	0.19	0.52***	0.63***		
Age at MINT	-0.26	0.02	0.00	0.00	-0.06	0.10	0.12	
Education (yrs)	0.28	0.18	0.25	0.46**	0.05	0.08	-0.13	-0.18

Note: Values in italics are circular

Table SC.2

Correlations between variables in the dominant and nondominant language and MINT scores, for younger adults in Experiment 2, collapsed across dominance groups (n = 82). Participant information is listed in Table 2.

	MINT (D)	MINT (ND)	Self-rated proficiency (D)	Self-rated proficiency (ND)	Percent current use (ND)	MINT Index	Years in country (ND)	Age at MINT
MINT (ND)	<i>-0.32**</i>							
Self-rated proficiency (D)	<i>0.29**</i>	<i>-0.15</i>						
Self-rated proficiency (ND)	<i>-0.06</i>	<i>0.39***</i>	<i>0.37***</i>					
Percent current use (ND)	<i>-0.59***</i>	<i>0.45***</i>	<i>-0.04</i>	<i>0.22*</i>				
MINT Index	<i>-0.72***</i>	<i>0.88***</i>	<i>-0.25*</i>	<i>0.29**</i>	<i>0.63***</i>			
Immersion years (ND)	<i>-0.68***</i>	<i>0.50***</i>	<i>-0.14</i>	<i>0.10</i>	<i>0.59***</i>	<i>0.70***</i>		
Age at MINT	<i>0.16</i>	<i>0.23*</i>	<i>0.24*</i>	<i>0.22</i>	<i>0.07</i>	<i>0.09</i>	<i>0.03</i>	
Education (yrs)	<i>0.01</i>	<i>0.23*</i>	<i>0.21</i>	<i>0.36***</i>	<i>0.08</i>	<i>0.14</i>	<i>0.08</i>	<i>0.73***</i>

Note: Values in italics are circular.

Appendix SD – Experiment 2

Table SD.1.

Nondominant language naming accuracy predicted jointly from self-rated proficiency, years immersed and percent current use of the nondominant language.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.78	(0.44)	6.40	<.001
Self-Rated Proficiency	0.65	(0.14)	4.61	<.001
Immersion	0.05	(0.01)	5.01	<.001
Percent use	0.02	(0.01)	2.84	.004

Note. Model: Nondominant correct ~ Self-Rated Proficiency + Immersion + Percent use + (1 | Participant) + (1+ Self-Rated Proficiency + Immersion + Percent use || Item)

Table SD.2.

Nondominant language naming accuracy predicted from self-rated proficiency, age group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.74	(0.43)	6.32	<.001
Self-Rated Proficiency	0.85	(0.16)	5.33	<.001
Age Group	-0.48	(0.31)	-1.56	.12
Self-Rated Proficiency: Age Group	0.02	(0.33)	0.07	.94

Note. Model: Nondominant correct ~ Self-Rated Proficiency * Age Group + (1 | Participant) + (1+ Self-Rated Proficiency:Age Group |Item)

Table SD.3.

Nondominant language naming accuracy predicted from immersion, age group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.76	(0.43)	6.49	<.001
Immersion	0.10	(0.01)	7.40	<.001
Age Group	1.00	(0.30)	3.36	<.001
Immersion: Age Group	0.08	(0.03)	2.61	.01

Note. Model: Nondominant correct ~ Immersion * Age Group + (1 | Participant) + (1+ Immersion: Age Group |Item)

Figure SA. Experiment 2 - Predicted proportion correct on MINT accuracy in the nondominant language by the number of years immersed in the nondominant language, across age groups but collapsing across language dominance (note that the apparent interaction is spurious; see Figure 4). Raw and predicted data are superimposed; grey ribbons to show standard error.

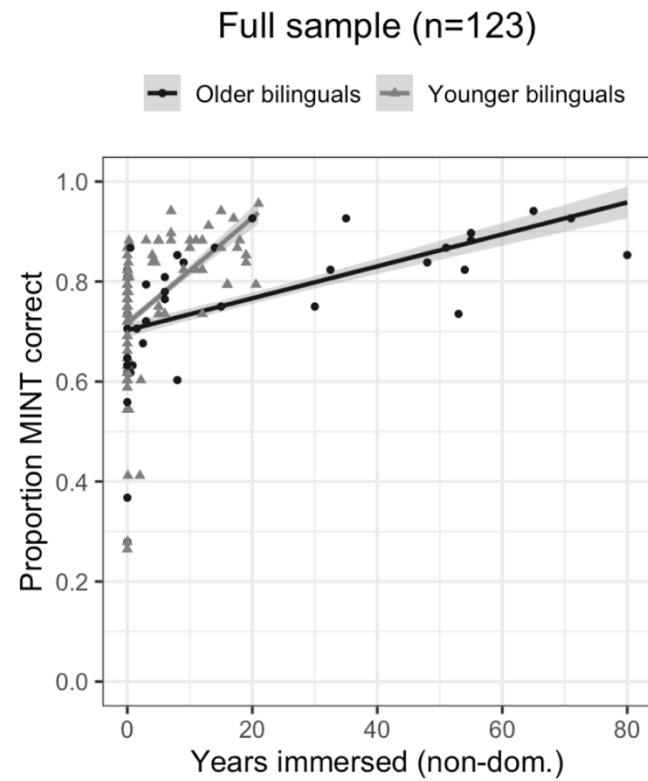


Table SD.3a.

Nondominant language naming accuracy predicted from immersion, age group, and their interaction, in English-dominant bilinguals only.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.26	(0.45)	5.01	<.001
Immersion	0.20	(0.04)	4.61	<.001
Age Group	0.89	(0.39)	2.26	.02
Immersion: Age Group	0.12	(0.09)	1.41	.16

Note. Model: Nondominant correct ~ Immersion * Age Group + (1 | Participant) + (1+ Immersion*Age Group |Item)

Table SD.3b.

Nondominant language naming accuracy predicted from immersion, age group, and their interaction, in Spanish-dominant bilinguals only.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	10.62	(1.82)	5.83	<.001
Immersion	0.05	(0.04)	1.35	.18
Age Group	1.84	(1.38)	1.33	.18
Immersion: Age Group	0.16	(0.12)	1.38	.17

Note. Model: Nondominant correct ~ Immersion * Age Group + (1 | Participant) + (1+ Immersion:Age Group |Item)

Table SD.4.

Nondominant language naming accuracy predicted from percent use, age group, and their interaction.

	Accuracy			
	<i>b</i>	<i>(SE)</i>	<i>z</i>	<i>p-value</i>
Intercept	2.67	(0.43)	6.21	<.001
Percent use	0.04	(0.01)	5.48	<.001
Age Group	-0.07	(0.29)	-0.25	.81
Percent use: Age Group	0.002	(0.02)	0.14	.89

Note. Model: Nondominant correct ~ Percent use * Age Group + (1 | Participant) + (1+ Percent use:Age Group |Item)