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Assessing the impact of the syllabary approach on German literacy gains for Tigrinya non-Roman alphabet literate learners

Santi Guerrero Calle

This article presents the preliminary results of a research project on the acquisition of literacy by non-Roman alphabet literate refugees in the German-speaking part of Switzerland. It addresses the written production (dictation) of 39 Eritrean participants whose mother tongue is Tigrinya. The results indicate that the syllabary approach could have a positive influence on learning success during literacy acquisition and for the standardized A1-level test but not on subsequent language lessons at A1 level. The findings also demonstrate a highly significant negative influence on the variable of the institution, suggesting that this variable should receive more attention in studies.

Keywords: syllabary approach, adult L2 literacy, Tigrinya, non-Roman alphabet literates, dictation.

1. Introduction

The problem of illiteracy was first addressed in industrialized countries during the 1970s. Although there has been significant research on this topic since, there is still no universal definition of the term "illiteracy" or of other related categories (cf. Löffler and Korfkamp 2016: 9). Although non-Roman alphabet literates[1] cannot be included in the illiteracy category because, unlike non-literates, they are at least semi-literate[2] in one language, they are nevertheless enrolled in the same literacy courses as non-literates in the German-speaking part of Switzerland. The aim of such literacy courses is to

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[1] "Learners are literate in a language written in a non-Roman alphabet" (Burt and Peyton 2003 5) or German second language learners (literate) (cf. Acevedo et al. 2016: 5).
[2] In German-speaking countries, semi-literate refers to persons who have written language skills but do not meet the minimum social requirements (e.g., filling out a form) (cf. Abraham and Linde 2009 92).

impart basic knowledge in reading and writing (cf. Hammann et al. 2013: 25), with the intention of starting a level A1 (Council of Europe 2018) course afterwards. Thus, non-Roman alphabet literates often attend a literacy course because they possess inadequate reading and writing skills in German or in another Roman alphabet language, which is why they cannot start an A1-level course directly. The extent to which a learner is semi-literate or not is often difficult to determine in practice because the particular social benchmark and thus the minimum requirements must be known, as well as the respective mother tongues and writing systems (cf. Tröster and Schrader 2016: 44-45). As such, it is difficult in practice to classify participants as semi-literate, since examiners seldom master the languages of origin. This is also often the case with non-Roman alphabet literates; the characteristic of these learners is usually linked to the number of school years. For example, non-Roman alphabet literates in Germany must have several years of school education and/or vocational school qualifications (cf. BAMF – Bundesamt für Migration und Flüchtlinge 2018: 10).

Conversely, in English-speaking countries, on the other hand, non-Roman alphabet literates with less than 10 years of education or a disrupted education are classified with literacy needs because they often require support in developing strategies and skills normally acquired through formal education (Acevedo et al. 2016: 5). The determination of non-Roman alphabet literates is measured by school years, rather than by literacy skills in L1[3], because this can be assessed by anybody, even those without mastery of the language of origin. Nevertheless, literacy screening devices, which are available in the participants' languages of origin, are often evaluated by people with insufficient or even no knowledge of the target language, as in the case of the Native Language Literacy Screening Device (cf. New York State Education Department 1999).

Identifying non-Roman alphabet learners by their schooling experience, is problematic in so far as school alone does not guarantee successful learning (cf. Feldmeier 2010: 21-22) and the education

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[3] L1 is used singularly in this article because it captures the dominant language of the participants (cf. Oksaar 2003: 16). This means that they were required to fill in the questionnaire in their dominant written language.

system of the country of origin is, in many cases, poorly recorded. For example, it may well be that a person has several years of school experience but is unable to use this profitably in class (cf. Feldmeier 2010: 20-21) or that a person has no school education and is nevertheless able to read and write at a high level. In contrast to non-literates, non-Roman alphabet literates have knowledge and skills in a written language: they know what a word is, often understand how words are synthesized and recognize rhymes (cf. Feldmeier 2010: 20). This last point is categorized under phonological awareness and is of great importance for learning an alphabetical writing system.

In the theory of adult illiteracy, scholars agree that the L1 of the participant has a positive influence on second language acquisition; a positive transfer takes place. Spruck Wrigley (2008), for example, stresses the decisive advantage of non-Roman alphabet literates over non-literates, since they can read and write in a language and thus often decode words more quickly, which leads to a shorter learning period, especially for reading (cf. Spruck Wrigley 2008: 3).

In contrast, most authors agree that the process of acquiring writing skills in a second language is slower than that of reading (cf. Tranza and Sunderland 2009: 22). Especially since components from the first language, such as grammatical patterns that differ from those in the second language, are often erroneously transferred one-to-one into the second language. Accordingly, non-Roman alphabet literates often experience difficulties in spelling acquisition (cf. Cook 2005: 427; Spruck Wrigley 2008: 3).

Although there are a number of studies on first and second language acquisition, which mostly use students, there are considerable gaps in the research on second language acquisition by refugees with or without an educational background. In the words of Gillespie (2001: 91), "To date, we know relatively little about how the development of writing ability in adult literacy learners compared with that of young children or of basic writers at the college level". There are few studies in this area as of yet (cf. Rackwitz 2016: 51)[4].

The results of this article are part of the researcher's dissertation on literacy acquisition in non-Roman alphabet literates (Guerrero

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[4] The following studies are worth mentioning here: Kurvers (2015); Kurvers, Vallen and Hout (2006).

Calle 2020). The aim of the dissertation is to assess whether or not it is possible for non-Roman alphabet literates to achieve an A1-level after 300 course lessons, as proposed by the German curriculum for non-Roman alphabet literates (cf. BAMF – Bundesamt für Migration und Flüchtlinge 2018). While the dissertation analyzes spoken language, listening comprehension, written production, oral reading fluency and non-words, this article focuses on the participants' written production and presents data from the evaluation of written dictation tests at three measurement points.

The participants in the dissertation research have a variety of ethnic backgrounds and first languages; the present study focuses on participants from Eritrea whose first language is Tigrinya. This group both represents the majority within the whole participant group and is generally overlooked in current research.

2. Syllabary approach in German

In the German language, syllables are key for the pronunciation of words and helpful for explaining regularities in spelling. Recognizing the syllabary structure of words is as important for adults' natural flow of speech as for that of children. This point of view obviates an oft-raised disadvantage of the syllabary approach: the avoidance of synthesis at the sound level. According to this argument, learners must first master synthesizing at the sound level so that they can read words consisting of complex syllables (cf. Feldmeier 2010: 63). Linguists, however, are not confident that this argument is logical because the syllable is decisive for, among other things, spelling (cf. Schründer-Lenzen 2013: 33). Despite these considerations, the syllabary approach has a firm position in the most common German literacy textbooks.

The syllabary approach has been used for some time in the field of German adult literacy (cf. e.g., Feick and Schramm 2016: 220) and was adapted from primary school teaching methods, such as the initial approach to reading and early promotion of reading and spelling (cf. Rokitzki, Nestler and Sokolowsky 2013: 98). The syllabary approach was first applied to adult learners by the educator Paulo Freire in the 1960s, whose focus was on impoverished adult populations in Brazil

(for more information, see Boulanger 2001; Spener 1990). However, to what extent a German syllabary approach can be based upon this precedent is questionable since, among other things, consonant clusters are less represented in Portuguese than in German (cf. Albert, et al. 2015: 46-47).

The syllabary approach belongs to the category of analytical-synthetic methods[5], which take various word components as a starting point (cf. Feick and Schramm 2016: 219). As the name suggests, the syllabary approach works with syllables. The aim of the approach is to combine spoken and written language and simultaneously train auditory and visual perception, which are needed to automate reading and writing in the literacy process. Using a syllabary approach can simplify the process of word recognition during reading and convey writing construction principles by making learners aware of regularities right from the start (cf. Mayer 2016: 19). In contrast to other synthetic methods, the immediate contraction of consonant and vowel is practiced (cf. Rokitzki et al. 2013: 98-99). This leads to a more fluent reading process (cf. Albert et al. 2015: 47). To this end, a distinction between three levels can be applied to literacy classes, in which the next level can be started after confident mastery of the current level:

1. The elementary level introduces words without consonant clusters (e.g., Tomate [English tomato]). The class should focus on phonetically accurate vowels, diphthongs and umlauts to simplify hearing and speaking. More difficult consonants (e.g., <z>) are then added. The goal of this level is to become proficient in phonetically accurate writing and start reading simple texts.
2. At the next level, syllables with consonant clusters (e.g., Frage [English question]) are introduced.
3. In the final stage, which presupposes reliable syllabic division, words with certain orthographic regularities (e.g., Liebe [English love]) and exceptions can be thematized (cf. Rokitzki et al. 2013: 99-102).

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[5] A general distinction is made between three methods: synthetic methods, analytical-synthetic methods and analytical methods (cf. Feick and Schramm 2016: 219).

Auditory and visual perception can be trained by rhythmic speaking, syllable swinging, syllable clapping or syllable walking. This gives learners confidence in their syllable segmentation on a physical level. This can, in turn, help them to master clearer articulation (cf. Albert et al. 2015: 48-49).

2.1. Syllabary approach research overview

In their project *Alphamar,* Albert et al. (2015) investigated the syllabary method with non-literates and non-Roman alphabet literates. They proved that the syllabary approach has a positive effect on learning among non-Roman alphabet literates. The syllabary approach after the Montessori approach and the contrastive use of the mother tongue resulted in a positive increase in learning with a group of 12 participants. The syllabary approach also had the highest average learning success of all of the learning methods in the study, with learning progress in 10 of 12 competencies. Only the writing accuracy and the completion of structural schemes showed negative learning progress (cf. Albert et al. 2015: 100-117). However, due to the rather small sample size and the unclear allocation of learners to illiterate and non-Roman alphabet literate or semi-literate learner groups, these results should be viewed with caution.

The present project aims to build upon and enhance the work of Albert et al. (2015), using a larger sample and more methodical allocation of learners to groups.

1. Tigrinya

Martin (2015) proposes a taxonomy of written scripts into five categories: alphabet, abugida, abjad, syllabary and morphosyllabary (cf. Martin 2015: 15). Tigrinya script can be classified as abugida because the writing system combines features of alphabets and syllabaries (cf. Bhide et al. 2014: 74).

Tigrinya uses an alphasyllabic script with Ge'ez symbols (cf. Piper and van Ginkel 2017: 38). Tigrinya includes five full (a, e, i, o,

u) and two central (ə, ä) vowels and has a rich consonant system (cf. Weninger 2011: 1155).

	front	central	back
close	i(:)		u(:)
half-closed	e(:)	ə	o(:)
half-opened		ä	
open		a(:)	

Table 1. Vowels in Tigrinya (Weninger 2011: 1155)

	fricative voiceless	voiceless	occlusive/affricate glottalized	voiced	fricative voiced
labial	f	[p]	ṗ [p']	b [b, ß]	[v]
dental		t	ṭ [t']	d	
alveolar	s		ṣ [ᵗs']	z	
palatalized	š	č	č [ᵗš']	ǧ	[ž]
velar		k [k, X]	ḳ (q) [k', X']	g	
labiovelar		kʷ [kʷ, Xʷ]	ḳʷ (qʷ) [kʷ', Xʷ']	gʷ	
pharyngeal	ħ [ḥ]				ʿ (')
glottal	h		ʾ (')		

Table 2. Consonants in Tigrinya (Weninger 2011: 1154).

Tigrinya contains a total of 248 symbols (cf. Piper and van Ginkel 2017: 38) and has a simple phonological structure that "allow[s] vowel (V), consonant-V (CV) and CVC combinations of syllables, with clusters of consonants broken up with the insertion of a vowel to conform to the CV and CVC syllable structure" (Asfaha, Kurvers and Kroon 2009: 711).

Tigrinya is spoken by about 12 million people; half are from Ethiopia and almost as many are from Eritrea (cf. Addis Ababa University 2019). As indicated in Table 3, half of the Eritrean population speaks Tigrinya as their mother tongue and more than 80% can communicate in Tigrinya (cf. Bereketeab 2010: 178). A total of nine native languages that represent three language families (Semitic, Cushitic, Nilo-Saharan) (cf. Asfaha, Kurvers and Kroon 2008: 225)

are spoken in Eritrea, and three different writing systems (Latin, Arabic, Ge'ez) are used.
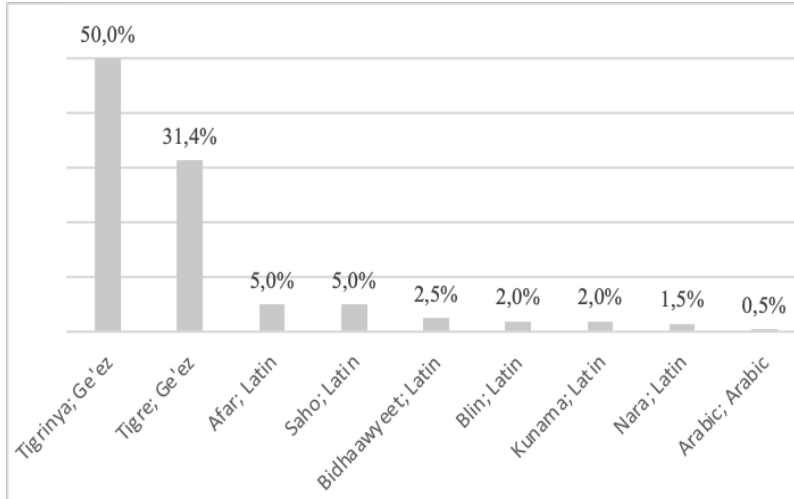

Table 3. Languages and writing scripts in Eritrea
(cf. Asfaha et al. 2008: 224-225; Bereketeab 2010: 158).

Tigrinya, Arabic and Amharic are the largest Semitic languages (cf. Weninger 2011: 1153) and are written with the Ge'ez writing system (cf. Asfaha et al. 2008: 225).

2. German

The German writing system can be categorized by its alphabet, which features a syllabary structure and is characterized by phoneme-grapheme correspondence. However, alphabetical scripts, including German, rarely display one-to-one correspondence. German exhibits a transparent phoneme-grapheme correspondence (forward regularity), since a given grapheme normally symbolizes the same phoneme. The phoneme-grapheme correspondence (backward regularity) is less clear, as individual sounds can be represented by different graphemes (cf. Mayer 2016: 16-18).

The German orthographic system can be explained through three determining principles: phonological, syllabary and morphemic (cf. Mayer 2016: 19).

The syllabary principle is increasingly employed in writing and reading pedagogy (cf. Nickel 2006: 61-63). Most German words include a stressed first syllable (the main syllable) and a second unstressed syllable. Deviations from this structure are often loan words from other languages or function words (cf. Mayer 2016: 22). In German, CV, VC, CVC, VCV, CVCV and VCVC-structures are possible (cf. Mayer 2018: 86). German contains 26 letters (30 including umlauts and Eszett [ß] 30), eight vowels and 21 consonants.

	front		central	back
close	iː	yː		uː
	ɪ	Y		ʊ
half-closed	eː	øː	ə	oː
half-opened	ɛ(ː)	œ	ɐ	ɔ
open			a(ː)	

Table 4. Vowels in German (Dahmen and Weth 2018: 36).

	Plosive		Nasal	Fricative		Affricae	Approximant	Lateral
Bilabial	p	b	m			(pf)		
Labio-dental					f			
				v				
Alveolar	t	d	n	s	z	(ts)		l
Post-alveolar				ʃ	ʒ	(tʃ)		
Palatal				ç			j	
Velar	k	g	ŋ					
Uvular				X	ʁ			
Glottal					h			

Table 5. Consonants in German, voiceless: left in a box, voiced: right in a box (Dahmen and Weth 2018: 34).

2.1. German versus Tigrinya

Table 6 below summarizes the differences between Tigrinya and German:

German	Tigrinya
Alphabet script	Ge'ez script
26 letters (30 including umlauts and Eszett [ß])	248 symbols
transparent	transparent
8 vowels	7 vowels (cf. Weninger 2011: 1155)
21 consonants	rich consonant system (more consonants than in German)
CV, VC, CVC, VCV, CVCV and VCVC	V, CV and CVC
diacritics at umlaut (cf. Dürscheid 2016: 122)	many diacritics
written from left to right	written from left to right (cf. Kifle 2011: 18)
frequently used punctuation marks: colon (:), comma (,), full stop (.), question mark (?), exclamation point (!).	frequently used punctuation marks: "commas (፡) and (፣), a semi-colon (፤), colon (፦), preface colon (፥), full stop (።) and question mark (፧ or ?)" (Kifle 2011: 18)
the writing of the letter starts at various places (e.g., *a* and *b*)	symbols are written from the upper left to the lower right and always from up to down (cf. Haile 1996: 575)
parts of certain letters are written under the line (e.g., *g*)	all parts of all letters are strictly above the line
there are sometimes pen-lifts when writing a letter (e.g., T)	the pen is repeatedly set off when writing a symbol
upper- and lower-case	no upper- and lower-case

Table 6. German versus Tigrinya, differences and similarities.

3. Participants

A total of 65 participants started the courses that provide the foundation for this research project; six later dropped out due to personal circumstances. The remaining 59 participants were all non-Roman alphabet literate German learners. All were adult refugees and had been learning German for a maximum of two years. None of them could write or read accurately in German at the start of the project.

The majority of participants (41 of 59) were Eritrean. Thirty-nine of the 41 Eritrean participants had Tigrinya as their language of origin; the remaining two had Arabic and Saho respectively. This article focuses on the 39 Eritrean participants with Tigrinya as their L1. There were 21 men and 18 women, aged 19 to 51; just over half were under 30 years old. With the exception of one 51-year-old participant, the remaining participants were between 30 and 44 years of age. All 39 participants were educated; the majority had received between seven and nine years of education.
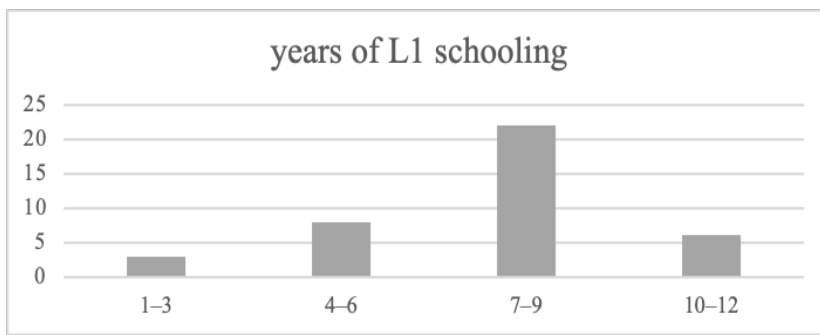

Table 7. Years of L1 schooling (n=39).

4. Methods

A field experiment was conducted to investigate the effectiveness of the interventions of the curriculum for non-Roman alphabet literates and the syllabary approach. For this purpose, the participants were randomly divided into either treatment group 1 (the curriculum from Germany for non-Roman alphabet literates) or treatment group 2 (the curriculum for non-Roman alphabet literates plus syllabary approach) after a placement test. The total of six groups, which were divided into two treatment groups, had between 8 and 11 participants each. The intervention of the syllabary approach was used throughout the course. The six groups were taught at one of two different institutions in the German-speaking part of Switzerland. Each institution had three levels: high, medium and low. The participants were given a level according to their score in the placement test (O_1) and randomly allocated to one of the two institutions. A total of two follow-up

measurements (O_2 and O_3) and a final standardized test *telc* (The European Language Certificates) A1 (O_4) followed.

This article addresses the written production of the Tigrinya-speaking learners only. Spelling is particularly important for learners that come from a different writing system (cf. Randall 2005: 121-123), which is why the study used dictations (cf. e.g., Küppers 2006: 91). Dictation has shown a strong correlation with TOEFL (Test of English as a Foreign Language) and overall language proficiency (cf. Rahimi 2008: 33-34). Dictation plays a central role in European teaching (cf. Kazazoğlu 2013: 1339), as well as in literacy courses (cf. Feldmeier 2005: 12). The evaluation system of Backhaus and Rackwitz (2011: 35) was used to assess the dictation and the following understanding: A1 learners are not yet required to write without errors (cf. Albert et al. 2015: 47).

The educational background questionnaire, foreign language skills, language knowledge and other factors were surveyed through a background questionnaire in the participants' language of origin[1]. Because non-literate learners could not read the questionnaire, let alone complete it, this also ensured that only non-Roman alphabet literates attended the courses. In the last part of the questionnaire, the participants had to write something about themselves or their family that could be fictitious.

This text was then evaluated by native translators and the researcher using an evaluation grid. The aim was to determine if participants with a larger vocabulary and higher grammatical knowledge in their L1 achieved higher results in German than participants who did not master their L1 as well. Participants who scored below an A2 level in this assessment were not admitted to the course. The participants achieved different scores for their texts, which they had to write in their L1: seven participants at A2 or A2+ level, eigth participants at B1 to B2 level and 24 above B2 level. The majority of the participants scored above B1 in their native language

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[1] Using the questionnaire in the dominant language, which was based on the characteristics for non-Roman alphabet learners (cf. BAMF – Bundesamt für Migration und Flüchtlinge 2018: 10-11), it was possible to collect various relevant information from the participants. The questionnaire was designed by the researcher and translated by experienced translators.

text, which reflects the adult literacy rate in Eritrea of almost 70% (cf. UNICEF 2013).

4.1. Instruments

The dictation was carried out three times in total: classification before the lessons began, the first follow-up 1 after 100 course lessons (45 minutes) and the second follow-up 2 after 200 course lessons. The words were taken from the frequency words, based on a 4.2-milion word corpus, of Tschirner (2016), levels A1 and A2. Because certain participants had already taken literacy courses, a total of 17 A1 words and five A2 words per dictation were randomly selected. More difficult words had to be added to differentiate between participants in the upper quartile. As recommended in the ESL Benchmark (cf. Acevedo et al., 2016, p. 71), a total of eight sentences with three to five words each were dictated, in addition to the words. Thirty percent of the items from the placement test were defined as retest items and thus repeated at all three measurement points.

5. Results

Learning success is defined as the increase in points from the placement test, i.e., from before the start of the course to the first measurement time after 100 lessons and the second measurement time after 200 lessons.

The test consists of 30 items with five points each. Because learning success is regarded as an average value across all items and a negative learning success is also conceivable, the learning success can assume a value between -5 and 5.

5.1. Descriptive analysis

A qualitative assessment of the results suggests that the participants with the syllabary approach made greater learning progress (an

increase of 0.46 points) than those without the syllabary approach (0.35 points) during the first 100 lessons, i.e., during the literacy phase. At A1 level, i.e., after 100 lessons, they recorded a lower learning success (0.29 points) compared to the participants who were taught without the additional focus on the syllabary approach (0.41 points). Overall, over the 200 lessons, i.e., from the placement to the second measurement, both groups demonstrated an approximately equal positive increase in learning, with the participants without the additional focus on the syllabary approach recording an average increase of 0.76 points and the participants with the additional focus on the syllabary approach increasing by an average of 0.75 points. In the standardized telc A1-level test, the groups using the syllabary approach achieved a higher score in writing (35.36 points compared to 33.16 points). According to these figures, the syllabary approach may be a sensible method during the literacy phase but is possibly of limited use at A1 or further levels.

syllabary method		0–100 lessons, O_1	100–200 lessons, O_2	0–200 lessons, O_3	telc writing A1
no	mean value	0.35	0.41	0.76	33.16
	N	21	21	21	19
	standard deviation	0.34	0.34	0.48	26.52
yes	mean value	0.46	0.29	0.75	35.56
	N	18	18	18	18
	standard deviation	0.37	0.27	0.47	22.46

Table 8. Learning progress at the time of measurement.

The syllabary approach could also be helpful for the written part of standardized tests. An analysis of variance with repeated measurements – with corresponding Greenhouse-Geisser correction due to the significant Mauchly test for sphericity (Mauchly-W(2)=.747, p = .005) – indicates that the differences between measurements are highly significant ($F(1.6,60.6) = 76.58$, $p = .000$, $\eta^2 = .67$). Unfortunately, t-tests could not statistically confirm any of the above-mentioned variances; for this reason, more research is highly encouraged.

5.2. Predictors of learning success

For a linear regression, the learning progress from the placement test (O_1) to the last measurement time (O_3) was selected as the dependent variable and various factors as the independent variables (Table 9).

Model	non-standardized coefficients		standard coefficient	T	p
	regression coefficient B	standard deviation	Beta		
(constant)	58.12	13.41		4.33	.001
institution	-13.89	4.32	-.72	-3.21	.008
course level low	8.93	5.80	.46	1.54	.152
course level average	6.72	5.19	.34	1.30	.222
syllabary approach	-1.98	4.72	-.11	-.42	.683
gender	-12.09	5.17	-.64	-2.34	.039
age 19	30.43	9.55	.52	3.19	.009
age 30-39	-11.76	4.23	-.55	-2.78	.018
age 40-49	-11.37	4.87	-.45	-2.33	.040
age >50	-23.05	8.84	-.40	-2.61	.024
vocabulary in Tigrinya B1/B2	-5.35	8.56	-.19	-.63	.545
vocabulary in Tigrinya C1/C2	12.99	6.89	.61	1.88	.086
correctness in Tigrinya B1/B2	3.98	5.81	.20	.68	.508
correctness in Tigrinya C1/C2	-3.10	5.70	-.16	-.54	.598
foreign language	3.91	4.86	.16	.81	.438
years of L1 schooling 1-3	-9.73	5.47	-.28	-1.78	.103
years of L1 schooling 4-6	-14.57	5.15	-.64	-2.83	.016
years of L1 schooling 10-12	-19.12	5.53	-.69	-3.46	.005
apprenticeship	-4.87	5.69	-.16	-.86	.410
working experience	8.05	3.55	.43	2.27	.044
having childcare obligation	3.30	4.63	.17	.71	.492
health conditions	-6.64	2.14	-.71	-3.11	.010
contact with native speakers 1-3 days per week	6.12	6.00	.32	1.02	.330
contact with native speakers 4-7 days per week	-1.53	5.38	-.07	-.28	.782
attended German language course	-7.70	5.84	-.34	-1.32	.215
course absence	-.58	.20	-.62	-2.96	.013

Table 9. Linear Regression of learning success (O_1 to O_3). $R^2 = .867$, corrected $R^2 = .566$.

The model has an R^2 of .867, indicating that 87% (R^2corr. = .566) of the variance of the learning success can be explained by these variables. According to the results of the linear regression, there are

various statistically significant independent variables such as institution, gender, age, 4 to 6 and 10 to 12 years of L1 schooling, working experience, health conditions and course absence.

The variable of institution has a significant p-value of .008. The regression coefficient B = -13.89 indicates a markedly lower learning success of participants from one of the two institutions. There thus appears to be an institution-dependent difference. One possible reason for this difference could be the different educational backgrounds of the respective teachers.

Another significant variable is gender. Female participants scored 12 percentage points less than male participants. This may be due to different roles in their professional and private lives and accords with the findings of other studies (cf. Scheible and Rother 2017: 15).

There is a negative correlation between age and learning success: 19-year-old participants achieved 30 percentage points higher than the reference category of 20 to 29-year-olds. Older learners than this reference category demonstrated weaker learning success. This corresponds with empirical findings found elsewhere, which clearly indicates that age can have a negative impact on second language acquisition (cf. Esser 2006: 103-109).

Years of native-language schooling shows significant correlations, albeit differently than expected: participants with 4 to 6 and 10 to 12 years of school experience both achieved lower learning success in writing than participants with 7 to 9 years of school experience. This result contradicts common sense and theory, which positively link school education and second language learning (cf. Acevedo et al. 2016: 5-6; Perlmann-Balme and Dengler 2007: 11). More studies on this subject are needed to corroborate these findings and find or refute possible explanations.

The regression coefficient for participants who have worked in their home country is positive. Working experience seems to have a beneficial effect on the acquisition of writing in German as a second language. The state of the person's health also plays a significant role in the acquisition of written language. The better the participants feel, the lower their learning success in writing. This is somewhat unexpected, and more research might shed light on this result.

The final variable is course absence. Rather unsurprisingly, the more often participants were skipping class, the lower their learning

success in writing. Concerning the use of the syllabary approach, which showed a positive but relatively low increase in learning success in the descriptive analysis, no statistically significant relationship can be found in the linear regression.

8. Discussion

This article illustrates the preliminary results of a research project on the acquisition of literacy by non-Roman alphabet literate refugees in the German-speaking part of Switzerland. Most success factors concern the learners themselves. However, the variable of institution exhibits a highly significant negative influence. It can therefore be assumed that this variable should be considered to a greater extent in further studies. Participants who were given the syllabary approach, while failing to be statistically significant, demonstrated a higher learning success in the first 100 course lessons and in the telc A1-level test. The syllabary approach, which can be classified under phonological awareness, appears to be useful for Eritreans in the initial literacy process and for the standard telc A1-level test but not in the A1 German course. Future research should examine whether this limited usefulness only applies to the syllabary approach or if it extends to further aspects of phonological awareness. Accepted theories make clear that phonological awareness plays a decisive role in the acquisition of an alphabetical script, especially in the acquisition of written language (cf. Schnitzler 2008: 64). Davidson and Stucker (2002: 313), for example, assume that phonological awareness should not only be practiced in literacy courses but also in further language courses (A1 up). To what extent this applies to Eritreans and whether or not it is beneficial to advance phonological awareness in further courses must be investigated further, preferably with a higher sample size.

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