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Revised Proposal for Encoding the Shaaldaa Script in the UCS

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General Overview:

This is a revised proposal to encode the Shaaldaa script into the Unicode Standard. It supersedes the following document:

- L2/24-109: "Proposal for Encoding the Sheek Bakrii Saphaloo Script in the UCS"

This version differs from the most recent version, L2/24-109, due to the following reasons and updates:

- Script name change from "Sheek Bakrii Saphaloo" to "Shaaldaa" as per community feedback.
- A review of letter and numeral glyphs variants has been added to Section III.
- Fixed character property typo of script-specific numerals from "No" to "Nd"
- Additional figures from other modern-day script in Section IX (Figures 60-61).
- Additional figures from the son of Sheikh Bakri in Section IX (Figures 62-65).
- Additional figures from Sheikh Bakrii in Section IX (Figures 66.1-66.18).
- Additional figures of handwritten samples of the comprehensive script (Figures 69.1-69.8)
- A diagram depicting the glyph variation of numerals, via educators, is added as Figure 70.
- Numeric values for digits added to field 6 of the properties data.

I Background

Sheikh Bakri Sapalo (November 1895 - 5 April 1980), born Abubakar Garad Usman (Oromo: Abubakar Garad Usmaan), known by many Oromo people regardless of their religious background, was a revered Oromo scholar, poet, linguist and religious teacher from Ethiopia. The Oromo language (ISO 639-3: orm; endonym: Afaan Oromoo) is an official language of Ethiopia, a recognized minority language in Kenya, and is spoken by ~37 million people in total. Sheikh Bakri created an abugida for Oromo in 1940-1948 (Ethiopian Calendar)/1948-1956 (Gregorian Calendar) in Ligibo, Goro Gutu district, East Hararghe Zone.

Sheikh Bakri taught the script to his pupils and those that were curious, which ushered in a period where people would write personal correspondences to each other in the script. Sheikh Bakri also wrote his famous poems, manuscripts, and other works in the script. He was then placed under a decade-long 'honorable confinement' in Dire Dawa (and later allowed to travel to and from Allede) in 1965 by Amhara officials who disapproved of the script's use. It was during this period that his most prominent work "*Shalda*" was written. Hayward and Hassen (1981) describe the work as "*a caustically worded indictment of Amhara colonial oppression and an account of the suffering of the Oromo under this regime*" and that "*Shalda is of interest in that it is really both the first and the last major writing in Shaykh Bakri Saṗalō's alphabet.*"

The script has been reported to still be in use in East (and possibly West) Hararghe Zone (Oromo: Harargee Bahaa; Amharic: ምስራቅ ሀረርጌ ዞን) in eastern Oromia (Oromo Region, Ethiopia), which is not to be confused with the Harari Region of Ethiopia (Harari: ሀረሪ ሑስኒ; Amharic: ሐረሪ ክልል; Oromo: Naannoo Hararii), among Oromo people, Muslim scholars, and others for secret communications among themselves and with their students. There is evidence that Sheikh Bakri's script at one point spread to the Bale region (Oromo: Aana Baalee; Amharic: ባሌ ዞን) during times of Oromo and Somali armed resistance. Emperor Haile Selassie I's soldiers captured usage of the script on the battlefields in Bale in 1964/1965. Prominent Oromo scholar Dr. Mohammed Hassen Ali noted this continued use of Sheikh Bakri's script in 2019 when he visited a number of cities and towns in eastern Oromia. He and other Oromo scholars again made subsequent confirmations that the script created by Sheikh Bakri Sapalo is still being used for communication in eastern Oromia. The script is also currently being taught in Dire Dawa, Ethiopia. One teacher of the script personally reports that 100 people just in his social circle alone have learned the script, and has been independently verified by the authors of this proposal.

There is overwhelming endorsement for the script to be encoded into Unicode from both users and scholars of Oromo linguistics, history, culture, heritage, etc. The value of encoding the script is to both serve the people that have been using the script for the past ~70 years, students currently learning the script, and for the digital preservation of historical documents and culture.

II Script Name

The proposed script name is "SHAALDAA", reflecting the name of the script used by the user community. This name was given to the script by the script creator as confirmed by his surviving children. Some users may colloquially refer to the script as "Qubee Sheek Bakrii Saphaloo". The canonical name of the script, in the script, is "𞤘𞤵𞤦𞤫" and the literal meaning is "a double-edged sword".

III Structure

The Shaaldaa script is an abugida written left to right in horizontal lines, from the top to the bottom of a page. The script has 33 base glyphs used in education to familiarize the students with the structure of the script. Each base glyph has 10 counterparts that each have a distinct vocalic component of the grapheme (e.g., 'ba', 'bu', 'bi', etc.), and 1 pure consonant counterpart without any vocalic component (e.g., 'b'). The base glyph by itself has no phonemic value and is not used by itself in written language, but is used in education. It does not serve the same purpose of representing standalone 'consonants' (C) like the 6th form of the Ethiopic script can (e.g., ብ, ግ, ድ). Unlike some languages that use the Ethiopic script, the Shaaldaa script does distinguish between non-gemination and gemination. There are 33 more base glyphs with the same 11 counterparts (vocalic, pure consonant) used for consonantal gemination. In summary, there are 33 base glyphs, 10 vocalized graphemes, and 1 pure consonant grapheme. Then, there are 33 more base glyphs (with 10 vocalic and 1 pure consonant counterparts) for gemination. This totals 792 unique graphemes that will be categorically reviewed here. Figures 69.1-69.8 present contemporary handwritten samples of the full inventory.

Current Oromo Orthography	IPA	Base Glyph	<a> /e/	<u> /ʊ/	<i> /ɪ/	<e> /ɛ/	<o> /ɔ/	<aa> /ɑː/	<uu> /uː/	<ii> /iː/	<ee> /eː/	<oo> /oː/	/C/
vowel / ‘	Ø/ʔ	ᬀ	ᬁ	ᬂ	ᬃ	ᬄ	ᬅ	ᬆ	ᬇ	ᬈ	ᬉ	ᬊ	ᬋ
vowel / ‘	Øː/ʔː	ᬌ	ᬍ	ᬎ	ᬏ	ᬐ	ᬑ	ᬒ	ᬓ	ᬔ	ᬕ	ᬖ	ᬗ
b	b	ᬘ	ᬙ	ᬚ	ᬛ	ᬜ	ᬝ	ᬞ	ᬟ	ᬠ	ᬡ	ᬢ	ᬣ
bb	bː	ᬤ	ᬥ	ᬦ	ᬧ	ᬨ	ᬩ	ᬪ	ᬫ	ᬬ	ᬭ	ᬮ	ᬯ
j	ʤ	ᬰ	ᬱ	ᬲ	ᬳ	᬴	ᬵ	ᬶ	ᬷ	ᬸ	ᬹ	ᬺ	ᬻ
jj	ʤː	ᬼ	ᬽ	ᬾ	ᬿ	ᭀ	ᭁ	ᭂ	ᭃ	᭄	ᭅ	ᭆ	ᭇ
d	d	ᭈ	ᭉ	ᭊ	ᭋ	ᭌ	᭍	᭎	᭏	᭐	᭑	᭒	᭓
dd	dː	᭔	᭕	᭖	᭗	᭘	᭙	᭚	᭛	᭜	᭝	᭞	᭟
h	h	᭠	᭡	᭢	᭣	᭤	᭥	᭦	᭧	᭨	᭩	᭪	᭫
hh	hː	᭬	᭭	᭮	᭯	᭰	᭱	᭲	᭳	᭴	᭵	᭶	᭷
w	w	᭸	᭹	᭺	᭻	᭼	᭽	᭾	᭿	ᮀ	ᮁ	ᮂ	ᮃ
ww	wː	ᮄ	ᮅ	ᮆ	ᮇ	ᮈ	ᮉ	ᮊ	ᮋ	ᮌ	ᮍ	ᮎ	ᮏ
z	z	ᮐ	ᮑ	ᮒ	ᮓ	ᮔ	ᮕ	ᮖ	ᮗ	ᮘ	ᮙ	ᮚ	ᮛ
zz	zː	ᮜ	ᮝ	ᮞ	ᮟ	ᮠ	ᮡ	ᮢ	ᮣ	ᮤ	ᮥ	ᮦ	ᮧ
h*	ħ	ᮨ	ᮩ	᮪	᮫	ᮬ	ᮭ	ᮮ	ᮯ	᮰	᮱	᮲	᮳
hh*	ħː	᮴	᮵	᮶	᮷	᮸	᮹	ᮺ	ᮻ	ᮼ	ᮽ	ᮾ	ᮿ
x	t’	ᯀ	ᯁ	ᯂ	ᯃ	ᯄ	ᯅ	ᯆ	ᯇ	ᯈ	ᯉ	ᯊ	ᯋ
xx	t’ː	ᯌ	ᯍ	ᯎ	ᯏ	ᯐ	ᯑ	ᯒ	ᯓ	ᯔ	ᯕ	ᯖ	ᯗ
y	j	ᯘ	ᯙ	ᯚ	ᯛ	ᯜ	ᯝ	ᯞ	ᯟ	ᯠ	ᯡ	ᯢ	ᯣ
yy	jː	ᯤ	ᯥ	᯦	ᯧ	ᯨ	ᯩ	ᯪ	ᯫ	ᯬ	ᯭ	ᯮ	ᯯ
k	k	ᯰ	ᯱ	᯲	᯳	᯴	᯵	᯶	᯷	᯸	᯹	᯺	᯻
kk	kː	᯼	᯽	᯾	᯿	ᰀ	ᰁ	ᰂ	ᰃ	ᰄ	ᰅ	ᰆ	ᰇ
l	l	ᰈ	ᰉ	ᰊ	ᰋ	ᰌ	ᰍ	ᰎ	ᰏ	ᰐ	ᰑ	ᰒ	ᰓ
ll	lː	ᰔ	ᰕ	ᰖ	ᰗ	ᰘ	ᰙ	ᰚ	ᰛ	ᰜ	ᰝ	ᰞ	ᰟ
m	m	ᰠ	ᰡ	ᰢ	ᰣ	ᰤ	ᰥ	ᰦ	ᰧ	ᰨ	ᰩ	ᰪ	ᰫ
mm	mː	ᰬ	ᰭ	ᰮ	ᰯ	ᰰ	ᰱ	ᰲ	ᰳ	ᰴ	ᰵ	ᰶ	᰷
n	n	᰸	᰹	᰺	᰻	᰼	᰽	᰾	᰿	᱀	᱁	᱂	᱃
nn	nː	᱄	᱅	᱆	᱇	᱈	᱉	᱊	᱋	᱌	ᱍ	ᱎ	ᱏ
s	s	᱐	᱑	᱒	᱓	᱔	᱕	᱖	᱗	᱘	᱙	ᱚ	ᱛ
ss	sː	ᱜ	ᱝ	ᱞ	ᱟ	ᱠ	ᱡ	ᱢ	ᱣ	ᱤ	ᱥ	ᱦ	ᱧ
f	f	ᱨ	ᱩ	ᱪ	ᱫ	ᱬ	ᱭ	ᱮ	ᱯ	ᱰ	ᱱ	ᱲ	ᱳ
ff	fː	ᱴ	ᱵ	ᱶ	ᱷ	ᱸ	ᱹ	ᱺ	ᱻ	ᱼ	ᱽ	᱾	᱿

s*	s	𑖮	𑖯	𑖰	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷	𑖸	𑖹
ss*	s:	𑖺	𑖻	𑖼	𑖽	𑖾	𑖿	𑗀	𑗁	𑗂	𑗃	𑗄	𑗅
q	k’	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍	𑖎	𑖏	𑖐	𑖑
qq	k’:	𑖒	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	𑖜	𑖝
r	r	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨	𑖩
rr	r:	𑖪	𑖫	𑖬	𑖭	𑖮	𑖯	𑖰	𑖱	𑖲	𑖳	𑖴	𑖵
sh	ʃ	𑖶	𑖷	𑖸	𑖹	𑖺	𑖻	𑖼	𑖽	𑖾	𑖿	𑗀	𑗁
shsh	ʃ:	𑗂	𑗃	𑗄	𑗅	𑗆	𑗇	𑗈	𑗉	𑗊	𑗋	𑗌	𑗍
t	t	𑖍	𑖎	𑖏	𑖐	𑖑	𑖒	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘
tt	t:	𑖙	𑖚	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤
kh**	x	𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆
khkh**	x:	𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆
dh	ɖ	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨	𑖩	𑖪	𑖫	𑖬	𑖭	𑖮
dhdh	ɖ:	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨	𑖩	𑖪	𑖫	𑖬	𑖭	𑖮
g	g	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍	𑖎	𑖏	𑖐
gg	g:	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍	𑖎	𑖏	𑖐
c	tʃ’	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	𑖜	𑖝	𑖞
cc	tʃ’:	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	𑖜	𑖝	𑖞
ny	ɲ	𑖯	𑖰	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷	𑖸	𑖹	𑖺
nyny	ɲ:	𑖯	𑖰	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷	𑖸	𑖹	𑖺
ch	tʃ	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦
chch	tʃ:	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦
ph	p’	𑖄	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍	𑖎	𑖏
phph	p’:	𑖄	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌	𑖍	𑖎	𑖏
a	ʔ	𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋
aa	ʔ:	𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋
p	p	𑖐	𑖑	𑖒	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛
pp	p:	𑖐	𑖑	𑖒	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛
v	v/β	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨
vv	v:/β:	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦	𑖧	𑖨
zy	ʒ	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡
zyzy	ʒ:	𑖖	𑖗	𑖘	𑖙	𑖚	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡
ts	ts’	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷	𑖸	𑖹	𑖺	𑖻	𑖼
tsts	ts’:	𑖱	𑖲	𑖳	𑖴	𑖵	𑖶	𑖷	𑖸	𑖹	𑖺	𑖻	𑖼

*Table 1. Inventory of the Shaaldaa script. *See “Additional Character Information” in Section IV.*

First forms (labeled as “Base Glyphs”) are not used in actual writing (Hayward & Hassen, 1981. Page 560), but are essential in learning the script. The final five graphemes (𑖀, 𑖁, 𑖂, 𑖃, and 𑖄, and all of their vocalized, pure consonant and geminated counterparts) are used for loanwords.

Punctuation and Numerals/Digits:

There are specific characters for both punctuation and numerals (0-9) in the Shaaldaa script. Shaaldaa punctuation is fairly straight forward with only two marks having been introduced, namely a wordspace and full stop.

* ‘𑖉’ used for words in ‘ሐ’ and ‘ር’, ‘𑖊’ for words in ‘ሠ’.

** ‘𑖂’ used for words in ‘ኸ’ and ‘ኽ’, ‘𑖀’ for words in ‘ዐ’ and ‘ዔ’

A wordspace/word-separator is represented by 2 vertically stacked dots – visually similar to a Latin colon (U+003A :). While it also appears to be visually similar to an Ethiopic word separator (U+1361 ፡), the Shaaldaa word-separator is always 2 *circular* dots, and never 2 square-like dots as is the case in some Ethiopic fonts. In practice, a whitespace (U+0020 SPACE) is often used, whereas historical documents more often use the script specific punctuation.

A full-stop is represented by two horizontally parallel strokes, and is visually similar to an equal sign (U+003D =). In practice, a period (U+002E FULL STOP .) is often used, and use of the Ethiopic full-stop (U+1362 ።) has been observed (see Figure 19, Section IX). See Plate I.1 in Section IX which highlights both punctuation marks.

Punctuation: ፡ wordspace/word-separator, 𝌆 full stop

It is noteworthy that the modern practice borrows western punctuation liberally, such as parenthesis, quotation marks, comma, question mark, and apostrophe, among others.

The Shaaldaa script includes a digital numeral system. Unlike the punctuation marks, the Shaaldaa numeral glyphs have evolved and proliferated over the years and warrant a more thorough explanation. Accordingly, the next section covers glyph variation in numerals. Table 2 presents the Shaaldaa numeral glyphs found in widest use as identified by the user community and originating from Sheikh Mahammadsiraac Sheikh Bakrii (a son of Sheikh Bakrii).

0	1	2	3	4	5	6	7	8	9
𐒠	𐒡	𐒢	𐒣	𐒤	𐒥	𐒦	𐒧	𐒨	𐒩

Table 2. Shaaldaa digits and their values.

Glyph Variations:

As a historically handwritten writing system, variation in the shapes of both letters and numbers is naturally encountered. Variation may also be a consequence of the clandestine use of the script in its earliest days leading to parties developing divergent habits in isolation. Notable variations that are an oft source of confusion are reviewed here.

Shaaldaa numerals show the most variation with no fewer than *four* sets of glyphs that have been found in varying degrees of use by different camps within the user community. The most popularized set of numeral glyphs is found on a monument to Sheikh Bakri Sapalo, one of two, erected in his home town (see Figures 42-44) . The monument in turn was created by Sheikh Mahammadsiraac Sheik Bakrii (SMSB), the son of the script's creator as well as student. Sheikh Mahammadsiraac uses these glyphs in regular writing and has taught them to generations of his students. For convenience, the name of the scribe is employed to refer to the different glyph sets. Digits 0-9:

The Sheikh Mahammadsiraac Sheikh Bakrii Set (SMSB): 𐒠 𐒡 𐒢 𐒣 𐒤 𐒥 𐒦 𐒧 𐒨 𐒩

The set of numeral glyphs by Sheikh Mahammad Rashad are likely the best-known shapes *outside* of Ethiopia by virtue of Sheikh Mahammad serving as the primary informant for University of London researchers R.J. Hayward and Mohammed Hassan who in turn published our Reference 1, the seminal work on the script found in the west. We have not yet found these glyph choices in use by modern users.

The Sheikh Mahammad Rashad Set (SMR): 𐒠 𐒟 𐒢 𐒭 𐒪 𐒥 𐒯 𐒫 𐒬 𐒱

A third set of glyphs was found to be in use by Ibsa Sheikh Mahammadsiraac (ISM), a son of Sheikh Mahammadsiraac. The ISM glyph set would appear to show more Latin script influences as reflected in the "F"-like shapes for the digits F (5) and 𑇃 (7), the "Z"-like shapes of digits 𑇆 (6) and 𑇉 (9), and the simple vertical stroke for the digit "I" (1). These shapes may also point to a modernization direction for the glyphs. The ISM glyphs are presented in Figure 67 and in the following:

The Ibsa Sheikh Mahammadsiraac Set (ISM): 𑇐 𑇁 𑇄 𑇅 𑇊 F 𑇆 𑇃 > 𑇉

The fourth set of numeral glyphs found in use comes from another student of Sheikh Bakri's, Sheikh Nuradin Ahmad (SNA), who has been a decades-long, well respected, educator of the script. The Sheikh Nuradin Ahmad (SNA) numeral glyphs are presented in Figure 68 and in the following:

The Sheikh Nuradin Ahmad Set (SNA): 𑇐 𑇂 𑇄 𑇅 𑇋 𑇌 𑇍 𑇏 𑇃 𑇈

As the various numeral shapes represent differing handwritten styles, the shapes are not found together in the same document. Accordingly, the authors recommend that these handwritten styles be treated as separate typefaces. Vendors wishing to support the styles within a single computer font, could however do so with OpenType stylistic sets or character variants. The approaches that have been applied for distinguishing the Arabic, Persian, Sindi, and Urdu numeral shapes may likewise be applied here.

	0	1	2	3	4	5	6	7	8	9
Sheikh Mahammadsiraac Sheikh Bakrii (SMSB)	𑇐	𑇁	𑇄	𑇅	𑇈	𑇌	𑇆	𑇃	𑇇	𑇉
Sheikh Mahammad Rashad (SMR)	𑇐	𑇌	𑇄	𑇅	𑇋	𑇌	𑇍	𑇏	𑇃	𑇈
Ibsa Sheikh Mahammadsiraac (ISM)	𑇐	𑇁	𑇄	𑇅	𑇊	F	𑇆	𑇃	>	𑇉
Sheikh Nuradin Ahmad (SNA)	𑇐	𑇂	𑇈	𑇅	𑇋	𑇏	𑇍	𑇌	𑇃	𑇈

Table 3. A Comparative view of the Shaaldaa Numeral Glyph Sets

To a lesser degree, glyph variation is also found in Shaaldaa letters. The handwriting of Sheikh Bakrii Saphaloo is treated as canonical and can be observed in Figures 66.1-66.18. It is worth pointing out then the differences in Sheikh Mahammad Rashad's handwriting as observed in Reference 1.

	Sheikh Bakrii Saphaloo	Sheikh Mahammad Rashad
R/RR	𑇎/𑇏	𑇎/𑇏
G/GG	𑇑/𑇒	𑇑/𑇒
C/CC	𑇓/𑇔	𑇓/𑇔
N/NN	𑇕/𑇖	𑇕/𑇖
NY/NYNY	𑇗/𑇘	𑇗/𑇘

Table 4. Variation found in five Shaaldaa series.

Should vendors wish to support the glyph differences, they may do so in the same manner as they would support the difference in the numeral glyphs.

Diacritics:

Diacritical marks are not used in the Shaaldaa script.

IV Character Repertoire

General Category and other properties

Table 2 presents the 824 syllabic graphemes, punctuation, and digital numerals in total for the Shaaldaa orthography. The table provides the shapes, names, and relative ordering. A consistent naming pattern is used throughout where the consonant component of a syllable name will be identical to the corresponding syllable name from the sibling script, Ethiopic (U+1200 – U+137F). However, the Ethiopic syllable naming follows the conventions for Semitic languages, while Afaan Oromo is a Cushitic language which follows a different system of phonology. This phonological awareness is the basis of the Qubee writing practice whose rules of gemination and vowel length are applied to the final part of a letter name.

The Shaaldaa script features both glottal and pharyngeal vowels in both short and long stresses along with a stop. The Shaaldaa syllabary is kept contiguous by also populating the syllabary positions for the geminated syllables (i.e. CCV, CCVV table cells) for the vowel families. The naming of these vowel glyphs follows a positional logic, in keeping with the CV syllables, and applies the modifier “GEMINATE” to distinguish them.

An Ethiopic encoding model is required for the script due to 1) a significant percentage of graphical irregularity when attempting to interpret the script’s vocalized graphemes through consistent application of “diacritics” (see Table 4 at the end of Section IX), 2) Hayward and Hassen’s assessment of how the structure of the script came about in relation to the Ethiopic script (see Reference 1, Section VII; see Figures 2, 3, 4, 6, 7, and 19, Section IX), 3) the way the user community conceptualizes the script as distinct letters, 4) the user community also being active users of the Ethiopic script in parallel. Diacritics are largely a foreign creation that do not exist in the local practices of written language and should not be imposed upon indigenous systems.

To the proposal authors, the only benefit of pursuing an Indic encoding model instead of an Ethiopic model would be to save encoding space. However, for the reasons cited, the model is simply not compatible with user requirements.

The Shaaldaa glyph inventory, with their respective addresses and letter names are presented in Table 2:

𐆐	SHAALDAA SYLLABLE VOWEL BASE
𐆑	SHAALDAA SYLLABLE A
𐆒	SHAALDAA SYLLABLE U
𐆓	SHAALDAA SYLLABLE I
𐆔	SHAALDAA SYLLABLE E
𐆕	SHAALDAA SYLLABLE O
𐆖	SHAALDAA SYLLABLE AA
𐆗	SHAALDAA SYLLABLE UU
𐆘	SHAALDAA SYLLABLE II
𐆙	SHAALDAA SYLLABLE EE
𐆚	SHAALDAA SYLLABLE OO
𐆛	SHAALDAA SYLLABLE GLOTTAL STOP

𑖃	SHAALDAA SYLLABLE GEMINATE VOWEL BASE
𑖄	SHAALDAA SYLLABLE GEMINATE A
𑖅	SHAALDAA SYLLABLE GEMINATE U
𑖆	SHAALDAA SYLLABLE GEMINATE I
𑖇	SHAALDAA SYLLABLE GEMINATE E
𑖈	SHAALDAA SYLLABLE GEMINATE O
𑖉	SHAALDAA SYLLABLE GEMINATE AA
𑖊	SHAALDAA SYLLABLE GEMINATE UU
𑖋	SHAALDAA SYLLABLE GEMINATE II
𑖌	SHAALDAA SYLLABLE GEMINATE EE
𑖍	SHAALDAA SYLLABLE GEMINATE OO
𑖎	SHAALDAA SYLLABLE GEMINATE GLOTTAL STOP
𑖏	SHAALDAA SYLLABLE B BASE
𑖐	SHAALDAA SYLLABLE BA
𑖑	SHAALDAA SYLLABLE BU
𑖒	SHAALDAA SYLLABLE BI
𑖓	SHAALDAA SYLLABLE BE
𑖔	SHAALDAA SYLLABLE BO
𑖕	SHAALDAA SYLLABLE BAA
𑖖	SHAALDAA SYLLABLE BUU
𑖗	SHAALDAA SYLLABLE BII
𑖘	SHAALDAA SYLLABLE BEE
𑖙	SHAALDAA SYLLABLE BOO
𑖚	SHAALDAA SYLLABLE B
𑖛	SHAALDAA SYLLABLE BB BASE
𑖜	SHAALDAA SYLLABLE BBA
𑖝	SHAALDAA SYLLABLE BBU
𑖞	SHAALDAA SYLLABLE BBI
𑖟	SHAALDAA SYLLABLE BBE
𑖠	SHAALDAA SYLLABLE BBO
𑖡	SHAALDAA SYLLABLE BBAA
𑖢	SHAALDAA SYLLABLE BBUU
𑖣	SHAALDAA SYLLABLE BBII
𑖤	SHAALDAA SYLLABLE BBEE
𑖥	SHAALDAA SYLLABLE BBOO
𑖦	SHAALDAA SYLLABLE BB
𑖧	SHAALDAA SYLLABLE J BASE
𑖨	SHAALDAA SYLLABLE JA
𑖩	SHAALDAA SYLLABLE JU

ఀ	SHAALDAA SYLLABLE JI
ఁ	SHAALDAA SYLLABLE JE
ం	SHAALDAA SYLLABLE JO
ః	SHAALDAA SYLLABLE JAA
ఄ	SHAALDAA SYLLABLE JUU
అ	SHAALDAA SYLLABLE JII
ఆ	SHAALDAA SYLLABLE JEE
ఇ	SHAALDAA SYLLABLE JOO
ఈ	SHAALDAA SYLLABLE J
ఉ	SHAALDAA SYLLABLE JJ BASE
ఊ	SHAALDAA SYLLABLE JJA
ఋ	SHAALDAA SYLLABLE JJU
ఌ	SHAALDAA SYLLABLE JJI
ఁ	SHAALDAA SYLLABLE JJE
ం	SHAALDAA SYLLABLE JJO
ః	SHAALDAA SYLLABLE JJAA
ఄ	SHAALDAA SYLLABLE JJUU
అ	SHAALDAA SYLLABLE JJII
ఆ	SHAALDAA SYLLABLE JJEE
ఇ	SHAALDAA SYLLABLE JJOO
ఈ	SHAALDAA SYLLABLE JJ
ఉ	SHAALDAA SYLLABLE D BASE
ఊ	SHAALDAA SYLLABLE DA
ఋ	SHAALDAA SYLLABLE DU
ఌ	SHAALDAA SYLLABLE DI
ఁ	SHAALDAA SYLLABLE DE
ం	SHAALDAA SYLLABLE DO
ః	SHAALDAA SYLLABLE DAA
ఄ	SHAALDAA SYLLABLE DUU
అ	SHAALDAA SYLLABLE DII
ఆ	SHAALDAA SYLLABLE DEE
ఇ	SHAALDAA SYLLABLE DOO
ఈ	SHAALDAA SYLLABLE D
ఉ	SHAALDAA SYLLABLE DD BASE
ఊ	SHAALDAA SYLLABLE DDA
ఋ	SHAALDAA SYLLABLE DDU
ఌ	SHAALDAA SYLLABLE DDI
ఁ	SHAALDAA SYLLABLE DDE
ం	SHAALDAA SYLLABLE DDO

𑖘	SHAALDAA SYLLABLE DDAA
𑖙	SHAALDAA SYLLABLE DDUU
𑖚	SHAALDAA SYLLABLE DDII
𑖛	SHAALDAA SYLLABLE DDEE
𑖜	SHAALDAA SYLLABLE DDOO
𑖗	SHAALDAA SYLLABLE DD
𑖞	SHAALDAA SYLLABLE H BASE
𑖟	SHAALDAA SYLLABLE HA
𑖠	SHAALDAA SYLLABLE HU
𑖡	SHAALDAA SYLLABLE HI
𑖢	SHAALDAA SYLLABLE HE
𑖣	SHAALDAA SYLLABLE HO
𑖤	SHAALDAA SYLLABLE HAA
𑖥	SHAALDAA SYLLABLE HUU
𑖦	SHAALDAA SYLLABLE HII
𑖧	SHAALDAA SYLLABLE HEE
𑖨	SHAALDAA SYLLABLE HOO
𑖝	SHAALDAA SYLLABLE H
𑖩	SHAALDAA SYLLABLE HH BASE
𑖪	SHAALDAA SYLLABLE HHA
𑖫	SHAALDAA SYLLABLE HHU
𑖬	SHAALDAA SYLLABLE HHI
𑖭	SHAALDAA SYLLABLE HHE
𑖮	SHAALDAA SYLLABLE HHO
𑖤𑖰	SHAALDAA SYLLABLE HHAA
𑖫𑖰	SHAALDAA SYLLABLE HHUU
𑖦𑖰	SHAALDAA SYLLABLE HHII
𑖧𑖰	SHAALDAA SYLLABLE HHEE
𑖨𑖰	SHAALDAA SYLLABLE HHOO
𑖩𑖰	SHAALDAA SYLLABLE HH
𑖯	SHAALDAA SYLLABLE W BASE
𑖰	SHAALDAA SYLLABLE WA
𑖱	SHAALDAA SYLLABLE WU
𑖲	SHAALDAA SYLLABLE WI
𑖳	SHAALDAA SYLLABLE WE
𑖴	SHAALDAA SYLLABLE WO
𑖯𑖰	SHAALDAA SYLLABLE WAA
𑖱𑖰	SHAALDAA SYLLABLE WUU
𑖲𑖰	SHAALDAA SYLLABLE WII

𑖪	SHAALDAA SYLLABLE WEE
𑖫	SHAALDAA SYLLABLE WOO
𑖬	SHAALDAA SYLLABLE W
𑖭	SHAALDAA SYLLABLE WW BASE
𑖮	SHAALDAA SYLLABLE WWA
𑖯	SHAALDAA SYLLABLE WWU
𑖰	SHAALDAA SYLLABLE WWI
𑖱	SHAALDAA SYLLABLE WWE
𑖲	SHAALDAA SYLLABLE WWO
𑖳	SHAALDAA SYLLABLE WWAA
𑖴	SHAALDAA SYLLABLE WWUU
𑖵	SHAALDAA SYLLABLE WWII
𑖶	SHAALDAA SYLLABLE WWEE
𑖷	SHAALDAA SYLLABLE WWOO
𑖸	SHAALDAA SYLLABLE WW
𑖹	SHAALDAA SYLLABLE Z BASE
𑖺	SHAALDAA SYLLABLE ZA
𑖻	SHAALDAA SYLLABLE ZU
𑖼	SHAALDAA SYLLABLE ZI
𑖽	SHAALDAA SYLLABLE ZE
𑖾	SHAALDAA SYLLABLE ZO
𑖿	SHAALDAA SYLLABLE ZAA
𑗀	SHAALDAA SYLLABLE ZUU
𑗁	SHAALDAA SYLLABLE ZII
𑗂	SHAALDAA SYLLABLE ZEE
𑗃	SHAALDAA SYLLABLE ZOO
𑗄	SHAALDAA SYLLABLE Z
𑗅	SHAALDAA SYLLABLE ZZ BASE
𑗆	SHAALDAA SYLLABLE ZZA
𑗇	SHAALDAA SYLLABLE ZZU
𑗈	SHAALDAA SYLLABLE ZZI
𑗉	SHAALDAA SYLLABLE ZZE
𑗊	SHAALDAA SYLLABLE ZZO
𑗋	SHAALDAA SYLLABLE ZZAA
𑗌	SHAALDAA SYLLABLE ZZUU
𑗍	SHAALDAA SYLLABLE ZZII
𑗎	SHAALDAA SYLLABLE ZZEE
𑗏	SHAALDAA SYLLABLE ZZOO
𑗐	SHAALDAA SYLLABLE ZZ

𑘀	SHAALDAA SYLLABLE HX BASE
𑘁	SHAALDAA SYLLABLE HXA
𑘂	SHAALDAA SYLLABLE HXU
𑘃	SHAALDAA SYLLABLE HXI
𑘄	SHAALDAA SYLLABLE HXE
𑘅	SHAALDAA SYLLABLE HXO
𑘆	SHAALDAA SYLLABLE HXAA
𑘇	SHAALDAA SYLLABLE HXUU
𑘈	SHAALDAA SYLLABLE HXII
𑘉	SHAALDAA SYLLABLE HXEE
𑘊	SHAALDAA SYLLABLE HXOO
𑘋	SHAALDAA SYLLABLE HX
𑘌	SHAALDAA SYLLABLE HHX BASE
𑘍	SHAALDAA SYLLABLE HHXA
𑘎	SHAALDAA SYLLABLE HHXU
𑘏	SHAALDAA SYLLABLE HHXI
𑘐	SHAALDAA SYLLABLE HHXE
𑘑	SHAALDAA SYLLABLE HHXO
𑘒	SHAALDAA SYLLABLE HHXAA
𑘓	SHAALDAA SYLLABLE HHXUU
𑘔	SHAALDAA SYLLABLE HHXII
𑘕	SHAALDAA SYLLABLE HHXEE
𑘖	SHAALDAA SYLLABLE HHXOO
𑘗	SHAALDAA SYLLABLE HHX
𑘘	SHAALDAA SYLLABLE X BASE
𑘙	SHAALDAA SYLLABLE XA
𑘚	SHAALDAA SYLLABLE XU
𑘛	SHAALDAA SYLLABLE XI
𑘜	SHAALDAA SYLLABLE XE
𑘝	SHAALDAA SYLLABLE XO
𑘞	SHAALDAA SYLLABLE XAA
𑘟	SHAALDAA SYLLABLE XUU
𑘠	SHAALDAA SYLLABLE XII
𑘡	SHAALDAA SYLLABLE XEE
𑘢	SHAALDAA SYLLABLE XOO
𑘣	SHAALDAA SYLLABLE X
𑘤	SHAALDAA SYLLABLE XX BASE
𑘥	SHAALDAA SYLLABLE XXA
𑘦	SHAALDAA SYLLABLE XXU

𑖼	SHAALDAA SYLLABLE XXI
𑖽	SHAALDAA SYLLABLE XXE
𑖾	SHAALDAA SYLLABLE XXO
𑖿	SHAALDAA SYLLABLE XXAA
𑗀	SHAALDAA SYLLABLE XXUU
𑗁	SHAALDAA SYLLABLE XXII
𑗂	SHAALDAA SYLLABLE XXEE
𑗃	SHAALDAA SYLLABLE XXOO
𑗄	SHAALDAA SYLLABLE XX
𑗅	SHAALDAA SYLLABLE Y BASE
𑗆	SHAALDAA SYLLABLE YA
𑗇	SHAALDAA SYLLABLE YU
𑗈	SHAALDAA SYLLABLE YI
𑗉	SHAALDAA SYLLABLE YE
𑗊	SHAALDAA SYLLABLE YO
𑗋	SHAALDAA SYLLABLE YAA
𑗌	SHAALDAA SYLLABLE YUU
𑗍	SHAALDAA SYLLABLE YII
𑗎	SHAALDAA SYLLABLE YEE
𑗏	SHAALDAA SYLLABLE YOO
𑗐	SHAALDAA SYLLABLE Y
𑗑	SHAALDAA SYLLABLE YY BASE
𑗒	SHAALDAA SYLLABLE YYA
𑗓	SHAALDAA SYLLABLE YYU
𑗔	SHAALDAA SYLLABLE YYI
𑗕	SHAALDAA SYLLABLE YYE
𑗖	SHAALDAA SYLLABLE YYO
𑗗	SHAALDAA SYLLABLE YYAA
𑗘	SHAALDAA SYLLABLE YYUU
𑗙	SHAALDAA SYLLABLE YYII
𑗚	SHAALDAA SYLLABLE YYEE
𑗛	SHAALDAA SYLLABLE YYOO
𑗜	SHAALDAA SYLLABLE YY
𑗝	SHAALDAA SYLLABLE K BASE
𑗞	SHAALDAA SYLLABLE KA
𑗟	SHAALDAA SYLLABLE KU
𑗠	SHAALDAA SYLLABLE KI
𑗡	SHAALDAA SYLLABLE KE
𑗢	SHAALDAA SYLLABLE KO

𑴏	SHAALDAA SYLLABLE KAA
𑴐	SHAALDAA SYLLABLE KUU
𑴑	SHAALDAA SYLLABLE KII
𑴒	SHAALDAA SYLLABLE KEE
𑴓	SHAALDAA SYLLABLE KOO
𑴔	SHAALDAA SYLLABLE K
𑴕	SHAALDAA SYLLABLE KK BASE
𑴖	SHAALDAA SYLLABLE KKA
𑴗	SHAALDAA SYLLABLE KKU
𑴘	SHAALDAA SYLLABLE KKI
𑴙	SHAALDAA SYLLABLE KKE
𑴚	SHAALDAA SYLLABLE KKO
𑴛	SHAALDAA SYLLABLE KKAA
𑴜	SHAALDAA SYLLABLE KKUU
𑴝	SHAALDAA SYLLABLE KKII
𑴞	SHAALDAA SYLLABLE KKEE
𑴟	SHAALDAA SYLLABLE KKOO
𑴠	SHAALDAA SYLLABLE KK
𑴡	SHAALDAA SYLLABLE L BASE
𑴢	SHAALDAA SYLLABLE LA
𑴣	SHAALDAA SYLLABLE LU
𑴤	SHAALDAA SYLLABLE LI
𑴥	SHAALDAA SYLLABLE LE
𑴦	SHAALDAA SYLLABLE LO
𑴧	SHAALDAA SYLLABLE LAA
𑴨	SHAALDAA SYLLABLE LUU
𑴩	SHAALDAA SYLLABLE LII
𑴪	SHAALDAA SYLLABLE LEE
𑴫	SHAALDAA SYLLABLE LOO
𑴬	SHAALDAA SYLLABLE L
𑴭	SHAALDAA SYLLABLE LL BASE
𑴮	SHAALDAA SYLLABLE LLA
𑴯	SHAALDAA SYLLABLE LLU
𑴰	SHAALDAA SYLLABLE LLI
𑴱	SHAALDAA SYLLABLE LLE
𑴲	SHAALDAA SYLLABLE LLO
𑴳	SHAALDAA SYLLABLE LLAA
𑴴	SHAALDAA SYLLABLE LLUU
𑴵	SHAALDAA SYLLABLE LLII

𑖵	SHAALDAA SYLLABLE LLEE
𑖶	SHAALDAA SYLLABLE LLOO
𑖷	SHAALDAA SYLLABLE LL
𑖸	SHAALDAA SYLLABLE M BASE
𑖹	SHAALDAA SYLLABLE MA
𑖺	SHAALDAA SYLLABLE MU
𑖻	SHAALDAA SYLLABLE MI
𑖼	SHAALDAA SYLLABLE ME
𑖽	SHAALDAA SYLLABLE MO
𑖾	SHAALDAA SYLLABLE MAA
𑖿	SHAALDAA SYLLABLE MUU
𑗀	SHAALDAA SYLLABLE MII
𑗁	SHAALDAA SYLLABLE MEE
𑗂	SHAALDAA SYLLABLE MOO
𑗃	SHAALDAA SYLLABLE M
𑗄	SHAALDAA SYLLABLE MM BASE
𑗅	SHAALDAA SYLLABLE MMA
𑗆	SHAALDAA SYLLABLE MMU
𑗇	SHAALDAA SYLLABLE MMI
𑗈	SHAALDAA SYLLABLE MME
𑗉	SHAALDAA SYLLABLE MMO
𑗊	SHAALDAA SYLLABLE MMAA
𑗋	SHAALDAA SYLLABLE MMUU
𑗌	SHAALDAA SYLLABLE MMII
𑗍	SHAALDAA SYLLABLE MMEE
𑗎	SHAALDAA SYLLABLE MMOO
𑗏	SHAALDAA SYLLABLE MM
𑗐	SHAALDAA SYLLABLE N BASE
𑗑	SHAALDAA SYLLABLE NA
𑗒	SHAALDAA SYLLABLE NU
𑗓	SHAALDAA SYLLABLE NI
𑗔	SHAALDAA SYLLABLE NE
𑗕	SHAALDAA SYLLABLE NO
𑗖	SHAALDAA SYLLABLE NAA
𑗗	SHAALDAA SYLLABLE NUU
𑗘	SHAALDAA SYLLABLE NII
𑗙	SHAALDAA SYLLABLE NEE
𑗚	SHAALDAA SYLLABLE NOO
𑗛	SHAALDAA SYLLABLE N

𑖥	SHAALDAA SYLLABLE NN BASE
𑖥𑖰	SHAALDAA SYLLABLE NNA
𑖥𑖱	SHAALDAA SYLLABLE NNU
𑖥𑖲	SHAALDAA SYLLABLE NNI
𑖥𑖳	SHAALDAA SYLLABLE NNE
𑖥𑖴	SHAALDAA SYLLABLE NNO
𑖥𑖰𑖰	SHAALDAA SYLLABLE NNAA
𑖥𑖱𑖱	SHAALDAA SYLLABLE NNUU
𑖥𑖲𑖲	SHAALDAA SYLLABLE NNII
𑖥𑖳𑖳	SHAALDAA SYLLABLE NNEE
𑖥𑖴𑖴	SHAALDAA SYLLABLE NNOO
𑖥𑖵	SHAALDAA SYLLABLE NN
𑖧	SHAALDAA SYLLABLE S BASE
𑖧𑖰	SHAALDAA SYLLABLE SA
𑖧𑖱	SHAALDAA SYLLABLE SU
𑖧𑖲	SHAALDAA SYLLABLE SI
𑖧𑖳	SHAALDAA SYLLABLE SE
𑖧𑖴	SHAALDAA SYLLABLE SO
𑖧𑖰	SHAALDAA SYLLABLE SAA
𑖧𑖱	SHAALDAA SYLLABLE SUU
𑖧𑖲	SHAALDAA SYLLABLE SII
𑖧𑖳	SHAALDAA SYLLABLE SEE
𑖧𑖴	SHAALDAA SYLLABLE SOO
𑖧𑖵	SHAALDAA SYLLABLE S
𑖧𑖧	SHAALDAA SYLLABLE SS BASE
𑖧𑖧𑖰	SHAALDAA SYLLABLE SSA
𑖧𑖧𑖱	SHAALDAA SYLLABLE SSU
𑖧𑖧𑖲	SHAALDAA SYLLABLE SSI
𑖧𑖧𑖳	SHAALDAA SYLLABLE SSE
𑖧𑖧𑖴	SHAALDAA SYLLABLE SSO
𑖧𑖧𑖰	SHAALDAA SYLLABLE SSAA
𑖧𑖧𑖱	SHAALDAA SYLLABLE SSUU
𑖧𑖧𑖲	SHAALDAA SYLLABLE SSII
𑖧𑖧𑖳	SHAALDAA SYLLABLE SSEE
𑖧𑖧𑖴	SHAALDAA SYLLABLE SSOO
𑖧𑖧𑖵	SHAALDAA SYLLABLE SS
𑖨	SHAALDAA SYLLABLE F BASE
𑖨𑖰	SHAALDAA SYLLABLE FA
𑖨𑖱	SHAALDAA SYLLABLE FU

𑆫	SHAALDAA SYLLABLE FI
𑆬	SHAALDAA SYLLABLE FE
𑆭	SHAALDAA SYLLABLE FO
𑆪	SHAALDAA SYLLABLE FAA
𑆯	SHAALDAA SYLLABLE FUU
𑆩	SHAALDAA SYLLABLE FII
𑆱	SHAALDAA SYLLABLE FEE
𑆲	SHAALDAA SYLLABLE FOO
𑆨	SHAALDAA SYLLABLE F
𑆴	SHAALDAA SYLLABLE FF BASE
𑆵	SHAALDAA SYLLABLE FFA
𑆶	SHAALDAA SYLLABLE FFU
𑆷	SHAALDAA SYLLABLE FFI
𑆸	SHAALDAA SYLLABLE FFE
𑆹	SHAALDAA SYLLABLE FFO
𑆺	SHAALDAA SYLLABLE FFAA
𑆼	SHAALDAA SYLLABLE FFUU
𑆻	SHAALDAA SYLLABLE FFII
𑆽	SHAALDAA SYLLABLE FFEE
𑆾	SHAALDAA SYLLABLE FFOO
𑆳	SHAALDAA SYLLABLE FF
𑇁	SHAALDAA SYLLABLE ALTERNATE S BASE
𑇂	SHAALDAA SYLLABLE ALTERNATE SA
𑇄	SHAALDAA SYLLABLE ALTERNATE SU
𑇃	SHAALDAA SYLLABLE ALTERNATE SI
𑇅	SHAALDAA SYLLABLE ALTERNATE SE
𑇆	SHAALDAA SYLLABLE ALTERNATE SO
𑇇	SHAALDAA SYLLABLE ALTERNATE SAA
𑇉	SHAALDAA SYLLABLE ALTERNATE SUU
𑇈	SHAALDAA SYLLABLE ALTERNATE SII
𑇊	SHAALDAA SYLLABLE ALTERNATE SEE
𑇋	SHAALDAA SYLLABLE ALTERNATE SOO
𑇀	SHAALDAA SYLLABLE ALTERNATE S
𑇍	SHAALDAA SYLLABLE ALTERNATE SS BASE
𑇎	SHAALDAA SYLLABLE ALTERNATE SSA
𑇐	SHAALDAA SYLLABLE ALTERNATE SSU
𑇏	SHAALDAA SYLLABLE ALTERNATE SSI
𑇑	SHAALDAA SYLLABLE ALTERNATE SSE
𑇒	SHAALDAA SYLLABLE ALTERNATE SSO

𑆿	SHAALDAA SYLLABLE ALTERNATE SSAA
𑇀	SHAALDAA SYLLABLE ALTERNATE SSUU
𑆾	SHAALDAA SYLLABLE ALTERNATE SSII
𑇁	SHAALDAA SYLLABLE ALTERNATE SSEE
𑇂	SHAALDAA SYLLABLE ALTERNATE SSOO
𑆽	SHAALDAA SYLLABLE ALTERNATE SS
𑇃	SHAALDAA SYLLABLE Q BASE
𑇄	SHAALDAA SYLLABLE QA
𑇅	SHAALDAA SYLLABLE QU
𑇆	SHAALDAA SYLLABLE QI
𑇇	SHAALDAA SYLLABLE QE
𑇈	SHAALDAA SYLLABLE QO
𑇉	SHAALDAA SYLLABLE QAA
𑇊	SHAALDAA SYLLABLE QUU
𑇋	SHAALDAA SYLLABLE QII
𑇌	SHAALDAA SYLLABLE QEE
𑇍	SHAALDAA SYLLABLE QOO
𑇎	SHAALDAA SYLLABLE Q
𑇏	SHAALDAA SYLLABLE QQ BASE
𑇐	SHAALDAA SYLLABLE QQA
𑇑	SHAALDAA SYLLABLE QQU
𑇒	SHAALDAA SYLLABLE QQI
𑇓	SHAALDAA SYLLABLE QQE
𑇔	SHAALDAA SYLLABLE QQO
𑇕	SHAALDAA SYLLABLE QQAA
𑇖	SHAALDAA SYLLABLE QQUU
𑇗	SHAALDAA SYLLABLE QQII
𑇘	SHAALDAA SYLLABLE QQEE
𑇙	SHAALDAA SYLLABLE QQOO
𑇚	SHAALDAA SYLLABLE QQ
𑇛	SHAALDAA SYLLABLE R BASE
𑇜	SHAALDAA SYLLABLE RA
𑇝	SHAALDAA SYLLABLE RU
𑇞	SHAALDAA SYLLABLE RI
𑇟	SHAALDAA SYLLABLE RE
𑇠	SHAALDAA SYLLABLE RO
𑇡	SHAALDAA SYLLABLE RAA
𑇢	SHAALDAA SYLLABLE RUU
𑇣	SHAALDAA SYLLABLE RII

𑆟𑆴	SHAALDAA SYLLABLE REE
𑆟𑆵	SHAALDAA SYLLABLE ROO
𑆟𑆷	SHAALDAA SYLLABLE R
𑆟	SHAALDAA SYLLABLE RR BASE
𑆟𑆸	SHAALDAA SYLLABLE RRA
𑆟𑆹	SHAALDAA SYLLABLE RRU
𑆟𑆺	SHAALDAA SYLLABLE RRI
𑆟𑆻	SHAALDAA SYLLABLE RRE
𑆟𑆼	SHAALDAA SYLLABLE RRO
𑆟𑆽	SHAALDAA SYLLABLE RRAA
𑆟𑆾	SHAALDAA SYLLABLE RRUU
𑆟𑆿	SHAALDAA SYLLABLE RRII
𑆟𑇀	SHAALDAA SYLLABLE RREE
𑆟𑇁	SHAALDAA SYLLABLE RROO
𑆟𑇂	SHAALDAA SYLLABLE RR
𑆠	SHAALDAA SYLLABLE SH BASE
𑆠𑆸	SHAALDAA SYLLABLE SHA
𑆠𑆹	SHAALDAA SYLLABLE SHU
𑆠𑆺	SHAALDAA SYLLABLE SHI
𑆠𑆻	SHAALDAA SYLLABLE SHE
𑆠𑆼	SHAALDAA SYLLABLE SHO
𑆠𑆽	SHAALDAA SYLLABLE SHAA
𑆠𑆾	SHAALDAA SYLLABLE SHUU
𑆠𑆿	SHAALDAA SYLLABLE SHII
𑆠𑇀	SHAALDAA SYLLABLE SHEE
𑆠𑇁	SHAALDAA SYLLABLE SHOO
𑆠𑇂	SHAALDAA SYLLABLE SH
𑆡	SHAALDAA SYLLABLE SSH BASE
𑆡𑆸	SHAALDAA SYLLABLE SSHA
𑆡𑆹	SHAALDAA SYLLABLE SSHU
𑆡𑆺	SHAALDAA SYLLABLE SSHI
𑆡𑆻	SHAALDAA SYLLABLE SSHE
𑆡𑆼	SHAALDAA SYLLABLE SSHO
𑆡𑆽	SHAALDAA SYLLABLE SSHAA
𑆡𑆾	SHAALDAA SYLLABLE SSHUU
𑆡𑆿	SHAALDAA SYLLABLE SSHII
𑆡𑇀	SHAALDAA SYLLABLE SSHEE
𑆡𑇁	SHAALDAA SYLLABLE SSHOO
𑆡𑇂	SHAALDAA SYLLABLE SSH

ᒉ	SHAALDAA SYLLABLE T BASE
ᒊ	SHAALDAA SYLLABLE TA
ᒋ	SHAALDAA SYLLABLE TU
ᒍ	SHAALDAA SYLLABLE TI
ᒎ	SHAALDAA SYLLABLE TE
ᒏ	SHAALDAA SYLLABLE TO
ᒉᐧ	SHAALDAA SYLLABLE TAA
ᒋᐧ	SHAALDAA SYLLABLE TUU
ᒍᐧ	SHAALDAA SYLLABLE TII
ᒎᐧ	SHAALDAA SYLLABLE TEE
ᒏᐧ	SHAALDAA SYLLABLE TOO
ᒐ	SHAALDAA SYLLABLE T
ᒑ	SHAALDAA SYLLABLE TT BASE
ᒑᐦ	SHAALDAA SYLLABLE TTA
ᒑᐨ	SHAALDAA SYLLABLE TTU
ᒑᐩ	SHAALDAA SYLLABLE TTI
ᒑᐪ	SHAALDAA SYLLABLE TTE
ᒑᐫ	SHAALDAA SYLLABLE TTO
ᒑᐧ	SHAALDAA SYLLABLE TTAA
ᒑᐦᐧ	SHAALDAA SYLLABLE TTUU
ᒑᐩᐧ	SHAALDAA SYLLABLE TTII
ᒑᐪᐧ	SHAALDAA SYLLABLE TTEE
ᒑᐫᐧ	SHAALDAA SYLLABLE TTOO
ᒑᐣ	SHAALDAA SYLLABLE TT
ᒣ	SHAALDAA SYLLABLE KH BASE
ᒣᐦ	SHAALDAA SYLLABLE KHA
ᒣᐨ	SHAALDAA SYLLABLE KHU
ᒣᐩ	SHAALDAA SYLLABLE KHI
ᒣᐪ	SHAALDAA SYLLABLE KHE
ᒣᐫ	SHAALDAA SYLLABLE KHO
ᒣᐧ	SHAALDAA SYLLABLE KHAA
ᒣᐦᐧ	SHAALDAA SYLLABLE KHUU
ᒣᐩᐧ	SHAALDAA SYLLABLE KHII
ᒣᐪᐧ	SHAALDAA SYLLABLE KHEE
ᒣᐫᐧ	SHAALDAA SYLLABLE KHOO
ᒣᐣ	SHAALDAA SYLLABLE KH
ᒪ	SHAALDAA SYLLABLE KKH BASE
ᒪᐦ	SHAALDAA SYLLABLE KKHA
ᒪᐨ	SHAALDAA SYLLABLE KKHU

𑖭𑖿	SHAALDAA SYLLABLE KKHI
𑖭𑖾	SHAALDAA SYLLABLE KKHE
𑖭𑖽	SHAALDAA SYLLABLE KKHO
𑖭𑖰	SHAALDAA SYLLABLE KKHAA
𑖭𑖱	SHAALDAA SYLLABLE KKHUU
𑖭𑖲	SHAALDAA SYLLABLE KKHII
𑖭𑖳	SHAALDAA SYLLABLE KKHEE
𑖭𑖴	SHAALDAA SYLLABLE KKHOO
𑖭𑖵	SHAALDAA SYLLABLE KKH
𑖮	SHAALDAA SYLLABLE DH BASE
𑖮𑖰	SHAALDAA SYLLABLE DHA
𑖮𑖱	SHAALDAA SYLLABLE DHU
𑖮𑖿	SHAALDAA SYLLABLE DHI
𑖮𑖾	SHAALDAA SYLLABLE DHE
𑖮𑖽	SHAALDAA SYLLABLE DHO
𑖮𑖰	SHAALDAA SYLLABLE DHAA
𑖮𑖱	SHAALDAA SYLLABLE DHUU
𑖮𑖲	SHAALDAA SYLLABLE DHII
𑖮𑖳	SHAALDAA SYLLABLE DHEE
𑖮𑖴	SHAALDAA SYLLABLE DHOO
𑖮𑖵	SHAALDAA SYLLABLE DH
𑖯	SHAALDAA SYLLABLE DDH BASE
𑖯𑖰	SHAALDAA SYLLABLE DDHA
𑖯𑖱	SHAALDAA SYLLABLE DDHU
𑖯𑖿	SHAALDAA SYLLABLE DDHI
𑖯𑖾	SHAALDAA SYLLABLE DDHE
𑖯𑖽	SHAALDAA SYLLABLE DDHO
𑖯𑖰	SHAALDAA SYLLABLE DDHAA
𑖯𑖱	SHAALDAA SYLLABLE DDHUU
𑖯𑖲	SHAALDAA SYLLABLE DDHII
𑖯𑖳	SHAALDAA SYLLABLE DDHEE
𑖯𑖴	SHAALDAA SYLLABLE DDHOO
𑖯𑖵	SHAALDAA SYLLABLE DDH
𑖰	SHAALDAA SYLLABLE G BASE
𑖰𑖰	SHAALDAA SYLLABLE GA
𑖰𑖱	SHAALDAA SYLLABLE GU
𑖰𑖿	SHAALDAA SYLLABLE GI
𑖰𑖾	SHAALDAA SYLLABLE GE
𑖰𑖽	SHAALDAA SYLLABLE GO

𑴈	SHAALDAA SYLLABLE GAA
𑴉	SHAALDAA SYLLABLE GUU
𑴊	SHAALDAA SYLLABLE GII
𑴋	SHAALDAA SYLLABLE GEE
𑴌	SHAALDAA SYLLABLE GOO
𑴍	SHAALDAA SYLLABLE G
𑴎	SHAALDAA SYLLABLE GG BASE
𑴎𑴈	SHAALDAA SYLLABLE GGA
𑴎𑴉	SHAALDAA SYLLABLE GGU
𑴎𑴊	SHAALDAA SYLLABLE GGI
𑴎𑴋	SHAALDAA SYLLABLE GGE
𑴎𑴌	SHAALDAA SYLLABLE GGO
𑴎𑴈𑴈	SHAALDAA SYLLABLE GGAA
𑴎𑴉	SHAALDAA SYLLABLE GGUU
𑴎𑴊𑴊	SHAALDAA SYLLABLE GGII
𑴎𑴋	SHAALDAA SYLLABLE GGEE
𑴎𑴌	SHAALDAA SYLLABLE GGOO
𑴎	SHAALDAA SYLLABLE GG
𑴏	SHAALDAA SYLLABLE C BASE
𑴏𑴈	SHAALDAA SYLLABLE CA
𑴏𑴉	SHAALDAA SYLLABLE CU
𑴏𑴊	SHAALDAA SYLLABLE CI
𑴏𑴋	SHAALDAA SYLLABLE CE
𑴏𑴌	SHAALDAA SYLLABLE CO
𑴏𑴈𑴈	SHAALDAA SYLLABLE CAA
𑴏𑴉	SHAALDAA SYLLABLE CUU
𑴏𑴊𑴊	SHAALDAA SYLLABLE CII
𑴏𑴋	SHAALDAA SYLLABLE CEE
𑴏𑴌	SHAALDAA SYLLABLE COO
𑴏𑴍	SHAALDAA SYLLABLE C
𑴐	SHAALDAA SYLLABLE CC BASE
𑴐𑴈	SHAALDAA SYLLABLE CCA
𑴐𑴉	SHAALDAA SYLLABLE CCU
𑴐𑴊	SHAALDAA SYLLABLE CCI
𑴐𑴋	SHAALDAA SYLLABLE CCE
𑴐𑴌	SHAALDAA SYLLABLE CCO
𑴐𑴈𑴈	SHAALDAA SYLLABLE CCAA
𑴐𑴉	SHAALDAA SYLLABLE CCUU
𑴐𑴊𑴊	SHAALDAA SYLLABLE CCII

	SHAALDAA SYLLABLE CCEE
	SHAALDAA SYLLABLE CCOO
	SHAALDAA SYLLABLE CC
	SHAALDAA SYLLABLE NY BASE
	SHAALDAA SYLLABLE NYA
	SHAALDAA SYLLABLE NYU
	SHAALDAA SYLLABLE NYI
	SHAALDAA SYLLABLE NYE
	SHAALDAA SYLLABLE NYO
	SHAALDAA SYLLABLE NYAA
	SHAALDAA SYLLABLE NYUU
	SHAALDAA SYLLABLE NYII
	SHAALDAA SYLLABLE NYEE
	SHAALDAA SYLLABLE NYOO
	SHAALDAA SYLLABLE NY
	SHAALDAA SYLLABLE NNY BASE
	SHAALDAA SYLLABLE NNYA
	SHAALDAA SYLLABLE NNYU
	SHAALDAA SYLLABLE NNYI
	SHAALDAA SYLLABLE NNYE
	SHAALDAA SYLLABLE NNYO
	SHAALDAA SYLLABLE NNYAA
	SHAALDAA SYLLABLE NNYUU
	SHAALDAA SYLLABLE NNYII
	SHAALDAA SYLLABLE NNYEE
	SHAALDAA SYLLABLE NNYOO
	SHAALDAA SYLLABLE NNY
	SHAALDAA SYLLABLE CH BASE
	SHAALDAA SYLLABLE CHA
	SHAALDAA SYLLABLE CHU
	SHAALDAA SYLLABLE CHI
	SHAALDAA SYLLABLE CHE
	SHAALDAA SYLLABLE CHO
	SHAALDAA SYLLABLE CHAA
	SHAALDAA SYLLABLE CHUU
	SHAALDAA SYLLABLE CHII
	SHAALDAA SYLLABLE CHEE
	SHAALDAA SYLLABLE CHOO
	SHAALDAA SYLLABLE CH

𑒛	SHAALDAA SYLLABLE CCH BASE
𑒛𑒰	SHAALDAA SYLLABLE CCHA
𑒛𑒱	SHAALDAA SYLLABLE CCHU
𑒛𑒲	SHAALDAA SYLLABLE CCHI
𑒛𑒳	SHAALDAA SYLLABLE CCHE
𑒛𑒴	SHAALDAA SYLLABLE CCHO
𑒛𑒰𑒯	SHAALDAA SYLLABLE CCHAA
𑒛𑒱𑒯	SHAALDAA SYLLABLE CCHUU
𑒛𑒲𑒯	SHAALDAA SYLLABLE CCHII
𑒛𑒳𑒯	SHAALDAA SYLLABLE CCHEE
𑒛𑒴𑒯	SHAALDAA SYLLABLE CCHOO
𑒛𑒻	SHAALDAA SYLLABLE CCH
𑒜	SHAALDAA SYLLABLE PH BASE
𑒜𑒰	SHAALDAA SYLLABLE PHA
𑒜𑒱	SHAALDAA SYLLABLE PHU
𑒜𑒲	SHAALDAA SYLLABLE PHI
𑒜𑒳	SHAALDAA SYLLABLE PHE
𑒜𑒴	SHAALDAA SYLLABLE PHO
𑒜𑒯	SHAALDAA SYLLABLE PHAA
𑒜𑒱𑒯	SHAALDAA SYLLABLE PHUU
𑒜𑒲𑒯	SHAALDAA SYLLABLE PHII
𑒜𑒳𑒯	SHAALDAA SYLLABLE PHEE
𑒜𑒴𑒯	SHAALDAA SYLLABLE PHOO
𑒜𑒻	SHAALDAA SYLLABLE PH
𑒝	SHAALDAA SYLLABLE PPH BASE
𑒝𑒰	SHAALDAA SYLLABLE PPHA
𑒝𑒱	SHAALDAA SYLLABLE PPHU
𑒝𑒲	SHAALDAA SYLLABLE PPHI
𑒝𑒳	SHAALDAA SYLLABLE PPHE
𑒝𑒴	SHAALDAA SYLLABLE PPHO
𑒝𑒯	SHAALDAA SYLLABLE PPHAA
𑒝𑒱𑒯	SHAALDAA SYLLABLE PPHUU
𑒝𑒲𑒯	SHAALDAA SYLLABLE PPHII
𑒝𑒳𑒯	SHAALDAA SYLLABLE PPHEE
𑒝𑒴𑒯	SHAALDAA SYLLABLE PPHOO
𑒝𑒻	SHAALDAA SYLLABLE PPH
𑒞	SHAALDAA SYLLABLE PHARYNGEAL BASE
𑒞𑒰	SHAALDAA SYLLABLE PHARYNGEAL A
𑒞𑒱	SHAALDAA SYLLABLE PHARYNGEAL U

𑐴	SHAALDAA SYLLABLE PHARYNGEAL I
𑐵	SHAALDAA SYLLABLE PHARYNGEAL E
𑐶	SHAALDAA SYLLABLE PHARYNGEAL O
𑐷	SHAALDAA SYLLABLE PHARYNGEAL AA
𑐸	SHAALDAA SYLLABLE PHARYNGEAL UU
𑐹	SHAALDAA SYLLABLE PHARYNGEAL II
𑐺	SHAALDAA SYLLABLE PHARYNGEAL EE
𑐻	SHAALDAA SYLLABLE PHARYNGEAL OO
𑐼	SHAALDAA SYLLABLE PHARYNGEAL
𑐽	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL BASE
𑐾	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL A
𑐿	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL U
𑑀	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL I
𑑁	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL E
𑑂	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL O
𑑃	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL AA
𑑄	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL UU
𑑅	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL II
𑑆	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL EE
𑑇	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL OO
𑑈	SHAALDAA SYLLABLE GEMINATE PHARYNGEAL
𑑉	SHAALDAA SYLLABLE P BASE
𑑊	SHAALDAA SYLLABLE PA
𑑋	SHAALDAA SYLLABLE PU
𑑌	SHAALDAA SYLLABLE PI
𑑍	SHAALDAA SYLLABLE PE
𑑎	SHAALDAA SYLLABLE PO
𑑏	SHAALDAA SYLLABLE PAA
𑑐	SHAALDAA SYLLABLE PUU
𑑑	SHAALDAA SYLLABLE PII
𑑒	SHAALDAA SYLLABLE PEE
𑑓	SHAALDAA SYLLABLE POO
𑑔	SHAALDAA SYLLABLE P
𑑕	SHAALDAA SYLLABLE PP BASE
𑑖	SHAALDAA SYLLABLE PPA
𑑗	SHAALDAA SYLLABLE PPU
𑑘	SHAALDAA SYLLABLE PPI
𑑙	SHAALDAA SYLLABLE PPE
𑑚	SHAALDAA SYLLABLE PPO

𑖮	SHAALDAA SYLLABLE PPAA
𑖯	SHAALDAA SYLLABLE PPUU
𑖰	SHAALDAA SYLLABLE PPII
𑖱	SHAALDAA SYLLABLE PPEE
𑖲	SHAALDAA SYLLABLE PPOO
𑖳	SHAALDAA SYLLABLE PP
𑖴	SHAALDAA SYLLABLE V BASE
𑖵	SHAALDAA SYLLABLE VA
𑖶	SHAALDAA SYLLABLE VU
𑖷	SHAALDAA SYLLABLE VI
𑖸	SHAALDAA SYLLABLE VE
𑖹	SHAALDAA SYLLABLE VO
𑖺	SHAALDAA SYLLABLE VAA
𑖻	SHAALDAA SYLLABLE VUU
𑖼	SHAALDAA SYLLABLE VII
𑖽	SHAALDAA SYLLABLE VEE
𑖾	SHAALDAA SYLLABLE VOO
𑖿	SHAALDAA SYLLABLE V
𑗀	SHAALDAA SYLLABLE VV BASE
𑗁	SHAALDAA SYLLABLE VVA
𑗂	SHAALDAA SYLLABLE VVU
𑗃	SHAALDAA SYLLABLE VVI
𑗄	SHAALDAA SYLLABLE VVE
𑗅	SHAALDAA SYLLABLE VVO
𑗆	SHAALDAA SYLLABLE VVAA
𑗇	SHAALDAA SYLLABLE VVUU
𑗈	SHAALDAA SYLLABLE VVII
𑗉	SHAALDAA SYLLABLE VVEE
𑗊	SHAALDAA SYLLABLE VVOO
𑗋	SHAALDAA SYLLABLE VV
𑗌	SHAALDAA SYLLABLE ZH BASE
𑗍	SHAALDAA SYLLABLE ZHA
𑗎	SHAALDAA SYLLABLE ZHU
𑗏	SHAALDAA SYLLABLE ZHI
𑗐	SHAALDAA SYLLABLE ZHE
𑗑	SHAALDAA SYLLABLE ZHO
𑗒	SHAALDAA SYLLABLE ZHAA
𑗓	SHAALDAA SYLLABLE ZHUU
𑗔	SHAALDAA SYLLABLE ZHII

𑖵𑖽	SHAALDAA SYLLABLE ZHEE
𑖵𑖾	SHAALDAA SYLLABLE ZHOO
𑖵𑖿	SHAALDAA SYLLABLE ZH
𑖶	SHAALDAA SYLLABLE ZZH BASE
𑖶𑖰	SHAALDAA SYLLABLE ZZHA
𑖶𑖱	SHAALDAA SYLLABLE ZZHU
𑖶𑖲	SHAALDAA SYLLABLE ZZHI
𑖶𑖴	SHAALDAA SYLLABLE ZZHE
𑖶𑖵	SHAALDAA SYLLABLE ZZHO
𑖶𑖰	SHAALDAA SYLLABLE ZZHAA
𑖶𑖱	SHAALDAA SYLLABLE ZZHUU
𑖶𑖲	SHAALDAA SYLLABLE ZZHII
𑖶𑖽	SHAALDAA SYLLABLE ZZHEE
𑖶𑖾	SHAALDAA SYLLABLE ZZHOO
𑖶𑖿	SHAALDAA SYLLABLE ZZH
𑖷	SHAALDAA SYLLABLE TS BASE
𑖷𑖰	SHAALDAA SYLLABLE TSA
𑖷𑖱	SHAALDAA SYLLABLE TSU
𑖷𑖲	SHAALDAA SYLLABLE TSI
𑖷𑖴	SHAALDAA SYLLABLE TSE
𑖷𑖵	SHAALDAA SYLLABLE TSO
𑖷𑖰	SHAALDAA SYLLABLE TSAA
𑖷𑖱	SHAALDAA SYLLABLE TSUU
𑖷𑖲	SHAALDAA SYLLABLE TSII
𑖷𑖽	SHAALDAA SYLLABLE TSEE
𑖷𑖾	SHAALDAA SYLLABLE TSOO
𑖷𑖿	SHAALDAA SYLLABLE TS
𑖸	SHAALDAA SYLLABLE TTS BASE
𑖸𑖰	SHAALDAA SYLLABLE TTSA
𑖸𑖱	SHAALDAA SYLLABLE TTSU
𑖸𑖲	SHAALDAA SYLLABLE TTSI
𑖸𑖴	SHAALDAA SYLLABLE TTSE
𑖸𑖵	SHAALDAA SYLLABLE TTSO
𑖸𑖰	SHAALDAA SYLLABLE TTSAA
𑖸𑖱	SHAALDAA SYLLABLE TTSUU
𑖸𑖲	SHAALDAA SYLLABLE TTSII
𑖸𑖽	SHAALDAA SYLLABLE TTSEE
𑖸𑖾	SHAALDAA SYLLABLE TTSOO
𑖸𑖿	SHAALDAA SYLLABLE TTS

𞥐	SHAALDAA DIGIT ZERO
𞥑	SHAALDAA DIGIT ONE
𞥒	SHAALDAA DIGIT TWO
𞥓	SHAALDAA DIGIT THREE
𞥔	SHAALDAA DIGIT FOUR
𞥕	SHAALDAA DIGIT FIVE
𞥖	SHAALDAA DIGIT SIX
𞥗	SHAALDAA DIGIT SEVEN
𞥘	SHAALDAA DIGIT EIGHT
𞥙	SHAALDAA DIGIT NINE
𞥟	SHAALDAA WORDSPACE
𞥞	SHAALDAA FULL STOP

Table 2. The Shaaldaa Orthography

Additional information on characters

Phonetic value

The authors have already provided IPA values in Table 1 in Section III above. Therefore, here the authors will provide additional clarifying information for the phonemes associated with certain graphemes.

𞤩 (/ħ/) (and it's vocalized, pure consonant, and geminated counterparts) is reserved for words of Arabic origin, representing the Arabic letter <ح>.

𞤮 (/s/) and 𞤯 (/s/), and their counterparts, are perceived the same in Oromo. Hayward and Hassen (1981; pages 561-562 of Reference 1, Section VII) state:

> "*Another matter that appears to challenge the phonemic ideal is the fact that there are two symbols each for **h** and **s**, though all competent linguistic descriptions are fairly unanimous in according the language only on **h** (laryngeal fricative) phoneme and one **s** (alveolar sibilant) phoneme. The matrices of Figs. 2–4, as well as the accompanying illustrative sentences, are unhelpful in this case, for **h**^{1} and **h**^{2} are used in what appears to be a quite unprincipled way. When, however, we examine Shaykh Bakri's own use of **h**^{1} and **h**^{2} (at least in the MS of the letter shown in plate I) we discover that **h**^{1} is employed consistently to represent the laryngeal fricative, while **h**^{2} is used only to represent a voiceless pharyngeal fricative. The latter occurs, of course, only in words borrowed from Arabic, as, for example, in the proper names Ḥāmid, Aḥmad and Fāraḥ, all of which appear in line 3 of the letter. It seems then that it was Shaykh Bakri's intention to maintain the Arabic distinction in written Oromo, though it seems odd that **h**^{2} appears in the main matrix of symbols, rather than with the separate list of symbols provided for the representation of other non-Oromo sounds (see below [Table 4 in this proposal]). Why there are two symbols for **s**, however, is not at all clear. In Matrix 2 (shown in Fig. 2) the Ethiopic equivalents of **s**^{1} and **s**^{2} are given as ሰ and ሠ respectively. From a strictly linguistic viewpoint there is even less need for two **s**'s in Oromo than there is in Modern Amharic, for the latter does at least have etymological justification for this graphic redundancy. Within the limited corpus at our disposal **s**^{2} appears only twice, and both of these occurrences are in abbreviations which appear in line 1 of Shaykh Bakri's letter. Unfortunately, these shed little light on the significance of **s**^{2}, since we are at present quite unable to say what these abbreviations stand for. The only thing that does seem clear is that **s**^{2}, like its Amharic counterpart **ሠ**, is, in some sense, a 'special' letter.*"

𞤲 (and all its counterparts) is phonetically /x/, which is an allophone of /k/. Hayward and Hassen (1981; page 561 of Reference 1, Section VII) state:

"It is clear from a study of Eastern Oromo that /k/ and /x/ are really realizations of the same phoneme. In long intervocalic occurrences or when following a liquid or nasal we find only /k/, while in short intervocalic occurrences we usually find /x/. Word-initially, however, the two sounds are in variation. This variation is witnessed rather nicely in the example sentences and phrases which illustrate the use of the orthography; see Fig. 5. In the second line we find the question [[illegible]] ***Maqānkē ēññu*** *'What is your name?'. It is written both in Shaykh Bakri's orthography and in Ethiopic [መቃንኬ፡ኤኙ]. Later on in the thirteenth line, we find the phrase [[illegible]]* ***oboleyan kē*** *'your brother'. In the first case the possessive [[illegible]]* ***kē*** *is treated as an enclitic and since it then follows the nasal is spelled with [[illegible]]* ***kX****, while in the second case it is not treated as an enclitic and is spelled with [[illegible]]* ***xX****. On the eighth line the first symbol of [[illegible]]* ***katabān*** *'writing' is [[illegible]]* ***xII****, while the final word of the last line [[illegible]]* ***Kabirā****, [a] 'proper name' has [[illegible]]* ***kII*** *initially. A further indication that the /****k****/ : /****x****/ distinction is a subphonemic one appears in the spelling of [[illegible]]* ***bēke*** *'I know' on line 4. In the Shaykh's orthography the sound (/x/) is spelled with xV, but in Ethiopic with* ***ኸ****. The fact that an attempt was made in this case to distinguish what are clearly only allophones may very well be explained as a hypersensitivity to phonetic distinctions brought about by Shaykh Bakri's awareness of the phonemic contrast* of ك : خ in *Arabic."*

- Sheikh Bakri's use of Ethiopic ኸ for /x/ parallels Harari, Tigrinya, Tigre, and the Gurage languages.

Joining information

There is no joining for any aspect of the script

Punctuation

Words are separated either with the script-specific word-separator, ⁚. Sentences are ended with the script-specific full-stop, ═.

Numbers

Numbers 0-9 are represented with:

V Properties

All letters in this proposal are simple syllables with common property values (Letter Other, Left-to-Right, non-combining, and non-mirrored):

```
1C800;SHAALDAA SYLLABLE VOWEL BASE;Lo;0;L;;;;;N;;;;;
1C801;SHAALDAA SYLLABLE A;Lo;0;L;;;;;N;;;;;
1C802;SHAALDAA SYLLABLE U;Lo;0;L;;;;;N;;;;;
1C803;SHAALDAA SYLLABLE I;Lo;0;L;;;;;N;;;;;
1C804;SHAALDAA SYLLABLE E;Lo;0;L;;;;;N;;;;;
1C805;SHAALDAA SYLLABLE O;Lo;0;L;;;;;N;;;;;
1C806;SHAALDAA SYLLABLE AA;Lo;0;L;;;;;N;;;;;
1C807;SHAALDAA SYLLABLE UU;Lo;0;L;;;;;N;;;;;
1C808;SHAALDAA SYLLABLE II;Lo;0;L;;;;;N;;;;;
1C809;SHAALDAA SYLLABLE EE;Lo;0;L;;;;;N;;;;;
1C80A;SHAALDAA SYLLABLE OO;Lo;0;L;;;;;N;;;;;
1C80B;SHAALDAA SYLLABLE GLOTTAL STOP;Lo;0;L;;;;;N;;;;;
1C80C;SHAALDAA SYLLABLE GEMINATE VOWEL BASE;Lo;0;L;;;;;N;;;;;
1C80D;SHAALDAA SYLLABLE GEMINATE A;Lo;0;L;;;;;N;;;;;
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```
1C80E;SHAALDAA SYLLABLE GEMINATE U;Lo;0;L;;;;;N;;;;;
1C80F;SHAALDAA SYLLABLE GEMINATE I;Lo;0;L;;;;;N;;;;;
1C810;SHAALDAA SYLLABLE GEMINATE E;Lo;0;L;;;;;N;;;;;
1C811;SHAALDAA SYLLABLE GEMINATE O;Lo;0;L;;;;;N;;;;;
1C812;SHAALDAA SYLLABLE GEMINATE AA;Lo;0;L;;;;;N;;;;;
1C813;SHAALDAA SYLLABLE GEMINATE UU;Lo;0;L;;;;;N;;;;;
1C814;SHAALDAA SYLLABLE GEMINATE II;Lo;0;L;;;;;N;;;;;
1C815;SHAALDAA SYLLABLE GEMINATE EE;Lo;0;L;;;;;N;;;;;
1C816;SHAALDAA SYLLABLE GEMINATE OO;Lo;0;L;;;;;N;;;;;
1C817;SHAALDAA SYLLABLE GEMINATE GLOTTAL STOP;Lo;0;L;;;;;N;;;;;
1C818;SHAALDAA SYLLABLE B BASE;Lo;0;L;;;;;N;;;;;
1C819;SHAALDAA SYLLABLE BA;Lo;0;L;;;;;N;;;;;
1C81A;SHAALDAA SYLLABLE BU;Lo;0;L;;;;;N;;;;;
1C81B;SHAALDAA SYLLABLE BI;Lo;0;L;;;;;N;;;;;
1C81C;SHAALDAA SYLLABLE BE;Lo;0;L;;;;;N;;;;;
1C81D;SHAALDAA SYLLABLE BO;Lo;0;L;;;;;N;;;;;
1C81E;SHAALDAA SYLLABLE BAA;Lo;0;L;;;;;N;;;;;
1C81F;SHAALDAA SYLLABLE BUU;Lo;0;L;;;;;N;;;;;
1C820;SHAALDAA SYLLABLE BII;Lo;0;L;;;;;N;;;;;
1C821;SHAALDAA SYLLABLE BEE;Lo;0;L;;;;;N;;;;;
1C822;SHAALDAA SYLLABLE BOO;Lo;0;L;;;;;N;;;;;
1C823;SHAALDAA SYLLABLE B;Lo;0;L;;;;;N;;;;;
1C824;SHAALDAA SYLLABLE BB BASE;Lo;0;L;;;;;N;;;;;
1C825;SHAALDAA SYLLABLE BBA;Lo;0;L;;;;;N;;;;;
1C826;SHAALDAA SYLLABLE BBU;Lo;0;L;;;;;N;;;;;
1C827;SHAALDAA SYLLABLE BBI;Lo;0;L;;;;;N;;;;;
1C828;SHAALDAA SYLLABLE BBE;Lo;0;L;;;;;N;;;;;
1C829;SHAALDAA SYLLABLE BBO;Lo;0;L;;;;;N;;;;;
1C82A;SHAALDAA SYLLABLE BBAA;Lo;0;L;;;;;N;;;;;
1C82B;SHAALDAA SYLLABLE BBUU;Lo;0;L;;;;;N;;;;;
1C82C;SHAALDAA SYLLABLE BBII;Lo;0;L;;;;;N;;;;;
1C82D;SHAALDAA SYLLABLE BBEE;Lo;0;L;;;;;N;;;;;
1C82E;SHAALDAA SYLLABLE BBOO;Lo;0;L;;;;;N;;;;;
1C82F;SHAALDAA SYLLABLE BB;Lo;0;L;;;;;N;;;;;
1C830;SHAALDAA SYLLABLE J BASE;Lo;0;L;;;;;N;;;;;
1C831;SHAALDAA SYLLABLE JA;Lo;0;L;;;;;N;;;;;
1C832;SHAALDAA SYLLABLE JU;Lo;0;L;;;;;N;;;;;
1C833;SHAALDAA SYLLABLE JI;Lo;0;L;;;;;N;;;;;
1C834;SHAALDAA SYLLABLE JE;Lo;0;L;;;;;N;;;;;
1C835;SHAALDAA SYLLABLE JO;Lo;0;L;;;;;N;;;;;
1C836;SHAALDAA SYLLABLE JAA;Lo;0;L;;;;;N;;;;;
1C837;SHAALDAA SYLLABLE JUU;Lo;0;L;;;;;N;;;;;
1C838;SHAALDAA SYLLABLE JII;Lo;0;L;;;;;N;;;;;
1C839;SHAALDAA SYLLABLE JEE;Lo;0;L;;;;;N;;;;;
1C83A;SHAALDAA SYLLABLE JOO;Lo;0;L;;;;;N;;;;;
1C83B;SHAALDAA SYLLABLE J;Lo;0;L;;;;;N;;;;;
1C83C;SHAALDAA SYLLABLE JJ BASE;Lo;0;L;;;;;N;;;;;
1C83D;SHAALDAA SYLLABLE JJA;Lo;0;L;;;;;N;;;;;
1C83E;SHAALDAA SYLLABLE JJU;Lo;0;L;;;;;N;;;;;
1C83F;SHAALDAA SYLLABLE JJI;Lo;0;L;;;;;N;;;;;
1C840;SHAALDAA SYLLABLE JJE;Lo;0;L;;;;;N;;;;;
1C841;SHAALDAA SYLLABLE JJO;Lo;0;L;;;;;N;;;;;
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1C842;SHAALDAA SYLLABLE JJAA;Lo;0;L;;;;;N;;;;;
1C843;SHAALDAA SYLLABLE JJUU;Lo;0;L;;;;;N;;;;;
1C844;SHAALDAA SYLLABLE JJII;Lo;0;L;;;;;N;;;;;
1C845;SHAALDAA SYLLABLE JJEE;Lo;0;L;;;;;N;;;;;
1C846;SHAALDAA SYLLABLE JJOO;Lo;0;L;;;;;N;;;;;
1C847;SHAALDAA SYLLABLE JJ;Lo;0;L;;;;;N;;;;;
1C848;SHAALDAA SYLLABLE D BASE;Lo;0;L;;;;;N;;;;;
1C849;SHAALDAA SYLLABLE DA;Lo;0;L;;;;;N;;;;;
1C84A;SHAALDAA SYLLABLE DU;Lo;0;L;;;;;N;;;;;
1C84B;SHAALDAA SYLLABLE DI;Lo;0;L;;;;;N;;;;;
1C84C;SHAALDAA SYLLABLE DE;Lo;0;L;;;;;N;;;;;
1C84D;SHAALDAA SYLLABLE DO;Lo;0;L;;;;;N;;;;;
1C84E;SHAALDAA SYLLABLE DAA;Lo;0;L;;;;;N;;;;;
1C84F;SHAALDAA SYLLABLE DUU;Lo;0;L;;;;;N;;;;;
1C850;SHAALDAA SYLLABLE DII;Lo;0;L;;;;;N;;;;;
1C851;SHAALDAA SYLLABLE DEE;Lo;0;L;;;;;N;;;;;
1C852;SHAALDAA SYLLABLE DOO;Lo;0;L;;;;;N;;;;;
1C853;SHAALDAA SYLLABLE D;Lo;0;L;;;;;N;;;;;
1C854;SHAALDAA SYLLABLE DD BASE;Lo;0;L;;;;;N;;;;;
1C855;SHAALDAA SYLLABLE DDA;Lo;0;L;;;;;N;;;;;
1C856;SHAALDAA SYLLABLE DDU;Lo;0;L;;;;;N;;;;;
1C857;SHAALDAA SYLLABLE DDI;Lo;0;L;;;;;N;;;;;
1C858;SHAALDAA SYLLABLE DDE;Lo;0;L;;;;;N;;;;;
1C859;SHAALDAA SYLLABLE DDO;Lo;0;L;;;;;N;;;;;
1C85A;SHAALDAA SYLLABLE DDAA;Lo;0;L;;;;;N;;;;;
1C85B;SHAALDAA SYLLABLE DDUU;Lo;0;L;;;;;N;;;;;
1C85C;SHAALDAA SYLLABLE DDII;Lo;0;L;;;;;N;;;;;
1C85D;SHAALDAA SYLLABLE DDEE;Lo;0;L;;;;;N;;;;;
1C85E;SHAALDAA SYLLABLE DDOO;Lo;0;L;;;;;N;;;;;
1C85F;SHAALDAA SYLLABLE DD;Lo;0;L;;;;;N;;;;;
1C860;SHAALDAA SYLLABLE H BASE;Lo;0;L;;;;;N;;;;;
1C861;SHAALDAA SYLLABLE HA;Lo;0;L;;;;;N;;;;;
1C862;SHAALDAA SYLLABLE HU;Lo;0;L;;;;;N;;;;;
1C863;SHAALDAA SYLLABLE HI;Lo;0;L;;;;;N;;;;;
1C864;SHAALDAA SYLLABLE HE;Lo;0;L;;;;;N;;;;;
1C865;SHAALDAA SYLLABLE HO;Lo;0;L;;;;;N;;;;;
1C866;SHAALDAA SYLLABLE HAA;Lo;0;L;;;;;N;;;;;
1C867;SHAALDAA SYLLABLE HUU;Lo;0;L;;;;;N;;;;;
1C868;SHAALDAA SYLLABLE HII;Lo;0;L;;;;;N;;;;;
1C869;SHAALDAA SYLLABLE HEE;Lo;0;L;;;;;N;;;;;
1C86A;SHAALDAA SYLLABLE HOO;Lo;0;L;;;;;N;;;;;
1C86B;SHAALDAA SYLLABLE H;Lo;0;L;;;;;N;;;;;
1C86C;SHAALDAA SYLLABLE HH BASE;Lo;0;L;;;;;N;;;;;
1C86D;SHAALDAA SYLLABLE HHA;Lo;0;L;;;;;N;;;;;
1C86E;SHAALDAA SYLLABLE HHU;Lo;0;L;;;;;N;;;;;
1C86F;SHAALDAA SYLLABLE HHI;Lo;0;L;;;;;N;;;;;
1C870;SHAALDAA SYLLABLE HHE;Lo;0;L;;;;;N;;;;;
1C871;SHAALDAA SYLLABLE HHO;Lo;0;L;;;;;N;;;;;
1C872;SHAALDAA SYLLABLE HHAA;Lo;0;L;;;;;N;;;;;
1C873;SHAALDAA SYLLABLE HHUU;Lo;0;L;;;;;N;;;;;
1C874;SHAALDAA SYLLABLE HHII;Lo;0;L;;;;;N;;;;;
1C875;SHAALDAA SYLLABLE HHEE;Lo;0;L;;;;;N;;;;;
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1C876;SHAALDAA SYLLABLE HHOO;Lo;0;L;;;;;N;;;;;
1C877;SHAALDAA SYLLABLE HH;Lo;0;L;;;;;N;;;;;
1C878;SHAALDAA SYLLABLE W BASE;Lo;0;L;;;;;N;;;;;
1C879;SHAALDAA SYLLABLE WA;Lo;0;L;;;;;N;;;;;
1C87A;SHAALDAA SYLLABLE WU;Lo;0;L;;;;;N;;;;;
1C87B;SHAALDAA SYLLABLE WI;Lo;0;L;;;;;N;;;;;
1C87C;SHAALDAA SYLLABLE WE;Lo;0;L;;;;;N;;;;;
1C87D;SHAALDAA SYLLABLE WO;Lo;0;L;;;;;N;;;;;
1C87E;SHAALDAA SYLLABLE WAA;Lo;0;L;;;;;N;;;;;
1C87F;SHAALDAA SYLLABLE WUU;Lo;0;L;;;;;N;;;;;
1C880;SHAALDAA SYLLABLE WII;Lo;0;L;;;;;N;;;;;
1C881;SHAALDAA SYLLABLE WEE;Lo;0;L;;;;;N;;;;;
1C882;SHAALDAA SYLLABLE WOO;Lo;0;L;;;;;N;;;;;
1C883;SHAALDAA SYLLABLE W;Lo;0;L;;;;;N;;;;;
1C884;SHAALDAA SYLLABLE WW BASE;Lo;0;L;;;;;N;;;;;
1C885;SHAALDAA SYLLABLE WWA;Lo;0;L;;;;;N;;;;;
1C886;SHAALDAA SYLLABLE WWU;Lo;0;L;;;;;N;;;;;
1C887;SHAALDAA SYLLABLE WWI;Lo;0;L;;;;;N;;;;;
1C888;SHAALDAA SYLLABLE WWE;Lo;0;L;;;;;N;;;;;
1C889;SHAALDAA SYLLABLE WWO;Lo;0;L;;;;;N;;;;;
1C88A;SHAALDAA SYLLABLE WWAA;Lo;0;L;;;;;N;;;;;
1C88B;SHAALDAA SYLLABLE WWUU;Lo;0;L;;;;;N;;;;;
1C88C;SHAALDAA SYLLABLE WWII;Lo;0;L;;;;;N;;;;;
1C88D;SHAALDAA SYLLABLE WWEE;Lo;0;L;;;;;N;;;;;
1C88E;SHAALDAA SYLLABLE WWOO;Lo;0;L;;;;;N;;;;;
1C88F;SHAALDAA SYLLABLE WW;Lo;0;L;;;;;N;;;;;
1C890;SHAALDAA SYLLABLE Z BASE;Lo;0;L;;;;;N;;;;;
1C891;SHAALDAA SYLLABLE ZA;Lo;0;L;;;;;N;;;;;
1C892;SHAALDAA SYLLABLE ZU;Lo;0;L;;;;;N;;;;;
1C893;SHAALDAA SYLLABLE ZI;Lo;0;L;;;;;N;;;;;
1C894;SHAALDAA SYLLABLE ZE;Lo;0;L;;;;;N;;;;;
1C895;SHAALDAA SYLLABLE ZO;Lo;0;L;;;;;N;;;;;
1C896;SHAALDAA SYLLABLE ZAA;Lo;0;L;;;;;N;;;;;
1C897;SHAALDAA SYLLABLE ZUU;Lo;0;L;;;;;N;;;;;
1C898;SHAALDAA SYLLABLE ZII;Lo;0;L;;;;;N;;;;;
1C899;SHAALDAA SYLLABLE ZEE;Lo;0;L;;;;;N;;;;;
1C89A;SHAALDAA SYLLABLE ZOO;Lo;0;L;;;;;N;;;;;
1C89B;SHAALDAA SYLLABLE Z;Lo;0;L;;;;;N;;;;;
1C89C;SHAALDAA SYLLABLE ZZ BASE;Lo;0;L;;;;;N;;;;;
1C89D;SHAALDAA SYLLABLE ZZA;Lo;0;L;;;;;N;;;;;
1C89E;SHAALDAA SYLLABLE ZZU;Lo;0;L;;;;;N;;;;;
1C89F;SHAALDAA SYLLABLE ZZI;Lo;0;L;;;;;N;;;;;
1C8A0;SHAALDAA SYLLABLE ZZE;Lo;0;L;;;;;N;;;;;
1C8A1;SHAALDAA SYLLABLE ZZO;Lo;0;L;;;;;N;;;;;
1C8A2;SHAALDAA SYLLABLE ZZAA;Lo;0;L;;;;;N;;;;;
1C8A3;SHAALDAA SYLLABLE ZZUU;Lo;0;L;;;;;N;;;;;
1C8A4;SHAALDAA SYLLABLE ZZII;Lo;0;L;;;;;N;;;;;
1C8A5;SHAALDAA SYLLABLE ZZEE;Lo;0;L;;;;;N;;;;;
1C8A6;SHAALDAA SYLLABLE ZZOO;Lo;0;L;;;;;N;;;;;
1C8A7;SHAALDAA SYLLABLE ZZ;Lo;0;L;;;;;N;;;;;
1C8A8;SHAALDAA SYLLABLE HX BASE;Lo;0;L;;;;;N;;;;;
1C8A9;SHAALDAA SYLLABLE HXA;Lo;0;L;;;;;N;;;;;
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1C8AA;SHAALDAA SYLLABLE HXU;Lo;0;L;;;;;N;;;;;
1C8AB;SHAALDAA SYLLABLE HXI;Lo;0;L;;;;;N;;;;;
1C8AC;SHAALDAA SYLLABLE HXE;Lo;0;L;;;;;N;;;;;
1C8AD;SHAALDAA SYLLABLE HXO;Lo;0;L;;;;;N;;;;;
1C8AE;SHAALDAA SYLLABLE HXAA;Lo;0;L;;;;;N;;;;;
1C8AF;SHAALDAA SYLLABLE HXUU;Lo;0;L;;;;;N;;;;;
1C8B0;SHAALDAA SYLLABLE HXII;Lo;0;L;;;;;N;;;;;
1C8B1;SHAALDAA SYLLABLE HXEE;Lo;0;L;;;;;N;;;;;
1C8B2;SHAALDAA SYLLABLE HXOO;Lo;0;L;;;;;N;;;;;
1C8B3;SHAALDAA SYLLABLE HX;Lo;0;L;;;;;N;;;;;
1C8B4;SHAALDAA SYLLABLE HHX BASE;Lo;0;L;;;;;N;;;;;
1C8B5;SHAALDAA SYLLABLE HHXA;Lo;0;L;;;;;N;;;;;
1C8B6;SHAALDAA SYLLABLE HHXU;Lo;0;L;;;;;N;;;;;
1C8B7;SHAALDAA SYLLABLE HHXI;Lo;0;L;;;;;N;;;;;
1C8B8;SHAALDAA SYLLABLE HHXE;Lo;0;L;;;;;N;;;;;
1C8B9;SHAALDAA SYLLABLE HHXO;Lo;0;L;;;;;N;;;;;
1C8BA;SHAALDAA SYLLABLE HHXAA;Lo;0;L;;;;;N;;;;;
1C8BB;SHAALDAA SYLLABLE HHXUU;Lo;0;L;;;;;N;;;;;
1C8BC;SHAALDAA SYLLABLE HHXII;Lo;0;L;;;;;N;;;;;
1C8BD;SHAALDAA SYLLABLE HHXEE;Lo;0;L;;;;;N;;;;;
1C8BE;SHAALDAA SYLLABLE HHXOO;Lo;0;L;;;;;N;;;;;
1C8BF;SHAALDAA SYLLABLE HHX;Lo;0;L;;;;;N;;;;;
1C8C0;SHAALDAA SYLLABLE X BASE;Lo;0;L;;;;;N;;;;;
1C8C1;SHAALDAA SYLLABLE XA;Lo;0;L;;;;;N;;;;;
1C8C2;SHAALDAA SYLLABLE XU;Lo;0;L;;;;;N;;;;;
1C8C3;SHAALDAA SYLLABLE XI;Lo;0;L;;;;;N;;;;;
1C8C4;SHAALDAA SYLLABLE XE;Lo;0;L;;;;;N;;;;;
1C8C5;SHAALDAA SYLLABLE XO;Lo;0;L;;;;;N;;;;;
1C8C6;SHAALDAA SYLLABLE XAA;Lo;0;L;;;;;N;;;;;
1C8C7;SHAALDAA SYLLABLE XUU;Lo;0;L;;;;;N;;;;;
1C8C8;SHAALDAA SYLLABLE XII;Lo;0;L;;;;;N;;;;;
1C8C9;SHAALDAA SYLLABLE XEE;Lo;0;L;;;;;N;;;;;
1C8CA;SHAALDAA SYLLABLE XOO;Lo;0;L;;;;;N;;;;;
1C8CB;SHAALDAA SYLLABLE X;Lo;0;L;;;;;N;;;;;
1C8CC;SHAALDAA SYLLABLE XX BASE;Lo;0;L;;;;;N;;;;;
1C8CD;SHAALDAA SYLLABLE XXA;Lo;0;L;;;;;N;;;;;
1C8CE;SHAALDAA SYLLABLE XXU;Lo;0;L;;;;;N;;;;;
1C8CF;SHAALDAA SYLLABLE XXI;Lo;0;L;;;;;N;;;;;
1C8D0;SHAALDAA SYLLABLE XXE;Lo;0;L;;;;;N;;;;;
1C8D1;SHAALDAA SYLLABLE XXO;Lo;0;L;;;;;N;;;;;
1C8D2;SHAALDAA SYLLABLE XXAA;Lo;0;L;;;;;N;;;;;
1C8D3;SHAALDAA SYLLABLE XXUU;Lo;0;L;;;;;N;;;;;
1C8D4;SHAALDAA SYLLABLE XXII;Lo;0;L;;;;;N;;;;;
1C8D5;SHAALDAA SYLLABLE XXEE;Lo;0;L;;;;;N;;;;;
1C8D6;SHAALDAA SYLLABLE XXOO;Lo;0;L;;;;;N;;;;;
1C8D7;SHAALDAA SYLLABLE XX;Lo;0;L;;;;;N;;;;;
1C8D8;SHAALDAA SYLLABLE Y BASE;Lo;0;L;;;;;N;;;;;
1C8D9;SHAALDAA SYLLABLE YA;Lo;0;L;;;;;N;;;;;
1C8DA;SHAALDAA SYLLABLE YU;Lo;0;L;;;;;N;;;;;
1C8DB;SHAALDAA SYLLABLE YI;Lo;0;L;;;;;N;;;;;
1C8DC;SHAALDAA SYLLABLE YE;Lo;0;L;;;;;N;;;;;
1C8DD;SHAALDAA SYLLABLE YO;Lo;0;L;;;;;N;;;;;
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1C8DE;SHAALDAA SYLLABLE YAA;Lo;0;L;;;;;N;;;;;
1C8DF;SHAALDAA SYLLABLE YUU;Lo;0;L;;;;;N;;;;;
1C8E0;SHAALDAA SYLLABLE YII;Lo;0;L;;;;;N;;;;;
1C8E1;SHAALDAA SYLLABLE YEE;Lo;0;L;;;;;N;;;;;
1C8E2;SHAALDAA SYLLABLE YOO;Lo;0;L;;;;;N;;;;;
1C8E3;SHAALDAA SYLLABLE Y;Lo;0;L;;;;;N;;;;;
1C8E4;SHAALDAA SYLLABLE YY BASE;Lo;0;L;;;;;N;;;;;
1C8E5;SHAALDAA SYLLABLE YYA;Lo;0;L;;;;;N;;;;;
1C8E6;SHAALDAA SYLLABLE YYU;Lo;0;L;;;;;N;;;;;
1C8E7;SHAALDAA SYLLABLE YYI;Lo;0;L;;;;;N;;;;;
1C8E8;SHAALDAA SYLLABLE YYE;Lo;0;L;;;;;N;;;;;
1C8E9;SHAALDAA SYLLABLE YYO;Lo;0;L;;;;;N;;;;;
1C8EA;SHAALDAA SYLLABLE YYAA;Lo;0;L;;;;;N;;;;;
1C8EB;SHAALDAA SYLLABLE YYUU;Lo;0;L;;;;;N;;;;;
1C8EC;SHAALDAA SYLLABLE YYII;Lo;0;L;;;;;N;;;;;
1C8ED;SHAALDAA SYLLABLE YYEE;Lo;0;L;;;;;N;;;;;
1C8EE;SHAALDAA SYLLABLE YYOO;Lo;0;L;;;;;N;;;;;
1C8EF;SHAALDAA SYLLABLE YY;Lo;0;L;;;;;N;;;;;
1C8F0;SHAALDAA SYLLABLE K BASE;Lo;0;L;;;;;N;;;;;
1C8F1;SHAALDAA SYLLABLE KA;Lo;0;L;;;;;N;;;;;
1C8F2;SHAALDAA SYLLABLE KU;Lo;0;L;;;;;N;;;;;
1C8F3;SHAALDAA SYLLABLE KI;Lo;0;L;;;;;N;;;;;
1C8F4;SHAALDAA SYLLABLE KE;Lo;0;L;;;;;N;;;;;
1C8F5;SHAALDAA SYLLABLE KO;Lo;0;L;;;;;N;;;;;
1C8F6;SHAALDAA SYLLABLE KAA;Lo;0;L;;;;;N;;;;;
1C8F7;SHAALDAA SYLLABLE KUU;Lo;0;L;;;;;N;;;;;
1C8F8;SHAALDAA SYLLABLE KII;Lo;0;L;;;;;N;;;;;
1C8F9;SHAALDAA SYLLABLE KEE;Lo;0;L;;;;;N;;;;;
1C8FA;SHAALDAA SYLLABLE KOO;Lo;0;L;;;;;N;;;;;
1C8FB;SHAALDAA SYLLABLE K;Lo;0;L;;;;;N;;;;;
1C8FC;SHAALDAA SYLLABLE KK BASE;Lo;0;L;;;;;N;;;;;
1C8FD;SHAALDAA SYLLABLE KKA;Lo;0;L;;;;;N;;;;;
1C8FE;SHAALDAA SYLLABLE KKU;Lo;0;L;;;;;N;;;;;
1C8FF;SHAALDAA SYLLABLE KKI;Lo;0;L;;;;;N;;;;;
1C900;SHAALDAA SYLLABLE KKE;Lo;0;L;;;;;N;;;;;
1C901;SHAALDAA SYLLABLE KKO;Lo;0;L;;;;;N;;;;;
1C902;SHAALDAA SYLLABLE KKAA;Lo;0;L;;;;;N;;;;;
1C903;SHAALDAA SYLLABLE KKUU;Lo;0;L;;;;;N;;;;;
1C904;SHAALDAA SYLLABLE KKII;Lo;0;L;;;;;N;;;;;
1C905;SHAALDAA SYLLABLE KKEE;Lo;0;L;;;;;N;;;;;
1C906;SHAALDAA SYLLABLE KKOO;Lo;0;L;;;;;N;;;;;
1C907;SHAALDAA SYLLABLE KK;Lo;0;L;;;;;N;;;;;
1C908;SHAALDAA SYLLABLE L BASE;Lo;0;L;;;;;N;;;;;
1C909;SHAALDAA SYLLABLE LA;Lo;0;L;;;;;N;;;;;
1C90A;SHAALDAA SYLLABLE LU;Lo;0;L;;;;;N;;;;;
1C90B;SHAALDAA SYLLABLE LI;Lo;0;L;;;;;N;;;;;
1C90C;SHAALDAA SYLLABLE LE;Lo;0;L;;;;;N;;;;;
1C90D;SHAALDAA SYLLABLE LO;Lo;0;L;;;;;N;;;;;
1C90E;SHAALDAA SYLLABLE LAA;Lo;0;L;;;;;N;;;;;
1C90F;SHAALDAA SYLLABLE LUU;Lo;0;L;;;;;N;;;;;
1C910;SHAALDAA SYLLABLE LII;Lo;0;L;;;;;N;;;;;
1C911;SHAALDAA SYLLABLE LEE;Lo;0;L;;;;;N;;;;;
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1C912;SHAALDAA SYLLABLE LOO;Lo;0;L;;;;;N;;;;;
1C913;SHAALDAA SYLLABLE L;Lo;0;L;;;;;N;;;;;
1C914;SHAALDAA SYLLABLE LL BASE;Lo;0;L;;;;;N;;;;;
1C915;SHAALDAA SYLLABLE LLA;Lo;0;L;;;;;N;;;;;
1C916;SHAALDAA SYLLABLE LLU;Lo;0;L;;;;;N;;;;;
1C917;SHAALDAA SYLLABLE LLI;Lo;0;L;;;;;N;;;;;
1C918;SHAALDAA SYLLABLE LLE;Lo;0;L;;;;;N;;;;;
1C919;SHAALDAA SYLLABLE LLO;Lo;0;L;;;;;N;;;;;
1C91A;SHAALDAA SYLLABLE LLAA;Lo;0;L;;;;;N;;;;;
1C91B;SHAALDAA SYLLABLE LLUU;Lo;0;L;;;;;N;;;;;
1C91C;SHAALDAA SYLLABLE LLII;Lo;0;L;;;;;N;;;;;
1C91D;SHAALDAA SYLLABLE LLEE;Lo;0;L;;;;;N;;;;;
1C91E;SHAALDAA SYLLABLE LLOO;Lo;0;L;;;;;N;;;;;
1C91F;SHAALDAA SYLLABLE LL;Lo;0;L;;;;;N;;;;;
1C920;SHAALDAA SYLLABLE M BASE;Lo;0;L;;;;;N;;;;;
1C921;SHAALDAA SYLLABLE MA;Lo;0;L;;;;;N;;;;;
1C922;SHAALDAA SYLLABLE MU;Lo;0;L;;;;;N;;;;;
1C923;SHAALDAA SYLLABLE MI;Lo;0;L;;;;;N;;;;;
1C924;SHAALDAA SYLLABLE ME;Lo;0;L;;;;;N;;;;;
1C925;SHAALDAA SYLLABLE MO;Lo;0;L;;;;;N;;;;;
1C926;SHAALDAA SYLLABLE MAA;Lo;0;L;;;;;N;;;;;
1C927;SHAALDAA SYLLABLE MUU;Lo;0;L;;;;;N;;;;;
1C928;SHAALDAA SYLLABLE MII;Lo;0;L;;;;;N;;;;;
1C929;SHAALDAA SYLLABLE MEE;Lo;0;L;;;;;N;;;;;
1C92A;SHAALDAA SYLLABLE MOO;Lo;0;L;;;;;N;;;;;
1C92B;SHAALDAA SYLLABLE M;Lo;0;L;;;;;N;;;;;
1C92C;SHAALDAA SYLLABLE MM BASE;Lo;0;L;;;;;N;;;;;
1C92D;SHAALDAA SYLLABLE MMA;Lo;0;L;;;;;N;;;;;
1C92E;SHAALDAA SYLLABLE MMU;Lo;0;L;;;;;N;;;;;
1C92F;SHAALDAA SYLLABLE MMI;Lo;0;L;;;;;N;;;;;
1C930;SHAALDAA SYLLABLE MME;Lo;0;L;;;;;N;;;;;
1C931;SHAALDAA SYLLABLE MMO;Lo;0;L;;;;;N;;;;;
1C932;SHAALDAA SYLLABLE MMAA;Lo;0;L;;;;;N;;;;;
1C933;SHAALDAA SYLLABLE MMUU;Lo;0;L;;;;;N;;;;;
1C934;SHAALDAA SYLLABLE MMII;Lo;0;L;;;;;N;;;;;
1C935;SHAALDAA SYLLABLE MMEE;Lo;0;L;;;;;N;;;;;
1C936;SHAALDAA SYLLABLE MMOO;Lo;0;L;;;;;N;;;;;
1C937;SHAALDAA SYLLABLE MM;Lo;0;L;;;;;N;;;;;
1C938;SHAALDAA SYLLABLE N BASE;Lo;0;L;;;;;N;;;;;
1C939;SHAALDAA SYLLABLE NA;Lo;0;L;;;;;N;;;;;
1C93A;SHAALDAA SYLLABLE NU;Lo;0;L;;;;;N;;;;;
1C93B;SHAALDAA SYLLABLE NI;Lo;0;L;;;;;N;;;;;
1C93C;SHAALDAA SYLLABLE NE;Lo;0;L;;;;;N;;;;;
1C93D;SHAALDAA SYLLABLE NO;Lo;0;L;;;;;N;;;;;
1C93E;SHAALDAA SYLLABLE NAA;Lo;0;L;;;;;N;;;;;
1C93F;SHAALDAA SYLLABLE NUU;Lo;0;L;;;;;N;;;;;
1C940;SHAALDAA SYLLABLE NII;Lo;0;L;;;;;N;;;;;
1C941;SHAALDAA SYLLABLE NEE;Lo;0;L;;;;;N;;;;;
1C942;SHAALDAA SYLLABLE NOO;Lo;0;L;;;;;N;;;;;
1C943;SHAALDAA SYLLABLE N;Lo;0;L;;;;;N;;;;;
1C944;SHAALDAA SYLLABLE NN BASE;Lo;0;L;;;;;N;;;;;
1C945;SHAALDAA SYLLABLE NNA;Lo;0;L;;;;;N;;;;;
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1C946;SHAALDAA SYLLABLE NNU;Lo;0;L;;;;;N;;;;;
1C947;SHAALDAA SYLLABLE NNI;Lo;0;L;;;;;N;;;;;
1C948;SHAALDAA SYLLABLE NNE;Lo;0;L;;;;;N;;;;;
1C949;SHAALDAA SYLLABLE NNO;Lo;0;L;;;;;N;;;;;
1C94A;SHAALDAA SYLLABLE NNAA;Lo;0;L;;;;;N;;;;;
1C94B;SHAALDAA SYLLABLE NNUU;Lo;0;L;;;;;N;;;;;
1C94C;SHAALDAA SYLLABLE NNII;Lo;0;L;;;;;N;;;;;
1C94D;SHAALDAA SYLLABLE NNEE;Lo;0;L;;;;;N;;;;;
1C94E;SHAALDAA SYLLABLE NNOO;Lo;0;L;;;;;N;;;;;
1C94F;SHAALDAA SYLLABLE NN;Lo;0;L;;;;;N;;;;;
1C950;SHAALDAA SYLLABLE S BASE;Lo;0;L;;;;;N;;;;;
1C951;SHAALDAA SYLLABLE SA;Lo;0;L;;;;;N;;;;;
1C952;SHAALDAA SYLLABLE SU;Lo;0;L;;;;;N;;;;;
1C953;SHAALDAA SYLLABLE SI;Lo;0;L;;;;;N;;;;;
1C954;SHAALDAA SYLLABLE SE;Lo;0;L;;;;;N;;;;;
1C955;SHAALDAA SYLLABLE SO;Lo;0;L;;;;;N;;;;;
1C956;SHAALDAA SYLLABLE SAA;Lo;0;L;;;;;N;;;;;
1C957;SHAALDAA SYLLABLE SUU;Lo;0;L;;;;;N;;;;;
1C958;SHAALDAA SYLLABLE SII;Lo;0;L;;;;;N;;;;;
1C959;SHAALDAA SYLLABLE SEE;Lo;0;L;;;;;N;;;;;
1C95A;SHAALDAA SYLLABLE SOO;Lo;0;L;;;;;N;;;;;
1C95B;SHAALDAA SYLLABLE S;Lo;0;L;;;;;N;;;;;
1C95C;SHAALDAA SYLLABLE SS BASE;Lo;0;L;;;;;N;;;;;
1C95D;SHAALDAA SYLLABLE SSA;Lo;0;L;;;;;N;;;;;
1C95E;SHAALDAA SYLLABLE SSU;Lo;0;L;;;;;N;;;;;
1C95F;SHAALDAA SYLLABLE SSI;Lo;0;L;;;;;N;;;;;
1C960;SHAALDAA SYLLABLE SSE;Lo;0;L;;;;;N;;;;;
1C961;SHAALDAA SYLLABLE SSO;Lo;0;L;;;;;N;;;;;
1C962;SHAALDAA SYLLABLE SSAA;Lo;0;L;;;;;N;;;;;
1C963;SHAALDAA SYLLABLE SSUU;Lo;0;L;;;;;N;;;;;
1C964;SHAALDAA SYLLABLE SSII;Lo;0;L;;;;;N;;;;;
1C965;SHAALDAA SYLLABLE SSEE;Lo;0;L;;;;;N;;;;;
1C966;SHAALDAA SYLLABLE SSOO;Lo;0;L;;;;;N;;;;;
1C967;SHAALDAA SYLLABLE SS;Lo;0;L;;;;;N;;;;;
1C968;SHAALDAA SYLLABLE F BASE;Lo;0;L;;;;;N;;;;;
1C969;SHAALDAA SYLLABLE FA;Lo;0;L;;;;;N;;;;;
1C96A;SHAALDAA SYLLABLE FU;Lo;0;L;;;;;N;;;;;
1C96B;SHAALDAA SYLLABLE FI;Lo;0;L;;;;;N;;;;;
1C96C;SHAALDAA SYLLABLE FE;Lo;0;L;;;;;N;;;;;
1C96D;SHAALDAA SYLLABLE FO;Lo;0;L;;;;;N;;;;;
1C96E;SHAALDAA SYLLABLE FAA;Lo;0;L;;;;;N;;;;;
1C96F;SHAALDAA SYLLABLE FUU;Lo;0;L;;;;;N;;;;;
1C970;SHAALDAA SYLLABLE FII;Lo;0;L;;;;;N;;;;;
1C971;SHAALDAA SYLLABLE FEE;Lo;0;L;;;;;N;;;;;
1C972;SHAALDAA SYLLABLE FOO;Lo;0;L;;;;;N;;;;;
1C973;SHAALDAA SYLLABLE F;Lo;0;L;;;;;N;;;;;
1C974;SHAALDAA SYLLABLE FF BASE;Lo;0;L;;;;;N;;;;;
1C975;SHAALDAA SYLLABLE FFA;Lo;0;L;;;;;N;;;;;
1C976;SHAALDAA SYLLABLE FFU;Lo;0;L;;;;;N;;;;;
1C977;SHAALDAA SYLLABLE FFI;Lo;0;L;;;;;N;;;;;
1C978;SHAALDAA SYLLABLE FFE;Lo;0;L;;;;;N;;;;;
1C979;SHAALDAA SYLLABLE FFO;Lo;0;L;;;;;N;;;;;
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1C97A;SHAALDAA SYLLABLE FFAA;Lo;0;L;;;;;N;;;;;
1C97B;SHAALDAA SYLLABLE FFUU;Lo;0;L;;;;;N;;;;;
1C97C;SHAALDAA SYLLABLE FFII;Lo;0;L;;;;;N;;;;;
1C97D;SHAALDAA SYLLABLE FFEE;Lo;0;L;;;;;N;;;;;
1C97E;SHAALDAA SYLLABLE FFOO;Lo;0;L;;;;;N;;;;;
1C97F;SHAALDAA SYLLABLE FF;Lo;0;L;;;;;N;;;;;
1C980;SHAALDAA SYLLABLE ALTERNATE S BASE;Lo;0;L;;;;;N;;;;;
1C981;SHAALDAA SYLLABLE ALTERNATE SA;Lo;0;L;;;;;N;;;;;
1C982;SHAALDAA SYLLABLE ALTERNATE SU;Lo;0;L;;;;;N;;;;;
1C983;SHAALDAA SYLLABLE ALTERNATE SI;Lo;0;L;;;;;N;;;;;
1C984;SHAALDAA SYLLABLE ALTERNATE SE;Lo;0;L;;;;;N;;;;;
1C985;SHAALDAA SYLLABLE ALTERNATE SO;Lo;0;L;;;;;N;;;;;
1C986;SHAALDAA SYLLABLE ALTERNATE SAA;Lo;0;L;;;;;N;;;;;
1C987;SHAALDAA SYLLABLE ALTERNATE SUU;Lo;0;L;;;;;N;;;;;
1C988;SHAALDAA SYLLABLE ALTERNATE SII;Lo;0;L;;;;;N;;;;;
1C989;SHAALDAA SYLLABLE ALTERNATE SEE;Lo;0;L;;;;;N;;;;;
1C98A;SHAALDAA SYLLABLE ALTERNATE SOO;Lo;0;L;;;;;N;;;;;
1C98B;SHAALDAA SYLLABLE ALTERNATE S;Lo;0;L;;;;;N;;;;;
1C98C;SHAALDAA SYLLABLE ALTERNATE SS BASE;Lo;0;L;;;;;N;;;;;
1C98D;SHAALDAA SYLLABLE ALTERNATE SSA;Lo;0;L;;;;;N;;;;;
1C98E;SHAALDAA SYLLABLE ALTERNATE SSU;Lo;0;L;;;;;N;;;;;
1C98F;SHAALDAA SYLLABLE ALTERNATE SSI;Lo;0;L;;;;;N;;;;;
1C990;SHAALDAA SYLLABLE ALTERNATE SSE;Lo;0;L;;;;;N;;;;;
1C991;SHAALDAA SYLLABLE ALTERNATE SSO;Lo;0;L;;;;;N;;;;;
1C992;SHAALDAA SYLLABLE ALTERNATE SSAA;Lo;0;L;;;;;N;;;;;
1C993;SHAALDAA SYLLABLE ALTERNATE SSUU;Lo;0;L;;;;;N;;;;;
1C994;SHAALDAA SYLLABLE ALTERNATE SSII;Lo;0;L;;;;;N;;;;;
1C995;SHAALDAA SYLLABLE ALTERNATE SSEE;Lo;0;L;;;;;N;;;;;
1C996;SHAALDAA SYLLABLE ALTERNATE SSOO;Lo;0;L;;;;;N;;;;;
1C997;SHAALDAA SYLLABLE ALTERNATE SS;Lo;0;L;;;;;N;;;;;
1C998;SHAALDAA SYLLABLE Q BASE;Lo;0;L;;;;;N;;;;;
1C999;SHAALDAA SYLLABLE QA;Lo;0;L;;;;;N;;;;;
1C99A;SHAALDAA SYLLABLE QU;Lo;0;L;;;;;N;;;;;
1C99B;SHAALDAA SYLLABLE QI;Lo;0;L;;;;;N;;;;;
1C99C;SHAALDAA SYLLABLE QE;Lo;0;L;;;;;N;;;;;
1C99D;SHAALDAA SYLLABLE QO;Lo;0;L;;;;;N;;;;;
1C99E;SHAALDAA SYLLABLE QAA;Lo;0;L;;;;;N;;;;;
1C99F;SHAALDAA SYLLABLE QUU;Lo;0;L;;;;;N;;;;;
1C9A0;SHAALDAA SYLLABLE QII;Lo;0;L;;;;;N;;;;;
1C9A1;SHAALDAA SYLLABLE QEE;Lo;0;L;;;;;N;;;;;
1C9A2;SHAALDAA SYLLABLE QOO;Lo;0;L;;;;;N;;;;;
1C9A3;SHAALDAA SYLLABLE Q;Lo;0;L;;;;;N;;;;;
1C9A4;SHAALDAA SYLLABLE QQ BASE;Lo;0;L;;;;;N;;;;;
1C9A5;SHAALDAA SYLLABLE QQA;Lo;0;L;;;;;N;;;;;
1C9A6;SHAALDAA SYLLABLE QQU;Lo;0;L;;;;;N;;;;;
1C9A7;SHAALDAA SYLLABLE QQI;Lo;0;L;;;;;N;;;;;
1C9A8;SHAALDAA SYLLABLE QQE;Lo;0;L;;;;;N;;;;;
1C9A9;SHAALDAA SYLLABLE QQO;Lo;0;L;;;;;N;;;;;
1C9AA;SHAALDAA SYLLABLE QQAA;Lo;0;L;;;;;N;;;;;
1C9AB;SHAALDAA SYLLABLE QQUU;Lo;0;L;;;;;N;;;;;
1C9AC;SHAALDAA SYLLABLE QQII;Lo;0;L;;;;;N;;;;;
1C9AD;SHAALDAA SYLLABLE QQEE;Lo;0;L;;;;;N;;;;;
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1C9AE;SHAALDAA SYLLABLE QQOO;Lo;0;L;;;;;N;;;;;
1C9AF;SHAALDAA SYLLABLE QQ;Lo;0;L;;;;;N;;;;;
1C9B0;SHAALDAA SYLLABLE R BASE;Lo;0;L;;;;;N;;;;;
1C9B1;SHAALDAA SYLLABLE RA;Lo;0;L;;;;;N;;;;;
1C9B2;SHAALDAA SYLLABLE RU;Lo;0;L;;;;;N;;;;;
1C9B3;SHAALDAA SYLLABLE RI;Lo;0;L;;;;;N;;;;;
1C9B4;SHAALDAA SYLLABLE RE;Lo;0;L;;;;;N;;;;;
1C9B5;SHAALDAA SYLLABLE RO;Lo;0;L;;;;;N;;;;;
1C9B6;SHAALDAA SYLLABLE RAA;Lo;0;L;;;;;N;;;;;
1C9B7;SHAALDAA SYLLABLE RUU;Lo;0;L;;;;;N;;;;;
1C9B8;SHAALDAA SYLLABLE RII;Lo;0;L;;;;;N;;;;;
1C9B9;SHAALDAA SYLLABLE REE;Lo;0;L;;;;;N;;;;;
1C9BA;SHAALDAA SYLLABLE ROO;Lo;0;L;;;;;N;;;;;
1C9BB;SHAALDAA SYLLABLE R;Lo;0;L;;;;;N;;;;;
1C9BC;SHAALDAA SYLLABLE RR BASE;Lo;0;L;;;;;N;;;;;
1C9BD;SHAALDAA SYLLABLE RRA;Lo;0;L;;;;;N;;;;;
1C9BE;SHAALDAA SYLLABLE RRU;Lo;0;L;;;;;N;;;;;
1C9BF;SHAALDAA SYLLABLE RRI;Lo;0;L;;;;;N;;;;;
1C9C0;SHAALDAA SYLLABLE RRE;Lo;0;L;;;;;N;;;;;
1C9C1;SHAALDAA SYLLABLE RRO;Lo;0;L;;;;;N;;;;;
1C9C2;SHAALDAA SYLLABLE RRAA;Lo;0;L;;;;;N;;;;;
1C9C3;SHAALDAA SYLLABLE RRUU;Lo;0;L;;;;;N;;;;;
1C9C4;SHAALDAA SYLLABLE RRII;Lo;0;L;;;;;N;;;;;
1C9C5;SHAALDAA SYLLABLE RREE;Lo;0;L;;;;;N;;;;;
1C9C6;SHAALDAA SYLLABLE RROO;Lo;0;L;;;;;N;;;;;
1C9C7;SHAALDAA SYLLABLE RR;Lo;0;L;;;;;N;;;;;
1C9C8;SHAALDAA SYLLABLE SH BASE;Lo;0;L;;;;;N;;;;;
1C9C9;SHAALDAA SYLLABLE SHA;Lo;0;L;;;;;N;;;;;
1C9CA;SHAALDAA SYLLABLE SHU;Lo;0;L;;;;;N;;;;;
1C9CB;SHAALDAA SYLLABLE SHI;Lo;0;L;;;;;N;;;;;
1C9CC;SHAALDAA SYLLABLE SHE;Lo;0;L;;;;;N;;;;;
1C9CD;SHAALDAA SYLLABLE SHO;Lo;0;L;;;;;N;;;;;
1C9CE;SHAALDAA SYLLABLE SHAA;Lo;0;L;;;;;N;;;;;
1C9CF;SHAALDAA SYLLABLE SHUU;Lo;0;L;;;;;N;;;;;
1C9D0;SHAALDAA SYLLABLE SHII;Lo;0;L;;;;;N;;;;;
1C9D1;SHAALDAA SYLLABLE SHEE;Lo;0;L;;;;;N;;;;;
1C9D2;SHAALDAA SYLLABLE SHOO;Lo;0;L;;;;;N;;;;;
1C9D3;SHAALDAA SYLLABLE SH;Lo;0;L;;;;;N;;;;;
1C9D4;SHAALDAA SYLLABLE SSH BASE;Lo;0;L;;;;;N;;;;;
1C9D5;SHAALDAA SYLLABLE SSHA;Lo;0;L;;;;;N;;;;;
1C9D6;SHAALDAA SYLLABLE SSHU;Lo;0;L;;;;;N;;;;;
1C9D7;SHAALDAA SYLLABLE SSHI;Lo;0;L;;;;;N;;;;;
1C9D8;SHAALDAA SYLLABLE SSHE;Lo;0;L;;;;;N;;;;;
1C9D9;SHAALDAA SYLLABLE SSHO;Lo;0;L;;;;;N;;;;;
1C9DA;SHAALDAA SYLLABLE SSHAA;Lo;0;L;;;;;N;;;;;
1C9DB;SHAALDAA SYLLABLE SSHUU;Lo;0;L;;;;;N;;;;;
1C9DC;SHAALDAA SYLLABLE SSHII;Lo;0;L;;;;;N;;;;;
1C9DD;SHAALDAA SYLLABLE SSHEE;Lo;0;L;;;;;N;;;;;
1C9DE;SHAALDAA SYLLABLE SSHOO;Lo;0;L;;;;;N;;;;;
1C9DF;SHAALDAA SYLLABLE SSH;Lo;0;L;;;;;N;;;;;
1C9E0;SHAALDAA SYLLABLE T BASE;Lo;0;L;;;;;N;;;;;
1C9E1;SHAALDAA SYLLABLE TA;Lo;0;L;;;;;N;;;;;
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1C9E2;SHAALDAA SYLLABLE TU;Lo;0;L;;;;;N;;;;;
1C9E3;SHAALDAA SYLLABLE TI;Lo;0;L;;;;;N;;;;;
1C9E4;SHAALDAA SYLLABLE TE;Lo;0;L;;;;;N;;;;;
1C9E5;SHAALDAA SYLLABLE TO;Lo;0;L;;;;;N;;;;;
1C9E6;SHAALDAA SYLLABLE TAA;Lo;0;L;;;;;N;;;;;
1C9E7;SHAALDAA SYLLABLE TUU;Lo;0;L;;;;;N;;;;;
1C9E8;SHAALDAA SYLLABLE TII;Lo;0;L;;;;;N;;;;;
1C9E9;SHAALDAA SYLLABLE TEE;Lo;0;L;;;;;N;;;;;
1C9EA;SHAALDAA SYLLABLE TOO;Lo;0;L;;;;;N;;;;;
1C9EB;SHAALDAA SYLLABLE T;Lo;0;L;;;;;N;;;;;
1C9EC;SHAALDAA SYLLABLE TT BASE;Lo;0;L;;;;;N;;;;;
1C9ED;SHAALDAA SYLLABLE TTA;Lo;0;L;;;;;N;;;;;
1C9EE;SHAALDAA SYLLABLE TTU;Lo;0;L;;;;;N;;;;;
1C9EF;SHAALDAA SYLLABLE TTI;Lo;0;L;;;;;N;;;;;
1C9F0;SHAALDAA SYLLABLE TTE;Lo;0;L;;;;;N;;;;;
1C9F1;SHAALDAA SYLLABLE TTO;Lo;0;L;;;;;N;;;;;
1C9F2;SHAALDAA SYLLABLE TTAA;Lo;0;L;;;;;N;;;;;
1C9F3;SHAALDAA SYLLABLE TTUU;Lo;0;L;;;;;N;;;;;
1C9F4;SHAALDAA SYLLABLE TTII;Lo;0;L;;;;;N;;;;;
1C9F5;SHAALDAA SYLLABLE TTEE;Lo;0;L;;;;;N;;;;;
1C9F6;SHAALDAA SYLLABLE TTOO;Lo;0;L;;;;;N;;;;;
1C9F7;SHAALDAA SYLLABLE TT;Lo;0;L;;;;;N;;;;;
1C9F8;SHAALDAA SYLLABLE KH BASE;Lo;0;L;;;;;N;;;;;
1C9F9;SHAALDAA SYLLABLE KHA;Lo;0;L;;;;;N;;;;;
1C9FA;SHAALDAA SYLLABLE KHU;Lo;0;L;;;;;N;;;;;
1C9FB;SHAALDAA SYLLABLE KHI;Lo;0;L;;;;;N;;;;;
1C9FC;SHAALDAA SYLLABLE KHE;Lo;0;L;;;;;N;;;;;
1C9FD;SHAALDAA SYLLABLE KHO;Lo;0;L;;;;;N;;;;;
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1C9FF;SHAALDAA SYLLABLE KHUU;Lo;0;L;;;;;N;;;;;
1CA00;SHAALDAA SYLLABLE KHII;Lo;0;L;;;;;N;;;;;
1CA01;SHAALDAA SYLLABLE KHEE;Lo;0;L;;;;;N;;;;;
1CA02;SHAALDAA SYLLABLE KHOO;Lo;0;L;;;;;N;;;;;
1CA03;SHAALDAA SYLLABLE KH;Lo;0;L;;;;;N;;;;;
1CA04;SHAALDAA SYLLABLE KKH BASE;Lo;0;L;;;;;N;;;;;
1CA05;SHAALDAA SYLLABLE KKHA;Lo;0;L;;;;;N;;;;;
1CA06;SHAALDAA SYLLABLE KKHU;Lo;0;L;;;;;N;;;;;
1CA07;SHAALDAA SYLLABLE KKHI;Lo;0;L;;;;;N;;;;;
1CA08;SHAALDAA SYLLABLE KKHE;Lo;0;L;;;;;N;;;;;
1CA09;SHAALDAA SYLLABLE KKHO;Lo;0;L;;;;;N;;;;;
1CA0A;SHAALDAA SYLLABLE KKHAA;Lo;0;L;;;;;N;;;;;
1CA0B;SHAALDAA SYLLABLE KKHUU;Lo;0;L;;;;;N;;;;;
1CA0C;SHAALDAA SYLLABLE KKHII;Lo;0;L;;;;;N;;;;;
1CA0D;SHAALDAA SYLLABLE KKHEE;Lo;0;L;;;;;N;;;;;
1CA0E;SHAALDAA SYLLABLE KKHOO;Lo;0;L;;;;;N;;;;;
1CA0F;SHAALDAA SYLLABLE KKH;Lo;0;L;;;;;N;;;;;
1CA10;SHAALDAA SYLLABLE DH BASE;Lo;0;L;;;;;N;;;;;
1CA11;SHAALDAA SYLLABLE DHA;Lo;0;L;;;;;N;;;;;
1CA12;SHAALDAA SYLLABLE DHU;Lo;0;L;;;;;N;;;;;
1CA13;SHAALDAA SYLLABLE DHI;Lo;0;L;;;;;N;;;;;
1CA14;SHAALDAA SYLLABLE DHE;Lo;0;L;;;;;N;;;;;
1CA15;SHAALDAA SYLLABLE DHO;Lo;0;L;;;;;N;;;;;
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1CA16;SHAALDAA SYLLABLE DHAA;Lo;0;L;;;;;N;;;;;
1CA17;SHAALDAA SYLLABLE DHUU;Lo;0;L;;;;;N;;;;;
1CA18;SHAALDAA SYLLABLE DHII;Lo;0;L;;;;;N;;;;;
1CA19;SHAALDAA SYLLABLE DHEE;Lo;0;L;;;;;N;;;;;
1CA1A;SHAALDAA SYLLABLE DHOO;Lo;0;L;;;;;N;;;;;
1CA1B;SHAALDAA SYLLABLE DH;Lo;0;L;;;;;N;;;;;
1CA1C;SHAALDAA SYLLABLE DDH BASE;Lo;0;L;;;;;N;;;;;
1CA1D;SHAALDAA SYLLABLE DDHA;Lo;0;L;;;;;N;;;;;
1CA1E;SHAALDAA SYLLABLE DDHU;Lo;0;L;;;;;N;;;;;
1CA1F;SHAALDAA SYLLABLE DDHI;Lo;0;L;;;;;N;;;;;
1CA20;SHAALDAA SYLLABLE DDHE;Lo;0;L;;;;;N;;;;;
1CA21;SHAALDAA SYLLABLE DDHO;Lo;0;L;;;;;N;;;;;
1CA22;SHAALDAA SYLLABLE DDHAA;Lo;0;L;;;;;N;;;;;
1CA23;SHAALDAA SYLLABLE DDHUU;Lo;0;L;;;;;N;;;;;
1CA24;SHAALDAA SYLLABLE DDHII;Lo;0;L;;;;;N;;;;;
1CA25;SHAALDAA SYLLABLE DDHEE;Lo;0;L;;;;;N;;;;;
1CA26;SHAALDAA SYLLABLE DDHOO;Lo;0;L;;;;;N;;;;;
1CA27;SHAALDAA SYLLABLE DDH;Lo;0;L;;;;;N;;;;;
1CA28;SHAALDAA SYLLABLE G BASE;Lo;0;L;;;;;N;;;;;
1CA29;SHAALDAA SYLLABLE GA;Lo;0;L;;;;;N;;;;;
1CA2A;SHAALDAA SYLLABLE GU;Lo;0;L;;;;;N;;;;;
1CA2B;SHAALDAA SYLLABLE GI;Lo;0;L;;;;;N;;;;;
1CA2C;SHAALDAA SYLLABLE GE;Lo;0;L;;;;;N;;;;;
1CA2D;SHAALDAA SYLLABLE GO;Lo;0;L;;;;;N;;;;;
1CA2E;SHAALDAA SYLLABLE GAA;Lo;0;L;;;;;N;;;;;
1CA2F;SHAALDAA SYLLABLE GUU;Lo;0;L;;;;;N;;;;;
1CA30;SHAALDAA SYLLABLE GII;Lo;0;L;;;;;N;;;;;
1CA31;SHAALDAA SYLLABLE GEE;Lo;0;L;;;;;N;;;;;
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1CA37;SHAALDAA SYLLABLE GGI;Lo;0;L;;;;;N;;;;;
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1CA3A;SHAALDAA SYLLABLE GGAA;Lo;0;L;;;;;N;;;;;
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1CA3C;SHAALDAA SYLLABLE GGII;Lo;0;L;;;;;N;;;;;
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1CA40;SHAALDAA SYLLABLE C BASE;Lo;0;L;;;;;N;;;;;
1CA41;SHAALDAA SYLLABLE CA;Lo;0;L;;;;;N;;;;;
1CA42;SHAALDAA SYLLABLE CU;Lo;0;L;;;;;N;;;;;
1CA43;SHAALDAA SYLLABLE CI;Lo;0;L;;;;;N;;;;;
1CA44;SHAALDAA SYLLABLE CE;Lo;0;L;;;;;N;;;;;
1CA45;SHAALDAA SYLLABLE CO;Lo;0;L;;;;;N;;;;;
1CA46;SHAALDAA SYLLABLE CAA;Lo;0;L;;;;;N;;;;;
1CA47;SHAALDAA SYLLABLE CUU;Lo;0;L;;;;;N;;;;;
1CA48;SHAALDAA SYLLABLE CII;Lo;0;L;;;;;N;;;;;
1CA49;SHAALDAA SYLLABLE CEE;Lo;0;L;;;;;N;;;;;
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1CA4A;SHAALDAA SYLLABLE COO;Lo;0;L;;;;;N;;;;;
1CA4B;SHAALDAA SYLLABLE C;Lo;0;L;;;;;N;;;;;
1CA4C;SHAALDAA SYLLABLE CC BASE;Lo;0;L;;;;;N;;;;;
1CA4D;SHAALDAA SYLLABLE CCA;Lo;0;L;;;;;N;;;;;
1CA4E;SHAALDAA SYLLABLE CCU;Lo;0;L;;;;;N;;;;;
1CA4F;SHAALDAA SYLLABLE CCI;Lo;0;L;;;;;N;;;;;
1CA50;SHAALDAA SYLLABLE CCE;Lo;0;L;;;;;N;;;;;
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1CA53;SHAALDAA SYLLABLE CCUU;Lo;0;L;;;;;N;;;;;
1CA54;SHAALDAA SYLLABLE CCII;Lo;0;L;;;;;N;;;;;
1CA55;SHAALDAA SYLLABLE CCEE;Lo;0;L;;;;;N;;;;;
1CA56;SHAALDAA SYLLABLE CCOO;Lo;0;L;;;;;N;;;;;
1CA57;SHAALDAA SYLLABLE CC;Lo;0;L;;;;;N;;;;;
1CA58;SHAALDAA SYLLABLE NY BASE;Lo;0;L;;;;;N;;;;;
1CA59;SHAALDAA SYLLABLE NYA;Lo;0;L;;;;;N;;;;;
1CA5A;SHAALDAA SYLLABLE NYU;Lo;0;L;;;;;N;;;;;
1CA5B;SHAALDAA SYLLABLE NYI;Lo;0;L;;;;;N;;;;;
1CA5C;SHAALDAA SYLLABLE NYE;Lo;0;L;;;;;N;;;;;
1CA5D;SHAALDAA SYLLABLE NYO;Lo;0;L;;;;;N;;;;;
1CA5E;SHAALDAA SYLLABLE NYAA;Lo;0;L;;;;;N;;;;;
1CA5F;SHAALDAA SYLLABLE NYUU;Lo;0;L;;;;;N;;;;;
1CA60;SHAALDAA SYLLABLE NYII;Lo;0;L;;;;;N;;;;;
1CA61;SHAALDAA SYLLABLE NYEE;Lo;0;L;;;;;N;;;;;
1CA62;SHAALDAA SYLLABLE NYOO;Lo;0;L;;;;;N;;;;;
1CA63;SHAALDAA SYLLABLE NY;Lo;0;L;;;;;N;;;;;
1CA64;SHAALDAA SYLLABLE NNY BASE;Lo;0;L;;;;;N;;;;;
1CA65;SHAALDAA SYLLABLE NNYA;Lo;0;L;;;;;N;;;;;
1CA66;SHAALDAA SYLLABLE NNYU;Lo;0;L;;;;;N;;;;;
1CA67;SHAALDAA SYLLABLE NNYI;Lo;0;L;;;;;N;;;;;
1CA68;SHAALDAA SYLLABLE NNYE;Lo;0;L;;;;;N;;;;;
1CA69;SHAALDAA SYLLABLE NNYO;Lo;0;L;;;;;N;;;;;
1CA6A;SHAALDAA SYLLABLE NNYAA;Lo;0;L;;;;;N;;;;;
1CA6B;SHAALDAA SYLLABLE NNYUU;Lo;0;L;;;;;N;;;;;
1CA6C;SHAALDAA SYLLABLE NNYII;Lo;0;L;;;;;N;;;;;
1CA6D;SHAALDAA SYLLABLE NNYEE;Lo;0;L;;;;;N;;;;;
1CA6E;SHAALDAA SYLLABLE NNYOO;Lo;0;L;;;;;N;;;;;
1CA6F;SHAALDAA SYLLABLE NNY;Lo;0;L;;;;;N;;;;;
1CA70;SHAALDAA SYLLABLE CH BASE;Lo;0;L;;;;;N;;;;;
1CA71;SHAALDAA SYLLABLE CHA;Lo;0;L;;;;;N;;;;;
1CA72;SHAALDAA SYLLABLE CHU;Lo;0;L;;;;;N;;;;;
1CA73;SHAALDAA SYLLABLE CHI;Lo;0;L;;;;;N;;;;;
1CA74;SHAALDAA SYLLABLE CHE;Lo;0;L;;;;;N;;;;;
1CA75;SHAALDAA SYLLABLE CHO;Lo;0;L;;;;;N;;;;;
1CA76;SHAALDAA SYLLABLE CHAA;Lo;0;L;;;;;N;;;;;
1CA77;SHAALDAA SYLLABLE CHUU;Lo;0;L;;;;;N;;;;;
1CA78;SHAALDAA SYLLABLE CHII;Lo;0;L;;;;;N;;;;;
1CA79;SHAALDAA SYLLABLE CHEE;Lo;0;L;;;;;N;;;;;
1CA7A;SHAALDAA SYLLABLE CHOO;Lo;0;L;;;;;N;;;;;
1CA7B;SHAALDAA SYLLABLE CH;Lo;0;L;;;;;N;;;;;
1CA7C;SHAALDAA SYLLABLE CCH BASE;Lo;0;L;;;;;N;;;;;
1CA7D;SHAALDAA SYLLABLE CCHA;Lo;0;L;;;;;N;;;;;
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1CA7E;SHAALDAA SYLLABLE CCHU;Lo;0;L;;;;;N;;;;;
1CA7F;SHAALDAA SYLLABLE CCHI;Lo;0;L;;;;;N;;;;;
1CA80;SHAALDAA SYLLABLE CCHE;Lo;0;L;;;;;N;;;;;
1CA81;SHAALDAA SYLLABLE CCHO;Lo;0;L;;;;;N;;;;;
1CA82;SHAALDAA SYLLABLE CCHAA;Lo;0;L;;;;;N;;;;;
1CA83;SHAALDAA SYLLABLE CCHUU;Lo;0;L;;;;;N;;;;;
1CA84;SHAALDAA SYLLABLE CCHII;Lo;0;L;;;;;N;;;;;
1CA85;SHAALDAA SYLLABLE CCHEE;Lo;0;L;;;;;N;;;;;
1CA86;SHAALDAA SYLLABLE CCHOO;Lo;0;L;;;;;N;;;;;
1CA87;SHAALDAA SYLLABLE CCH;Lo;0;L;;;;;N;;;;;
1CA88;SHAALDAA SYLLABLE PH BASE;Lo;0;L;;;;;N;;;;;
1CA89;SHAALDAA SYLLABLE PHA;Lo;0;L;;;;;N;;;;;
1CA8A;SHAALDAA SYLLABLE PHU;Lo;0;L;;;;;N;;;;;
1CA8B;SHAALDAA SYLLABLE PHI;Lo;0;L;;;;;N;;;;;
1CA8C;SHAALDAA SYLLABLE PHE;Lo;0;L;;;;;N;;;;;
1CA8D;SHAALDAA SYLLABLE PHO;Lo;0;L;;;;;N;;;;;
1CA8E;SHAALDAA SYLLABLE PHAA;Lo;0;L;;;;;N;;;;;
1CA8F;SHAALDAA SYLLABLE PHUU;Lo;0;L;;;;;N;;;;;
1CA90;SHAALDAA SYLLABLE PHII;Lo;0;L;;;;;N;;;;;
1CA91;SHAALDAA SYLLABLE PHEE;Lo;0;L;;;;;N;;;;;
1CA92;SHAALDAA SYLLABLE PHOO;Lo;0;L;;;;;N;;;;;
1CA93;SHAALDAA SYLLABLE PH;Lo;0;L;;;;;N;;;;;
1CA94;SHAALDAA SYLLABLE PPH BASE;Lo;0;L;;;;;N;;;;;
1CA95;SHAALDAA SYLLABLE PPHA;Lo;0;L;;;;;N;;;;;
1CA96;SHAALDAA SYLLABLE PPHU;Lo;0;L;;;;;N;;;;;
1CA97;SHAALDAA SYLLABLE PPHI;Lo;0;L;;;;;N;;;;;
1CA98;SHAALDAA SYLLABLE PPHE;Lo;0;L;;;;;N;;;;;
1CA99;SHAALDAA SYLLABLE PPHO;Lo;0;L;;;;;N;;;;;
1CA9A;SHAALDAA SYLLABLE PPHAA;Lo;0;L;;;;;N;;;;;
1CA9B;SHAALDAA SYLLABLE PPHUU;Lo;0;L;;;;;N;;;;;
1CA9C;SHAALDAA SYLLABLE PPHII;Lo;0;L;;;;;N;;;;;
1CA9D;SHAALDAA SYLLABLE PPHEE;Lo;0;L;;;;;N;;;;;
1CA9E;SHAALDAA SYLLABLE PPHOO;Lo;0;L;;;;;N;;;;;
1CA9F;SHAALDAA SYLLABLE PPH;Lo;0;L;;;;;N;;;;;
1CAA0;SHAALDAA SYLLABLE PHARYNGEAL BASE;Lo;0;L;;;;;N;;;;;
1CAA1;SHAALDAA SYLLABLE PHARYNGEAL A;Lo;0;L;;;;;N;;;;;
1CAA2;SHAALDAA SYLLABLE PHARYNGEAL U;Lo;0;L;;;;;N;;;;;
1CAA3;SHAALDAA SYLLABLE PHARYNGEAL I;Lo;0;L;;;;;N;;;;;
1CAA4;SHAALDAA SYLLABLE PHARYNGEAL E;Lo;0;L;;;;;N;;;;;
1CAA5;SHAALDAA SYLLABLE PHARYNGEAL O;Lo;0;L;;;;;N;;;;;
1CAA6;SHAALDAA SYLLABLE PHARYNGEAL AA;Lo;0;L;;;;;N;;;;;
1CAA7;SHAALDAA SYLLABLE PHARYNGEAL UU;Lo;0;L;;;;;N;;;;;
1CAA8;SHAALDAA SYLLABLE PHARYNGEAL II;Lo;0;L;;;;;N;;;;;
1CAA9;SHAALDAA SYLLABLE PHARYNGEAL EE;Lo;0;L;;;;;N;;;;;
1CAAA;SHAALDAA SYLLABLE PHARYNGEAL OO;Lo;0;L;;;;;N;;;;;
1CAAB;SHAALDAA SYLLABLE PHARYNGEAL;Lo;0;L;;;;;N;;;;;
1CAAC;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL BASE;Lo;0;L;;;;;N;;;;;
1CAAD;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL A;Lo;0;L;;;;;N;;;;;
1CAAE;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL U;Lo;0;L;;;;;N;;;;;
1CAAF;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL I;Lo;0;L;;;;;N;;;;;
1CAB0;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL E;Lo;0;L;;;;;N;;;;;
1CAB1;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL O;Lo;0;L;;;;;N;;;;;
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1CAB2;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL AA;Lo;0;L;;;;;N;;;;;
1CAB3;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL UU;Lo;0;L;;;;;N;;;;;
1CAB4;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL II;Lo;0;L;;;;;N;;;;;
1CAB5;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL EE;Lo;0;L;;;;;N;;;;;
1CAB6;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL OO;Lo;0;L;;;;;N;;;;;
1CAB7;SHAALDAA SYLLABLE GEMINATE PHARYNGEAL;Lo;0;L;;;;;N;;;;;
1CAB8;SHAALDAA SYLLABLE P BASE;Lo;0;L;;;;;N;;;;;
1CAB9;SHAALDAA SYLLABLE PA;Lo;0;L;;;;;N;;;;;
1CABA;SHAALDAA SYLLABLE PU;Lo;0;L;;;;;N;;;;;
1CABB;SHAALDAA SYLLABLE PI;Lo;0;L;;;;;N;;;;;
1CABC;SHAALDAA SYLLABLE PE;Lo;0;L;;;;;N;;;;;
1CABD;SHAALDAA SYLLABLE PO;Lo;0;L;;;;;N;;;;;
1CABE;SHAALDAA SYLLABLE PAA;Lo;0;L;;;;;N;;;;;
1CABF;SHAALDAA SYLLABLE PUU;Lo;0;L;;;;;N;;;;;
1CAC0;SHAALDAA SYLLABLE PII;Lo;0;L;;;;;N;;;;;
1CAC1;SHAALDAA SYLLABLE PEE;Lo;0;L;;;;;N;;;;;
1CAC2;SHAALDAA SYLLABLE POO;Lo;0;L;;;;;N;;;;;
1CAC3;SHAALDAA SYLLABLE P;Lo;0;L;;;;;N;;;;;
1CAC4;SHAALDAA SYLLABLE PP BASE;Lo;0;L;;;;;N;;;;;
1CAC5;SHAALDAA SYLLABLE PPA;Lo;0;L;;;;;N;;;;;
1CAC6;SHAALDAA SYLLABLE PPU;Lo;0;L;;;;;N;;;;;
1CAC7;SHAALDAA SYLLABLE PPI;Lo;0;L;;;;;N;;;;;
1CAC8;SHAALDAA SYLLABLE PPE;Lo;0;L;;;;;N;;;;;
1CAC9;SHAALDAA SYLLABLE PPO;Lo;0;L;;;;;N;;;;;
1CACA;SHAALDAA SYLLABLE PPAA;Lo;0;L;;;;;N;;;;;
1CACB;SHAALDAA SYLLABLE PPUU;Lo;0;L;;;;;N;;;;;
1CACC;SHAALDAA SYLLABLE PPII;Lo;0;L;;;;;N;;;;;
1CACD;SHAALDAA SYLLABLE PPEE;Lo;0;L;;;;;N;;;;;
1CACE;SHAALDAA SYLLABLE PPOO;Lo;0;L;;;;;N;;;;;
1CACF;SHAALDAA SYLLABLE PP;Lo;0;L;;;;;N;;;;;
1CAD0;SHAALDAA SYLLABLE V BASE;Lo;0;L;;;;;N;;;;;
1CAD1;SHAALDAA SYLLABLE VA;Lo;0;L;;;;;N;;;;;
1CAD2;SHAALDAA SYLLABLE VU;Lo;0;L;;;;;N;;;;;
1CAD3;SHAALDAA SYLLABLE VI;Lo;0;L;;;;;N;;;;;
1CAD4;SHAALDAA SYLLABLE VE;Lo;0;L;;;;;N;;;;;
1CAD5;SHAALDAA SYLLABLE VO;Lo;0;L;;;;;N;;;;;
1CAD6;SHAALDAA SYLLABLE VAA;Lo;0;L;;;;;N;;;;;
1CAD7;SHAALDAA SYLLABLE VUU;Lo;0;L;;;;;N;;;;;
1CAD8;SHAALDAA SYLLABLE VII;Lo;0;L;;;;;N;;;;;
1CAD9;SHAALDAA SYLLABLE VEE;Lo;0;L;;;;;N;;;;;
1CADA;SHAALDAA SYLLABLE VOO;Lo;0;L;;;;;N;;;;;
1CADB;SHAALDAA SYLLABLE V;Lo;0;L;;;;;N;;;;;
1CADC;SHAALDAA SYLLABLE VV BASE;Lo;0;L;;;;;N;;;;;
1CADD;SHAALDAA SYLLABLE VVA;Lo;0;L;;;;;N;;;;;
1CADE;SHAALDAA SYLLABLE VVU;Lo;0;L;;;;;N;;;;;
1CADF;SHAALDAA SYLLABLE VVI;Lo;0;L;;;;;N;;;;;
1CAE0;SHAALDAA SYLLABLE VVE;Lo;0;L;;;;;N;;;;;
1CAE1;SHAALDAA SYLLABLE VVO;Lo;0;L;;;;;N;;;;;
1CAE2;SHAALDAA SYLLABLE VVAA;Lo;0;L;;;;;N;;;;;
1CAE3;SHAALDAA SYLLABLE VVUU;Lo;0;L;;;;;N;;;;;
1CAE4;SHAALDAA SYLLABLE VVII;Lo;0;L;;;;;N;;;;;
1CAE5;SHAALDAA SYLLABLE VVEE;Lo;0;L;;;;;N;;;;;
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1CAE6;SHAALDAA SYLLABLE VVOO;Lo;0;L;;;;;N;;;;;
1CAE7;SHAALDAA SYLLABLE VV;Lo;0;L;;;;;N;;;;;
1CAE8;SHAALDAA SYLLABLE ZH BASE;Lo;0;L;;;;;N;;;;;
1CAE9;SHAALDAA SYLLABLE ZHA;Lo;0;L;;;;;N;;;;;
1CAEA;SHAALDAA SYLLABLE ZHU;Lo;0;L;;;;;N;;;;;
1CAEB;SHAALDAA SYLLABLE ZHI;Lo;0;L;;;;;N;;;;;
1CAEC;SHAALDAA SYLLABLE ZHE;Lo;0;L;;;;;N;;;;;
1CAED;SHAALDAA SYLLABLE ZHO;Lo;0;L;;;;;N;;;;;
1CAEE;SHAALDAA SYLLABLE ZHAA;Lo;0;L;;;;;N;;;;;
1CAEF;SHAALDAA SYLLABLE ZHUU;Lo;0;L;;;;;N;;;;;
1CAF0;SHAALDAA SYLLABLE ZHII;Lo;0;L;;;;;N;;;;;
1CAF1;SHAALDAA SYLLABLE ZHEE;Lo;0;L;;;;;N;;;;;
1CAF2;SHAALDAA SYLLABLE ZHOO;Lo;0;L;;;;;N;;;;;
1CAF3;SHAALDAA SYLLABLE ZH;Lo;0;L;;;;;N;;;;;
1CAF4;SHAALDAA SYLLABLE ZZH BASE;Lo;0;L;;;;;N;;;;;
1CAF5;SHAALDAA SYLLABLE ZZHA;Lo;0;L;;;;;N;;;;;
1CAF6;SHAALDAA SYLLABLE ZZHU;Lo;0;L;;;;;N;;;;;
1CAF7;SHAALDAA SYLLABLE ZZHI;Lo;0;L;;;;;N;;;;;
1CAF8;SHAALDAA SYLLABLE ZZHE;Lo;0;L;;;;;N;;;;;
1CAF9;SHAALDAA SYLLABLE ZZHO;Lo;0;L;;;;;N;;;;;
1CAFA;SHAALDAA SYLLABLE ZZHAA;Lo;0;L;;;;;N;;;;;
1CAFB;SHAALDAA SYLLABLE ZZHUU;Lo;0;L;;;;;N;;;;;
1CAFC;SHAALDAA SYLLABLE ZZHII;Lo;0;L;;;;;N;;;;;
1CAFD;SHAALDAA SYLLABLE ZZHEE;Lo;0;L;;;;;N;;;;;
1CAFE;SHAALDAA SYLLABLE ZZHOO;Lo;0;L;;;;;N;;;;;
1CAFF;SHAALDAA SYLLABLE ZZH;Lo;0;L;;;;;N;;;;;
1CB00;SHAALDAA SYLLABLE TS BASE;Lo;0;L;;;;;N;;;;;
1CB01;SHAALDAA SYLLABLE TSA;Lo;0;L;;;;;N;;;;;
1CB02;SHAALDAA SYLLABLE TSU;Lo;0;L;;;;;N;;;;;
1CB03;SHAALDAA SYLLABLE TSI;Lo;0;L;;;;;N;;;;;
1CB04;SHAALDAA SYLLABLE TSE;Lo;0;L;;;;;N;;;;;
1CB05;SHAALDAA SYLLABLE TSO;Lo;0;L;;;;;N;;;;;
1CB06;SHAALDAA SYLLABLE TSAA;Lo;0;L;;;;;N;;;;;
1CB07;SHAALDAA SYLLABLE TSUU;Lo;0;L;;;;;N;;;;;
1CB08;SHAALDAA SYLLABLE TSII;Lo;0;L;;;;;N;;;;;
1CB09;SHAALDAA SYLLABLE TSEE;Lo;0;L;;;;;N;;;;;
1CB0A;SHAALDAA SYLLABLE TSOO;Lo;0;L;;;;;N;;;;;
1CB0B;SHAALDAA SYLLABLE TS;Lo;0;L;;;;;N;;;;;
1CB0C;SHAALDAA SYLLABLE TTS BASE;Lo;0;L;;;;;N;;;;;
1CB0D;SHAALDAA SYLLABLE TTSA;Lo;0;L;;;;;N;;;;;
1CB0E;SHAALDAA SYLLABLE TTSU;Lo;0;L;;;;;N;;;;;
1CB0F;SHAALDAA SYLLABLE TTSI;Lo;0;L;;;;;N;;;;;
1CB10;SHAALDAA SYLLABLE TTSE;Lo;0;L;;;;;N;;;;;
1CB11;SHAALDAA SYLLABLE TTSO;Lo;0;L;;;;;N;;;;;
1CB12;SHAALDAA SYLLABLE TTSAA;Lo;0;L;;;;;N;;;;;
1CB13;SHAALDAA SYLLABLE TTSUU;Lo;0;L;;;;;N;;;;;
1CB14;SHAALDAA SYLLABLE TTSII;Lo;0;L;;;;;N;;;;;
1CB15;SHAALDAA SYLLABLE TTSEE;Lo;0;L;;;;;N;;;;;
1CB16;SHAALDAA SYLLABLE TTSOO;Lo;0;L;;;;;N;;;;;
1CB17;SHAALDAA SYLLABLE TTS;Lo;0;L;;;;;N;;;;;
1CB20;SHAALDAA DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
1CB21;SHAALDAA DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
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1CB22;SHAALDAA DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
1CB23;SHAALDAA DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
1CB24;SHAALDAA DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
1CB25;SHAALDAA DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
1CB26;SHAALDAA DIGIT SIX; Nd;0;L;;6;6;6;N;;;;;
1CB27;SHAALDAA DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
1CB28;SHAALDAA DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
1CB29;SHAALDAA DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
1CB2A;SHAALDAA WORDSPACE;Po;0;L;;;;;N;;;;;
1CB2B;SHAALDAA FULL STOP;Po;0;L;;;;;N;;;;;
```

Table 3. Shaaldaa Properties

Line breaking information

Line Breaking rules for the Shaaldaa script are as follows:

- Words are separated with the native script word separator, ᱹ, explained above, or with U+0020 SPACE. The word separator was extensively used in historical documents.
- Line breaks only occur at word boundaries.
- There is not a special mode found that allows lines breaks within words at select positions, such as using a hyphen sign (U+002D HYPHEN-MINUS) that other scripts apply.
- Line breaks cannot occur within numbers. Numbers must always be kept together.
- There are no restrictions explicitly stated on line breaking before or after certain punctuation characters. However, line breaking is observed in practice to occur only after the Shaaldaa punctuation.
- There are no other special considerations for line breaking in this script.

The Shaaldaa script is likely to occur with the Latin, Ethiopic, and possibly the Arabic script:

- Latin due to the current Qubee orthography.
- Ethiopic due to the user community being Ethiopian and using the Ethiopic script in many aspects of life.
- Arabic due to many Oromo people, including students of Sheikh Bakri, being Muslim. Sheikh Bakri was an Islamic scholar who extensively wrote in Arabic and an Arabic script-based Oromo orthography. Digitization of his historical manuscripts will require cohesion between his script and Arabic.

VI Collation

The expected sorting order of the script follows the ordering used in education and is shown in Table 1 and reflected in Table 2. Table 1 is read/ordered from left-to-right and top-to-bottom.

VII References

1. Hayward, Richard J., and Mohammed Hassan. "The Oromo orthography of Shaykh Bakri Saḍalō." Bulletin of the School of Oriental and African Studies 44.3 (1981): 550-566.
2. Aman, Nuraddin. "An Investigation into the Walābū Oromo Script Devised by Sheikh Kemal Adem." Journal of Ethiopian Studies 55.1 (2022): 129-150.
3. Rovenchak Andrij and Jason Glavy. African Writing Systems of the Modern Age: The Sub-Saharan Region. First English edition revised and expanded from the original Ukrainian edition ed. Athinkra 2011: 66-69
4. “Oromoon qubee jaarraa 16ffaairraa qabdi”. YouTube, January 6, 2024. https://www.youtube.com/watch?v=m5onMVuSz88
5. “Qubee Beeyna Nutii Maali Kulleen Sa'aa keenya kan du'ee Kullee”. YouTube, February 2, 2024. https://www.youtube.com/watch?v=jUU3oYrTNvU
6. “Ijoo Dubbii wa'ee Qubee fi Kullee irratti deemaa jiruun walqabatee turtii beeytoota waliin gone”. YouTube, February 4, 2024. https://www.youtube.com/watch?v=GydGGD9uVq8
7. “Jecha Qaalii kana dubbisaa bira kutaa Barruu Shaaldaa Keeysaahiin isinii fidee6 February 2024”. YouTube, February 6, 2024. https://www.youtube.com/watch?v=mnHmk18N0hU
8. Sheikh Nuraddin Ahmed and Aneso Mohammed going through documents in the Shaaldaa script – https://www.tiktok.com/t/ZT8EdrCge/
9. Engravings of Shaaldaa script – https://www.tiktok.com/t/ZT8EdeyBj/
10. Full Misrak Media (ምስራቅ ሚድያ) interview with Aneso Mohammed on his book about Sheikh Bakri Saphaloo and the latter’s script – https://www.tiktok.com/t/ZT8EdkuwE/
11. “Seenaa Sheek Bakrii Saphaloo Sheek Mahammad siraacirraa ha dhageenyuu May 30, 2022”. YouTube, May 30, 2022. https://www.youtube.com/watch?v=mPj11ST34gQ
12. Mohammed, Aneso, Sirna Barreeffama, Addis Ababa: Arodyon Books, Shaaaldaa, 2025.

Font and Keyboard

The Shaaldaa font used in this proposal, and a keyboard, can be retrieved from the Athinkra GitHub repository: *https://github.com/athinkra/sheek-bakrii-saphaloo* . A keyboard, that includes the aforementioned font, is available from the SIL Keyman website at the location: *https://keyman.com/keyboards/qff_sbs* .

VIII Acknowledgements

The authors would like to thank the scholars that have provided input, support, and feedback into this proposal and for helping us understand the legacy of Sheikh Bakri Saphalo’s script and its modern utilization. In particular, Professor Mohammed Hassen Ali and Aneso Mohammed worked closely with the authors providing both informative and financial support to the investigative effort. Without which, this proposal would not have been possible. Additionally, the following informants provided highly valuable input:

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The authors are also very grateful to Dr. Charles Riley, Dr. Andrij Rovenchak, and Jason Glavy of Athinkra, LLC for contributing the “JG Oromo” font for Shaaldaa script and placing it under an Open Source license. The contributed font has been updated and used here under the name “Sheek Bakrii Saphaloo”.

This project was made possible in part by a grant from the Mellon Foundation to the Script Encoding Initiative at the University of California, Berkeley.

An endorsement for the Unicode encoding of the Shaaldaa script from several Oromo scholars, represented by Dr. Mohammed Hassen, follows:

"Proposal for computer support to be extended to Shaykh Bakri's Oromo writing system"

The purpose behind this proposal is neither to superimpose Shaykh Bakri's writing system upon ***Qubee***, the widely used Latin alphabet-based Oromo writing system, nor upon **Ge'ez**, the Ethiopic alphabet (writing system). On the contrary, it is to demonstrate that Shaykh Bakri's invention was an original writing system that was "…purpose built, in which all the major issues of Oromo phonology are properly provided for."[1] This original writing system, which appears to be more popular today than seven decades ago, deserves to be considered for getting support for computer use.

Shaykh Bakri (1895-1980) was scholar who devoted his long life to educating his people in the language they understood. However, before the Ethiopian revolution of 1974, the Oromo language was banned by a succession of imperial regimes, from being used for teaching, preaching, publishing or broadcasting services in Ethiopia. Up the 1970s, only a fraction of the Oromo in the region of Haraghe knew either the Amharic or Arabic languages. It was precisely for this reason that Shaykh Bakri attempted to produce teaching material in the language that his Oromo people understood. For that purpose, he experimented with using both Ethiopic (Ge'ez) and Arabic writing systems. Nevertheless, Shaykh Bakrii quickly realized that neither the Ethiopic nor Arabic writing systems were suitable for writing in the Oromo language. In that regard "…Shaykh Bakri was the first Oromo who saw clearly the problems inherent in attempting to write the Oromo language by means of orthographic systems which had been devised primarily for other languages". [2]

The Ethiopic writing system has three major shortcomings, when used for writing in the Oromo language or any Cushitic language, such as Sidama or Somali. First, the Ethiopic writing system has only seven vowels, as opposed to ten vowels of the Oromo language. What is more, vowels of the Ethiopic writing system,"…do not have sound representation for the Oromo language'[3]. Second, there is a difference in consonants and glottal stops. Third, in the words of Andraejewski, the Ethiopic alphabet: "does not show the germination of consonants and is ill-fitted to represent the [Oromo] vowel sound." [4] Additionally, the Ethiopic writing system fails to represent specific widely present Oromo consonants, particularly (dh, g, c, ch, ph, ny)[5].

The problem with Arabic-written material in the Oromo language was that the Arabic writing system consists solely of consonants only; whereas the Oromo language has ten vowels. It was his realization of the above-mentioned factors, coupled with Shakyh Bakri's commitment that the Oromo language have its own writing system[6], that most probably launched him on a decade-long journey that culminated in his invention of an alphabet in 1953 at one of his teaching centers known as Ligibo.[7]

> Having developed the alphabet, [Shaykh Bakri] taught it to all his students and to others as well. To a limited extent people began to exchange letters in the new alphabet…In addition to letters, Shaykh Bakri himself employed his alphabet for writing his poems and other works.[8]

Seventy-one years after its invention, and forty-four years after the death of its inventor, Shaykh Bakri's script appears to be is more popular among educated Oromo in eastern Ethiopia today than during his lifetime (see below).

This conclusion is confirmed by Dr. Nuraddin Aman, a researcher at the Institute of Ethiopian Studies, and educator at the Addis Abba University in Ethiopia. He attended a major scholarly conference held on the campus of Dire Dawa University in November 2022. Among those who made presentations at that conference was a young graduate from Hadama University Institute of Technology, named Aneso Mohammed,who made his presentation on his new draft book written on Shaykh Bakri's script(see below on publication of that book).

Finally, **I believe that supporting Shaykh Bakri's writing system on computers is an idea whose time has come.** It was a thoughtfully designed writing system that has been used decades mainly for secret communications. However, it now appears that the writing system is not only viable but used openly to the extent that a young scholar, Aneso Mohammed, published his book in Addis Ababa, the Ethiopian capital in October 2023. The publication of this book received good media coverage. It may open a new chapter in the interest in Shaykh Bakri's script. This development most likely will encourage others to use that script. In short, there is interest in Shaykh Bakri's script, both in Ethiopia and among Diaspora Oromo scholars and others. From this perspective, if Shaykh Bakri's script is further developed, particularly if supported for computer use, it will open a new chapter in the scholarly analysis of that script itself, of the Oromo language and of an important indigenous initiative at overcoming state prohibition of expression by persons determined to keep their ancient language alive and, further, to develop it despite looming obstacles. Making the script available for computer access will encouraging scholarly productivity in the history of all these areas, Oromo writing,

linguistics, support for indigeneity and a more accurate history of the region where the language revival occurred.

Sincerely,

Mohammed Hassen

Endnotes

1. R.J. Hayward and Mohammed Hassen, 1981, "The Oromo Orthography of Shaykh Bakri Sapalo," *Bulletin of the School of Oriental and African Studies, (University of London, Volume XLIV, part 3): 553.*

2. *Ibid.*

3. *Feyisa Densie, "Special Fea*tures in Oromiffa and Reasons for Adopting Latin Script for Developing Oromo Orthography," *The Journal of Oromo Studies*, Volume 2, Numbers 1 and 2 (1995): 25.

4. B.W. Andrzejewski, "Some Observations on the Present Orthography of Oromo," *Proceedings of the Fifth International Conference of Ethiopian Studies*, ed. By J. Tubina, Rotterdam: A. A. Balkam, 1980: 127.

5. Mahadi Haamid Mudee, *Oromo Dictionary, Volume 1, English-Oromo* (Atlanta: Sagalee Oromoo Publishing Co., Inc. 1995) : xix.

6. Hayward & Hassen, 553

7. Aliyi Khalifa, 2000, "The Life and Career of Sheik Bakrii Saphalo (1895-1980)" B.A. Thesis, Addis Ababa University: 24.

8. Hayward & Hassen, 553.

IX Additional Figures/Images:

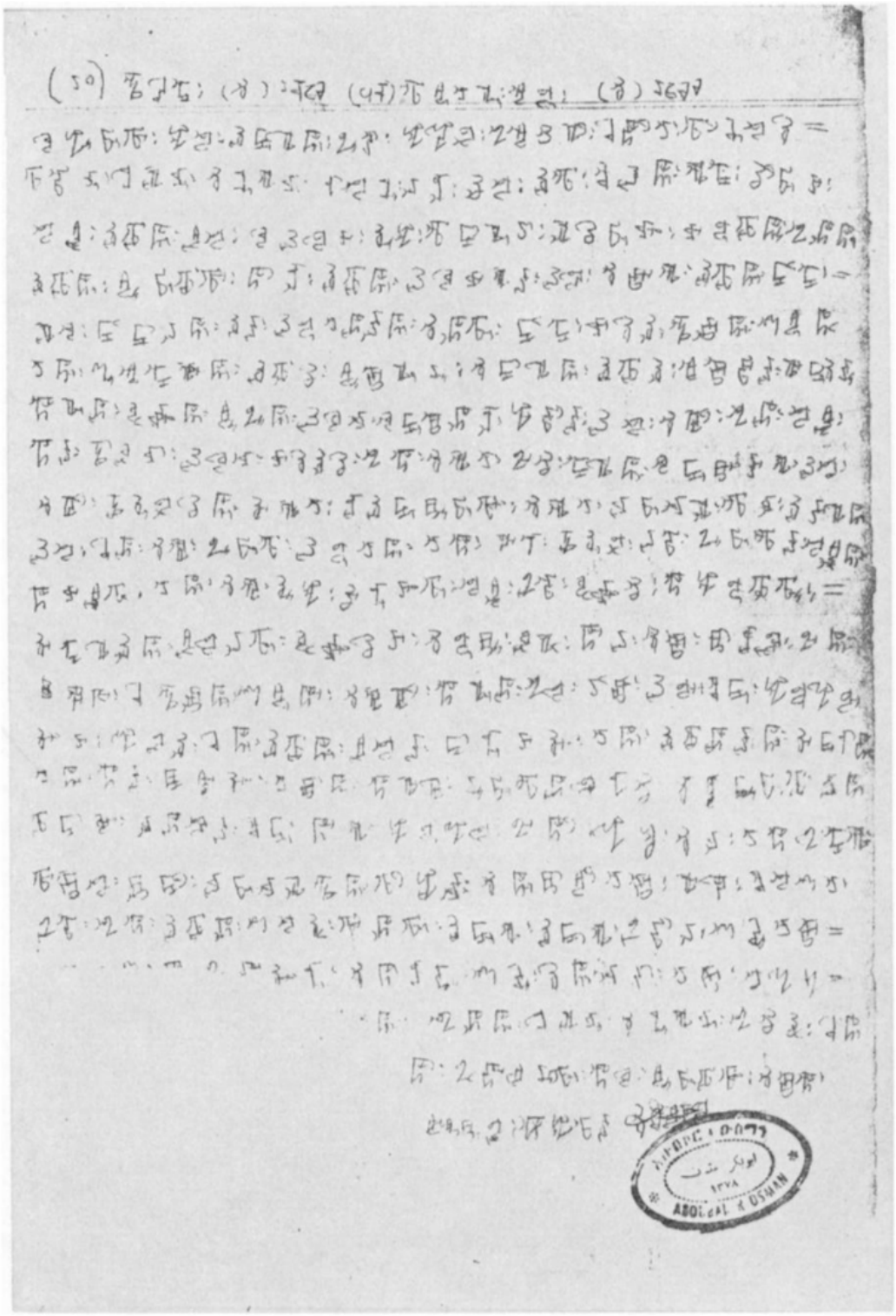


Plate I. A letter by Sheikh Bakri Sapalo, labeled as Plate I from Hayward and Hassen 1981. From ١٣٧٨ Hijri Calendar (1958 or 1959 Gregorian Calendar); dated in the stamp on the bottom-right.

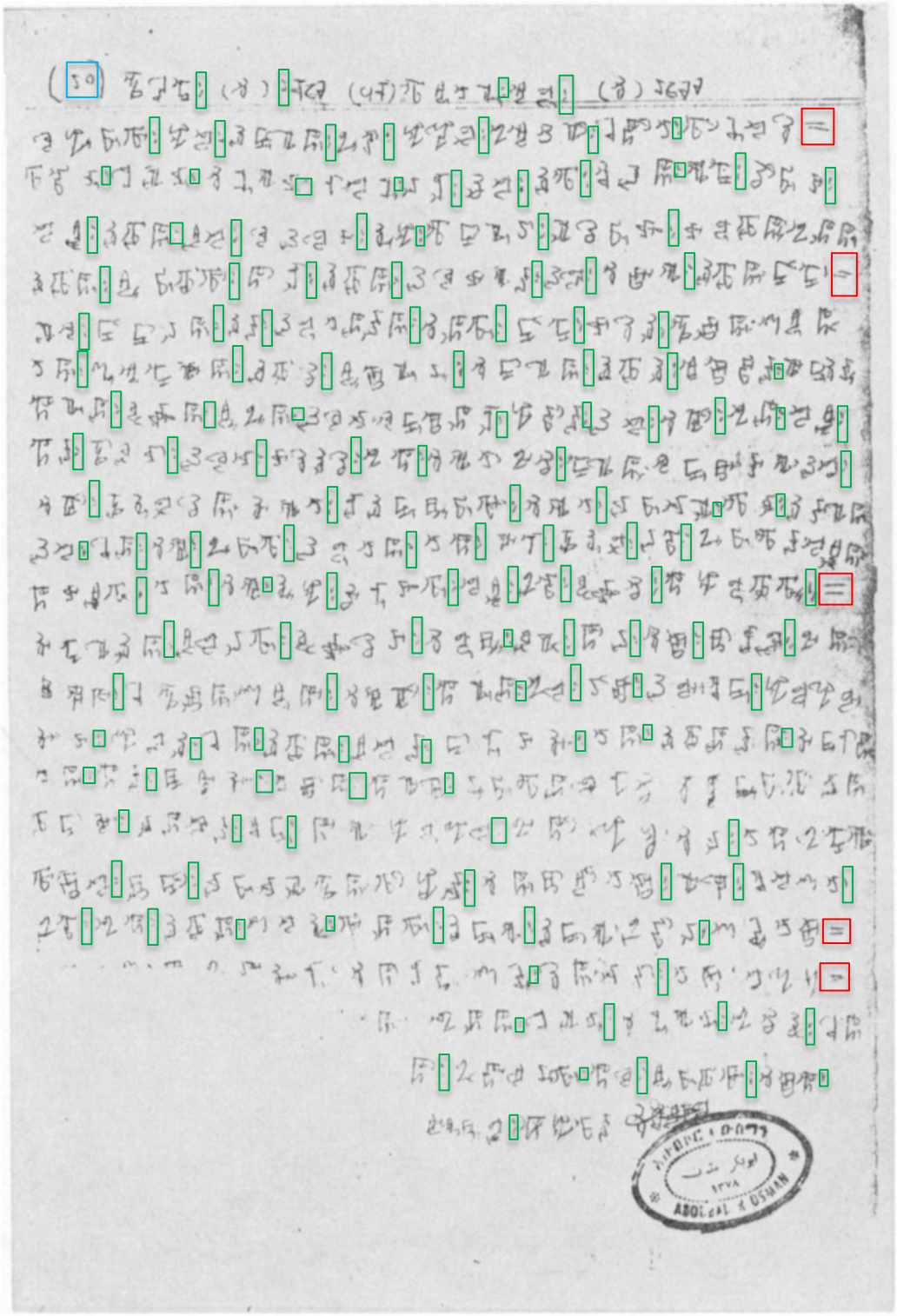


Plate I.1 (edited) Green boxes highlight some of the script-specific word-separator (many more in the Plate). Red boxes highlight some of the script-specific full-stop. The blue box highlights script-specific numerals.

FIG. 1

Figure 1. Table of Shaaldaa script created by Hayward and Hassen 1981. Column I is the 'base glyph'; Column II-VI are consonant+short vowel syllable graphemes; Column VII-XI are consonant+long-vowel syllable graphemes; Column XII represents the 'base glyph' for geminated consonants (which will have 5 short vowel, 5 long vowel, and 1 pure consonant counterpart); Column XIII represents a simple consonant without an inherent vowel.

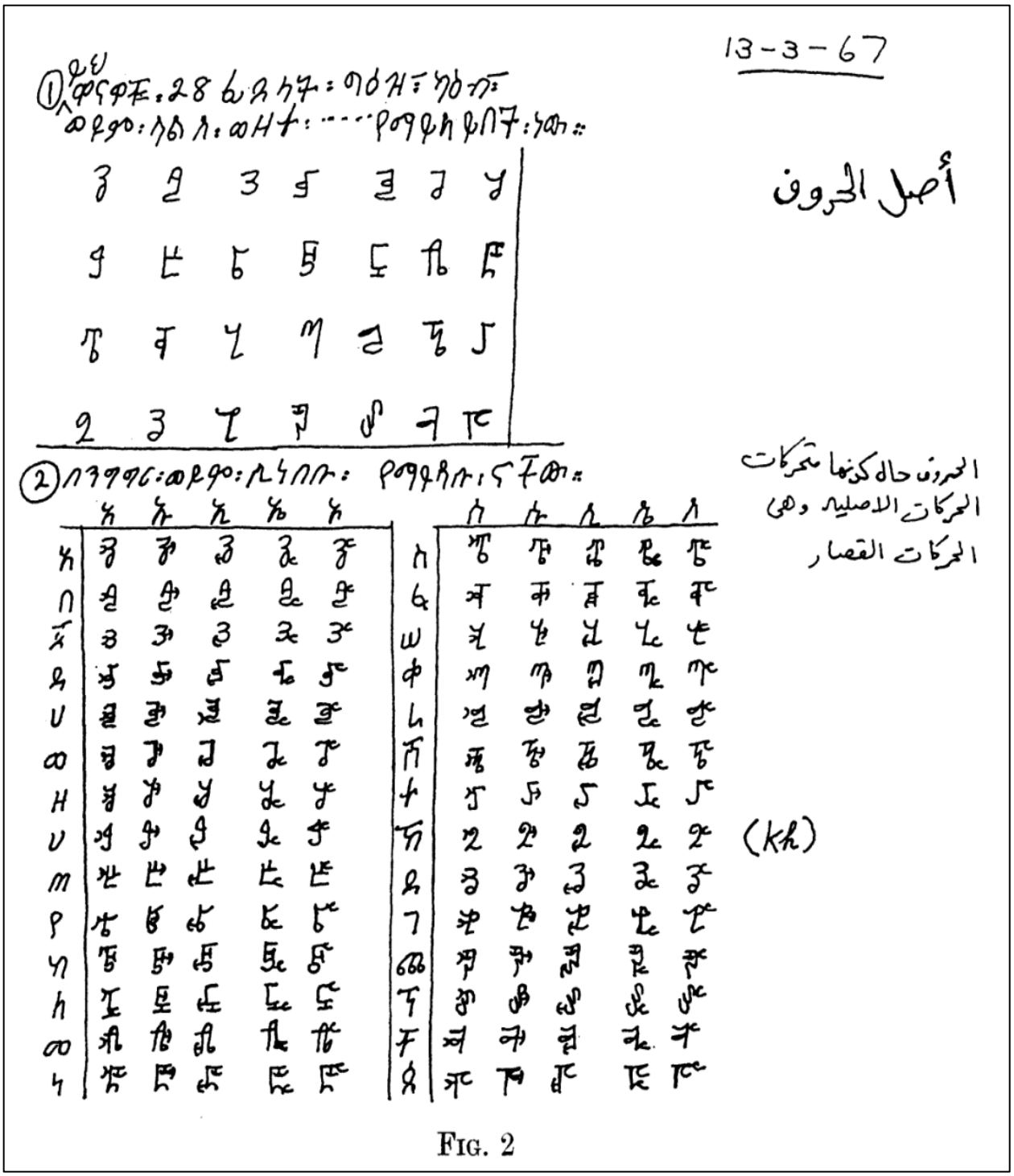


FIG. 2

Figure 2. Matrix from Hayward and Hassen 1981.

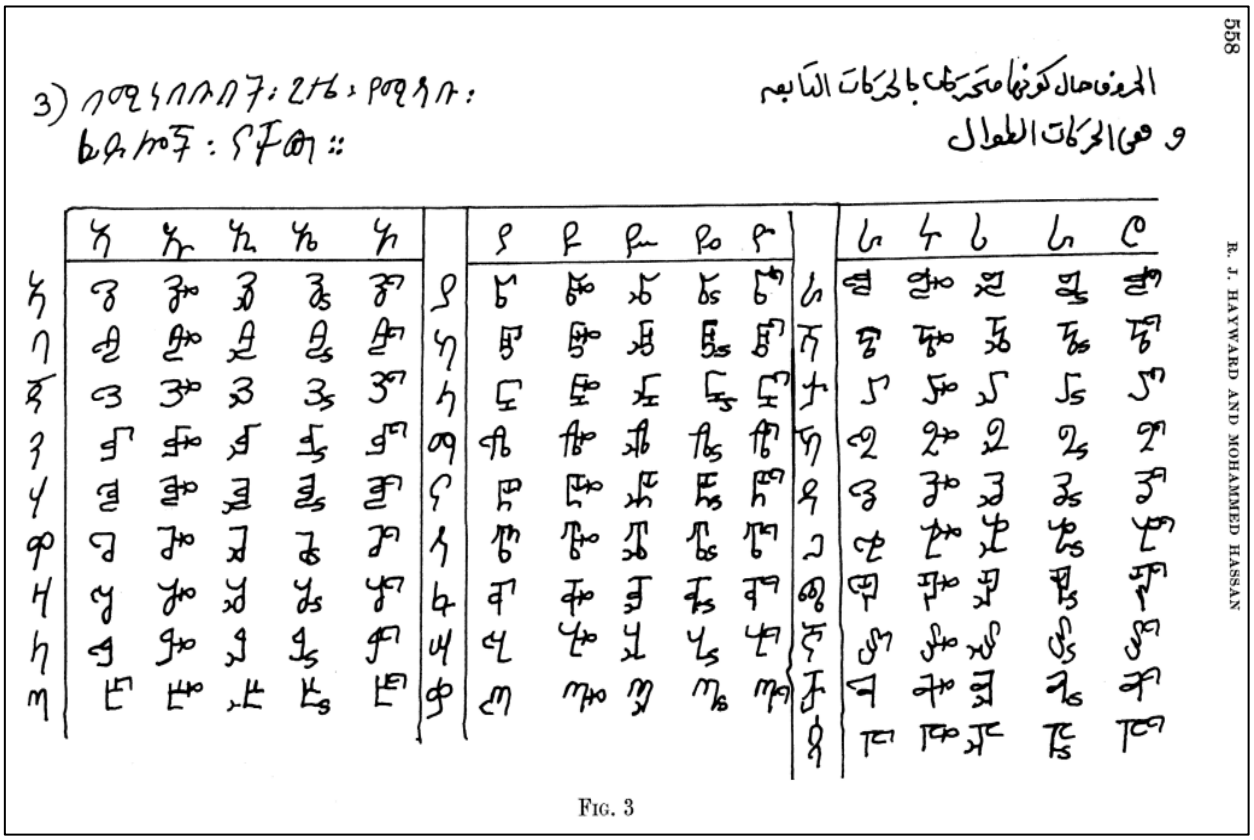


Figure 3. Matrix from Hayward and Hassen 1981.

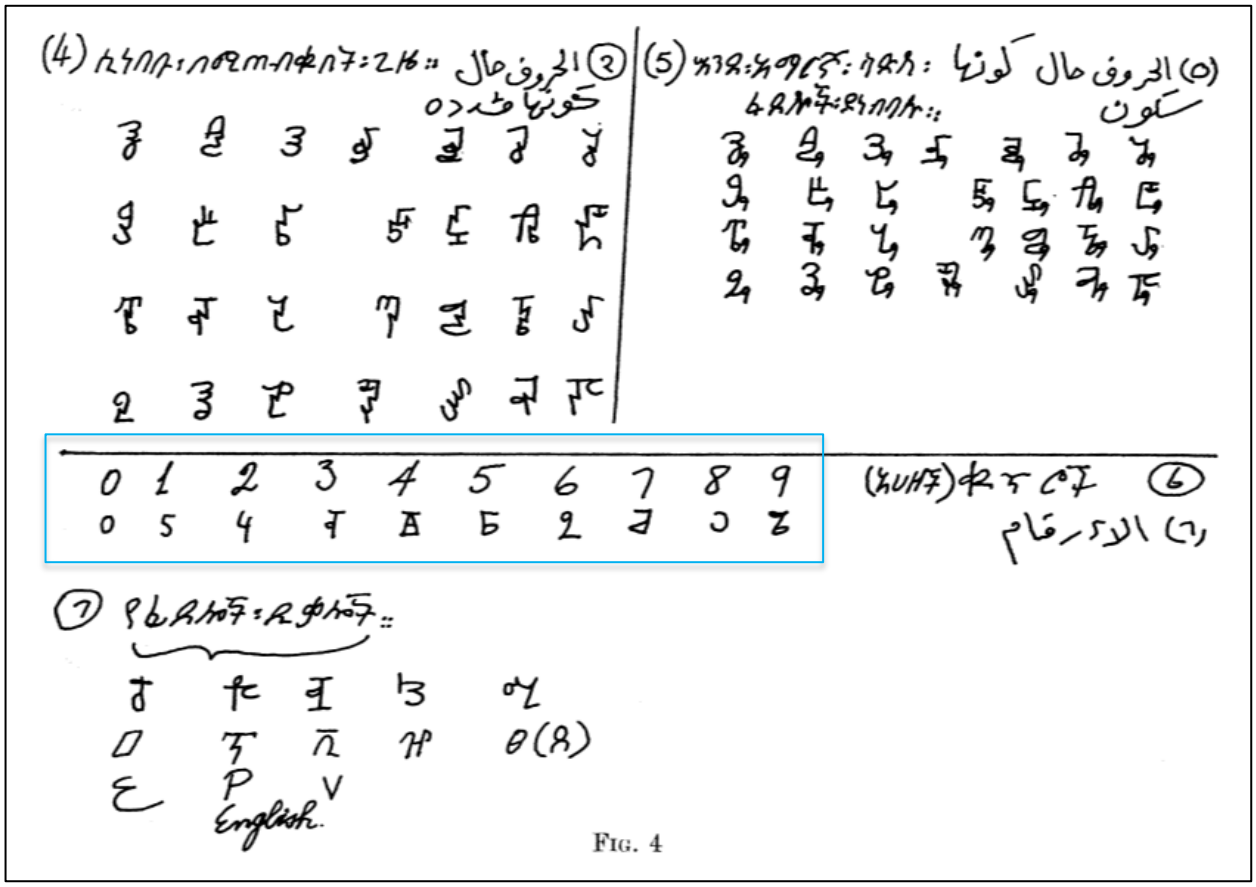


FIG. 4

Figure 4. From Hayward and Hassen 1981. Blue box highlights script-specific numerals.

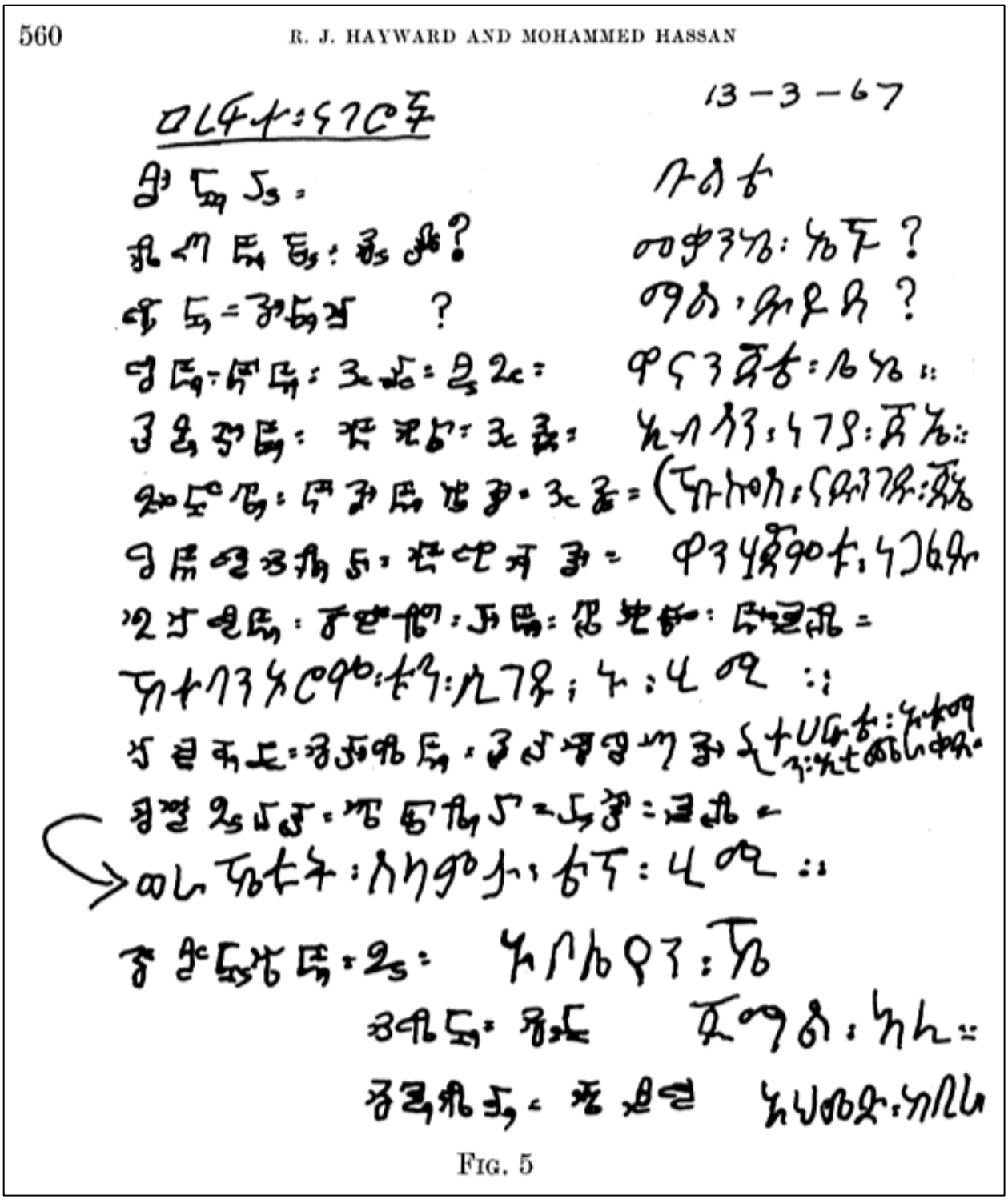
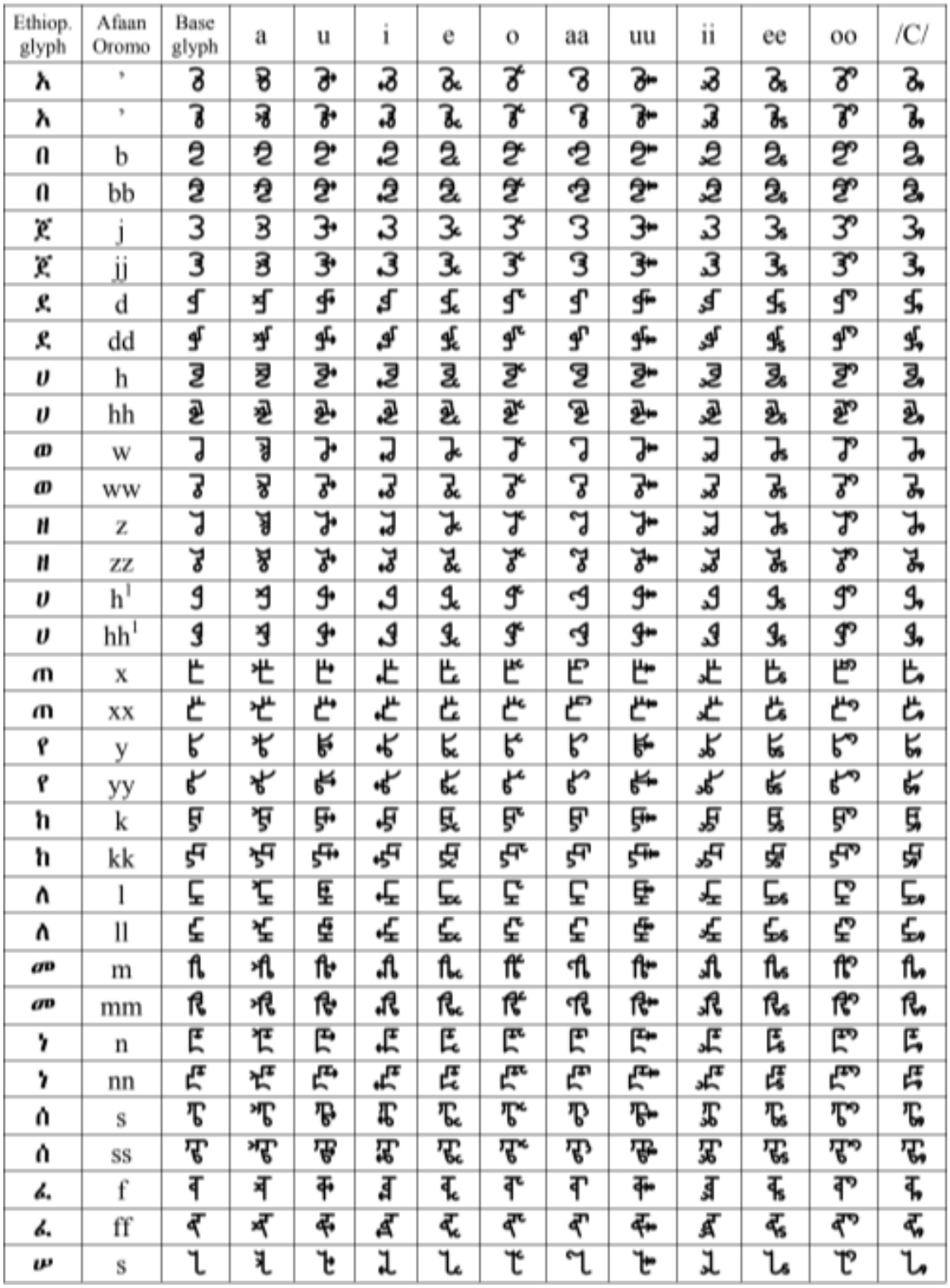


FIG. 5

Figure 5. Oromo-Amharic bilingual text; from Hayward and Hassen 1981.



Ethiop. glyph	Afaan Oromo	Base glyph	a	u	i	e	o	aa	uu	ii	ee	oo	/C/
አ	’	ሀ	ሁ	ሂ	ሃ	ሄ	ህ	ሆ	ሁ	ሃ	ሄ	ህ	ሀ
አ	’	ሐ	ሑ	ሒ	ሓ	ሔ	ሕ	ሖ	ሑ	ሓ	ሔ	ሕ	ሐ
በ	b	ለ	ሉ	ሊ	ላ	ሌ	ል	ሎ	ሉ	ላ	ሌ	ል	ለ
በ	bb	ለ	ሉ	ሊ	ላ	ሌ	ል	ሎ	ሉ	ላ	ሌ	ል	ለ
ጀ	j	መ	ሙ	ሚ	ማ	ሜ	ም	ሞ	ሙ	ማ	ሜ	ም	መ
ጀ	jj	መ	ሙ	ሚ	ማ	ሜ	ም	ሞ	ሙ	ማ	ሜ	ም	መ
ደ	d	ሠ	ሡ	ሢ	ሣ	ሤ	ሥ	ሦ	ሡ	ሣ	ሤ	ሥ	ሠ
ደ	dd	ሰ	ሱ	ሲ	ሳ	ሴ	ስ	ሶ	ሱ	ሳ	ሴ	ስ	ሰ
ሀ	h	ረ	ሩ	ሪ	ራ	ሬ	ር	ሮ	ሩ	ራ	ሬ	ር	ረ
ሀ	hh	ሰ	ሱ	ሲ	ሳ	ሴ	ስ	ሶ	ሱ	ሳ	ሴ	ስ	ሰ
ወ	w	ሸ	ሹ	ሺ	ሻ	ሼ	ሽ	ሾ	ሹ	ሻ	ሼ	ሽ	ሸ
ወ	ww	ሸ	ሹ	ሺ	ሻ	ሼ	ሽ	ሾ	ሹ	ሻ	ሼ	ሽ	ሸ
ዘ	z	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ዘ	zz	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ሀ	h[1]	ሐ	ሑ	ሒ	ሓ	ሔ	ሕ	ሖ	ሑ	ሓ	ሔ	ሕ	ሐ
ሀ	hh[1]	ሐ	ሑ	ሒ	ሓ	ሔ	ሕ	ሖ	ሑ	ሓ	ሔ	ሕ	ሐ
ጠ	x	ጨ	ጩ	ጪ	ጫ	ጬ	ጭ	ጮ	ጩ	ጫ	ጬ	ጭ	ጨ
ጠ	xx	ጨ	ጩ	ጪ	ጫ	ጬ	ጭ	ጮ	ጩ	ጫ	ጬ	ጭ	ጨ
የ	y	ደ	ዱ	ዲ	ዳ	ዴ	ድ	ዶ	ዱ	ዳ	ዴ	ድ	ደ
የ	yy	ደ	ዱ	ዲ	ዳ	ዴ	ድ	ዶ	ዱ	ዳ	ዴ	ድ	ደ
ከ	k	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ከ	kk	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ለ	l	ሠ	ሡ	ሢ	ሣ	ሤ	ሥ	ሦ	ሡ	ሣ	ሤ	ሥ	ሠ
ለ	ll	ሰ	ሱ	ሲ	ሳ	ሴ	ስ	ሶ	ሱ	ሳ	ሴ	ስ	ሰ
መ	m	ሜ	ሚ	ሜ	ማ	ሜ	ም	ሞ	ሚ	ማ	ሜ	ም	መ
መ	mm	ሜ	ሚ	ሜ	ማ	ሜ	ም	ሞ	ሚ	ማ	ሜ	ም	መ
ነ	n	ኔ	ኑ	ኒ	ና	ኔ	ን	ኖ	ኑ	ና	ኔ	ን	ኔ
ነ	nn	ኔ	ኑ	ኒ	ና	ኔ	ን	ኖ	ኑ	ና	ኔ	ን	ኔ
ሰ	s	ሸ	ሹ	ሺ	ሻ	ሼ	ሽ	ሾ	ሹ	ሻ	ሼ	ሽ	ሸ
ሰ	ss	ሸ	ሹ	ሺ	ሻ	ሼ	ሽ	ሾ	ሹ	ሻ	ሼ	ሽ	ሸ
ፈ	f	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ፈ	ff	ቀ	ቁ	ቂ	ቃ	ቄ	ቅ	ቆ	ቁ	ቃ	ቄ	ቅ	ቀ
ሠ	s	ኀ	ኁ	ኂ	ኃ	ኄ	ኅ	ኆ	ኁ	ኃ	ኄ	ኅ	ኀ

Figure 6. Table 4.2 from page 67 of “*African Writing Systems of the Modern Age: The Sub-Saharan Region*” by Andrij Rovenchak and Jason Glavy. Showcases vocalized and standalone consonant forms of geminated base glyphs.

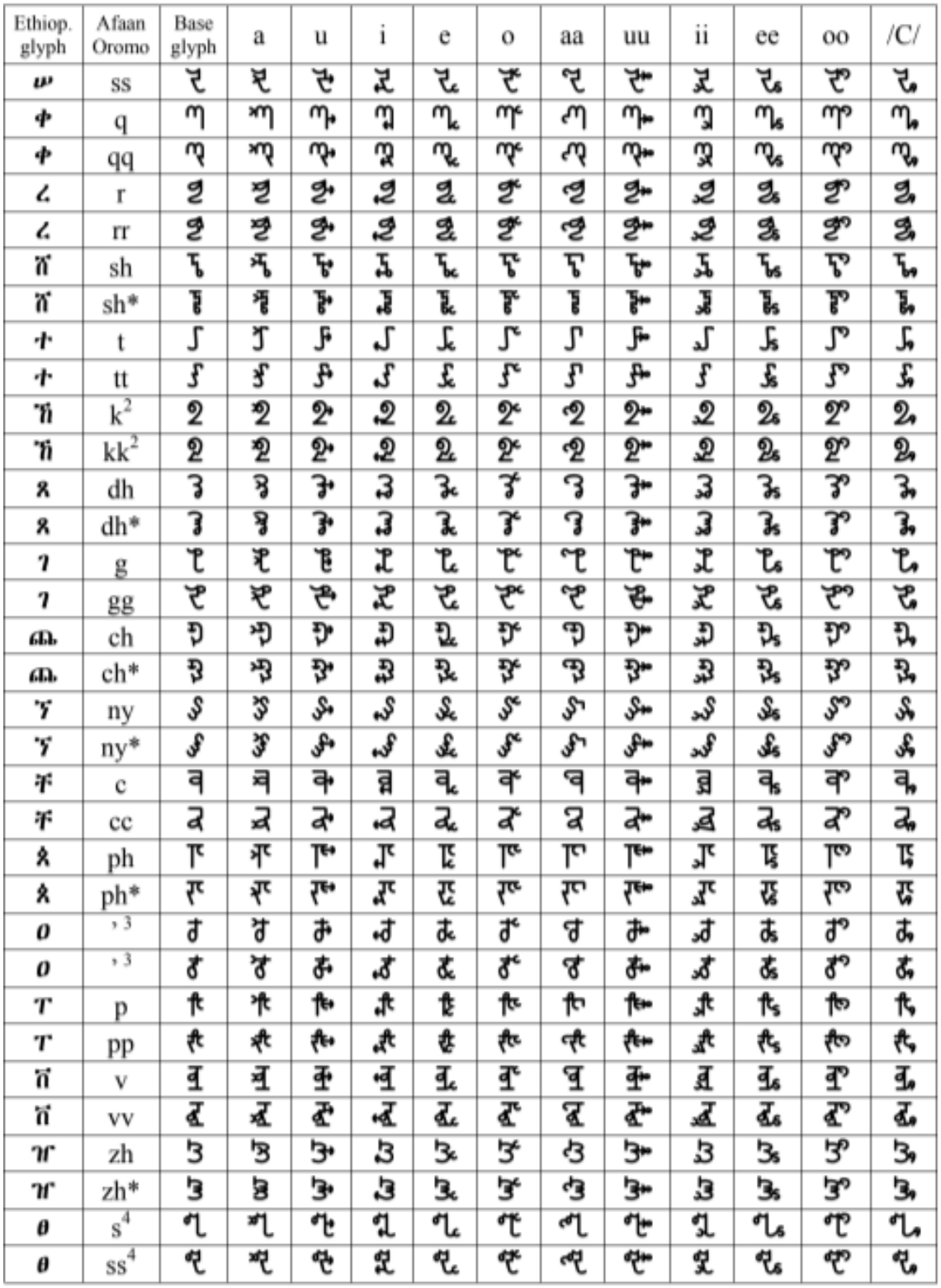


Figure 7. Table 4.2 (continued) from page 68 of "*African Writing Systems of the Modern Age: The Sub-Saharan Region*" by Andrij Rovenchak and Jason Glavy. Showcases vocalized and standalone consonant forms of geminated base glyphs.

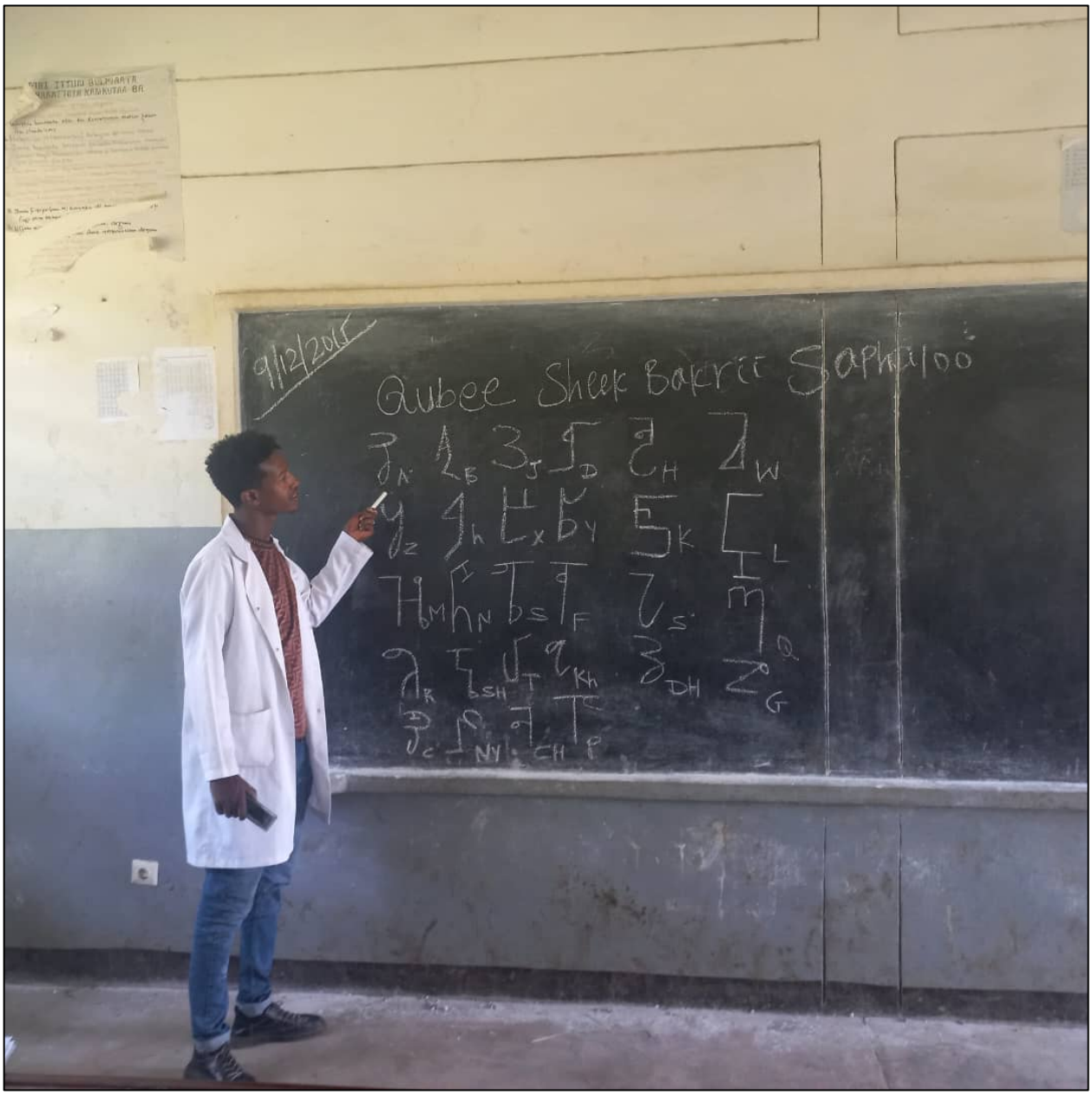


Figure 8. A young chemist named Aneso Mohammed teaching the Shaaldaa script to a full classroom of students in Dire Dawa, Ethiopia, 2023. Ethiopian Calendar date is present in the top left of the chalkboard.

Figure 9. Students of Aneso Mohammed learning the Shaaldaa script in Dire Dawa, Ethiopia, 2023.

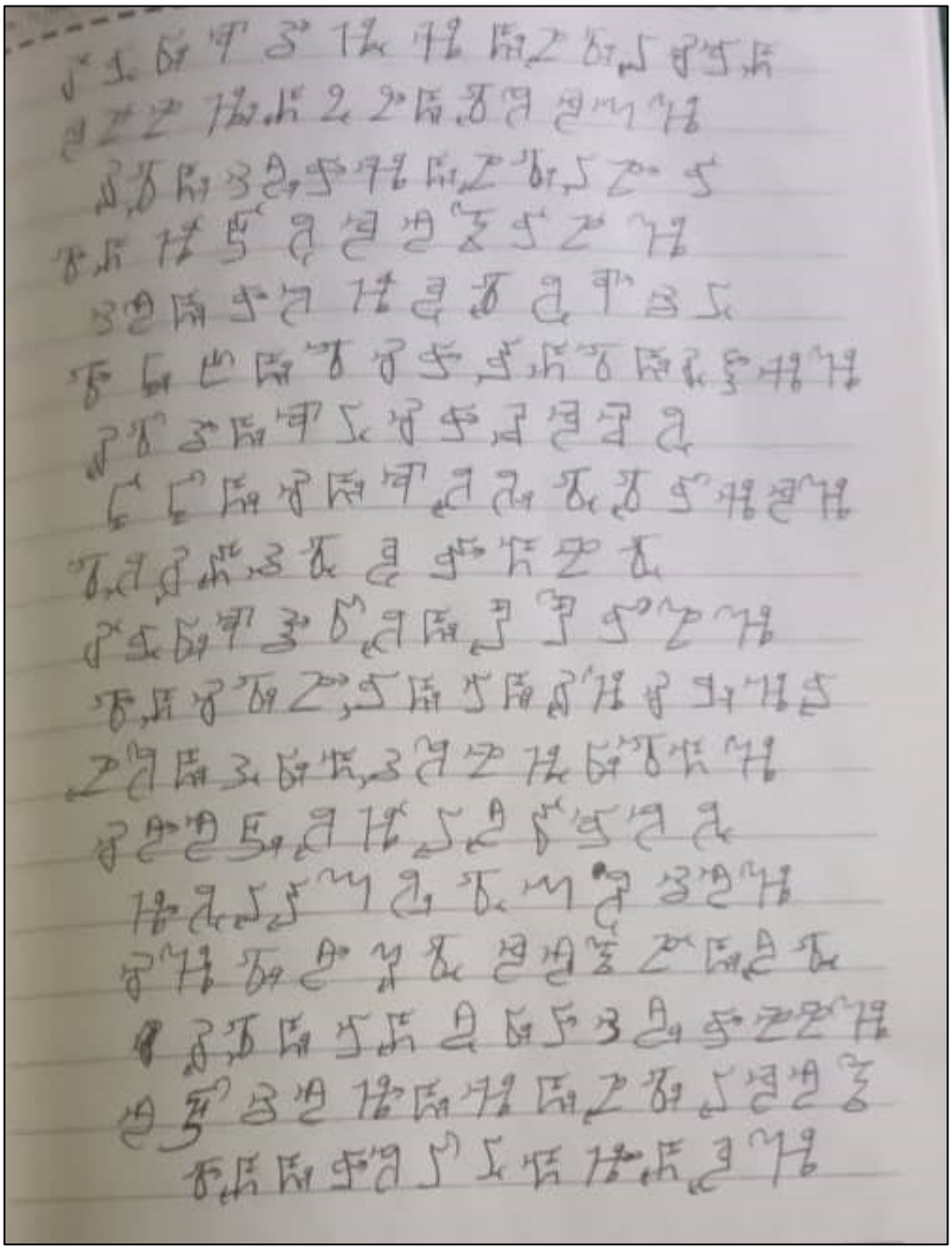


Figure 10. Modern day writing of the Shaaldaa script by one of Sheikh Bakri's students.

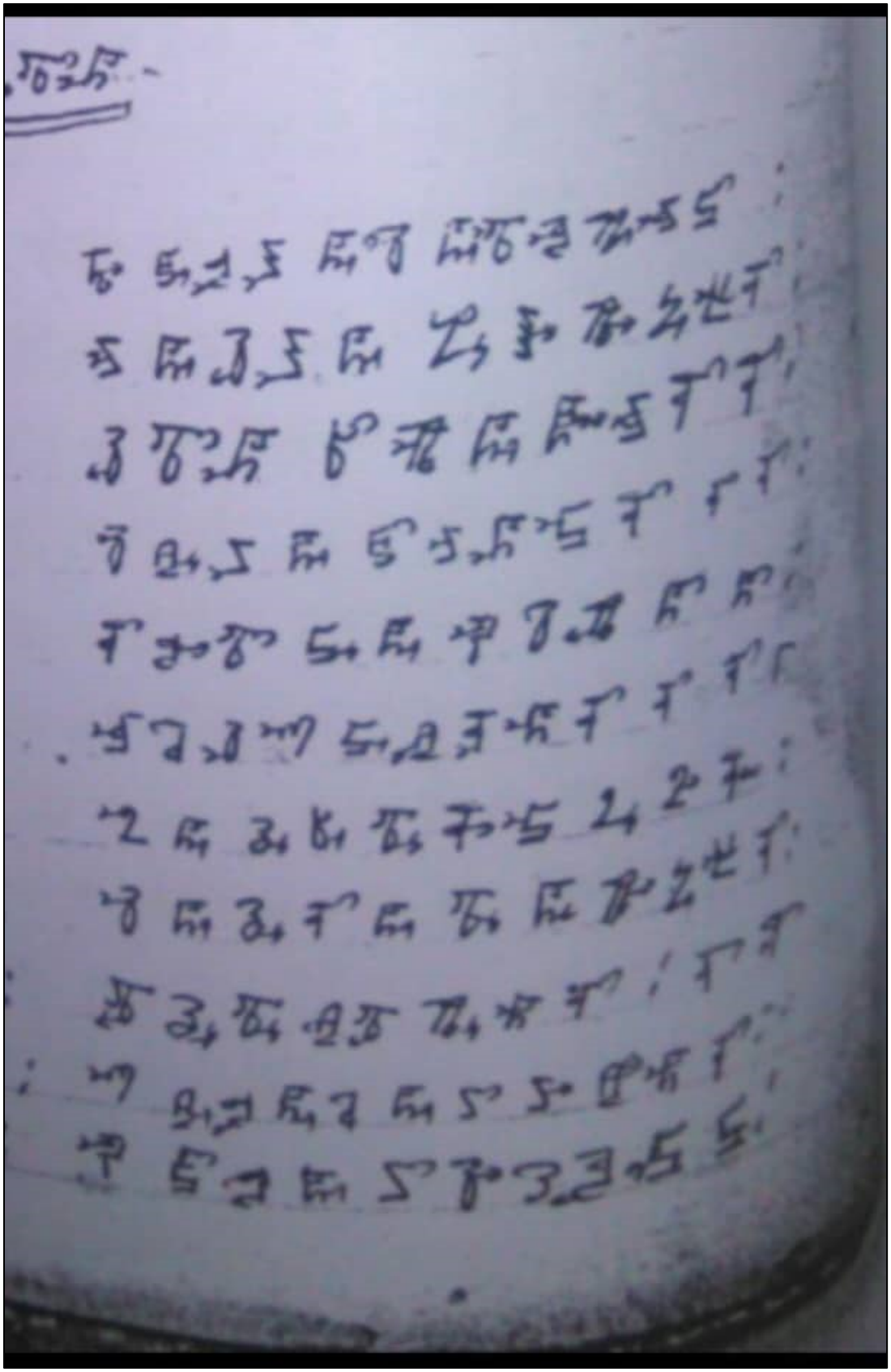


Figure 11. Excerpt of Sheikh Bakri Sapalo's handwriting.

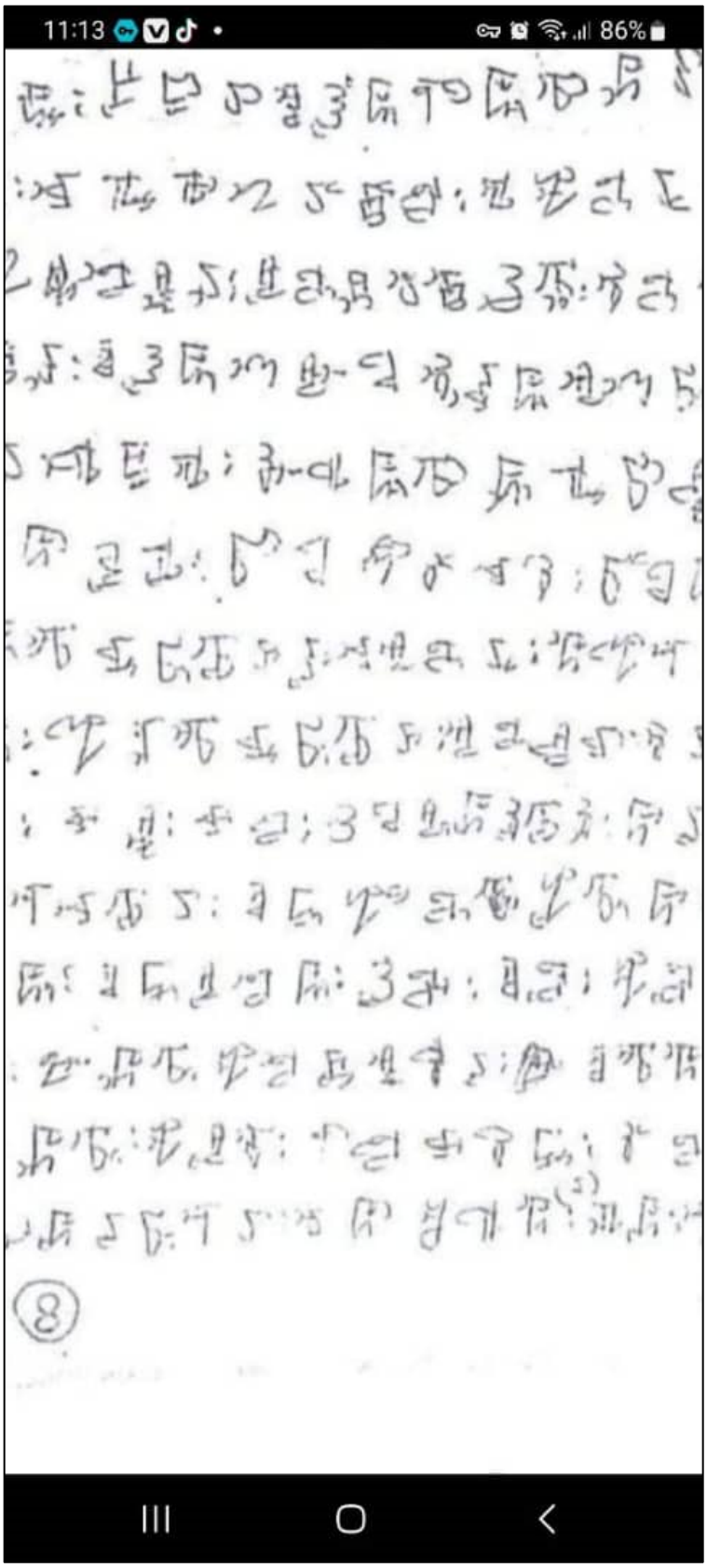


Figure 12. Excerpt of Sheikh Bakri Sapalo's handwriting.

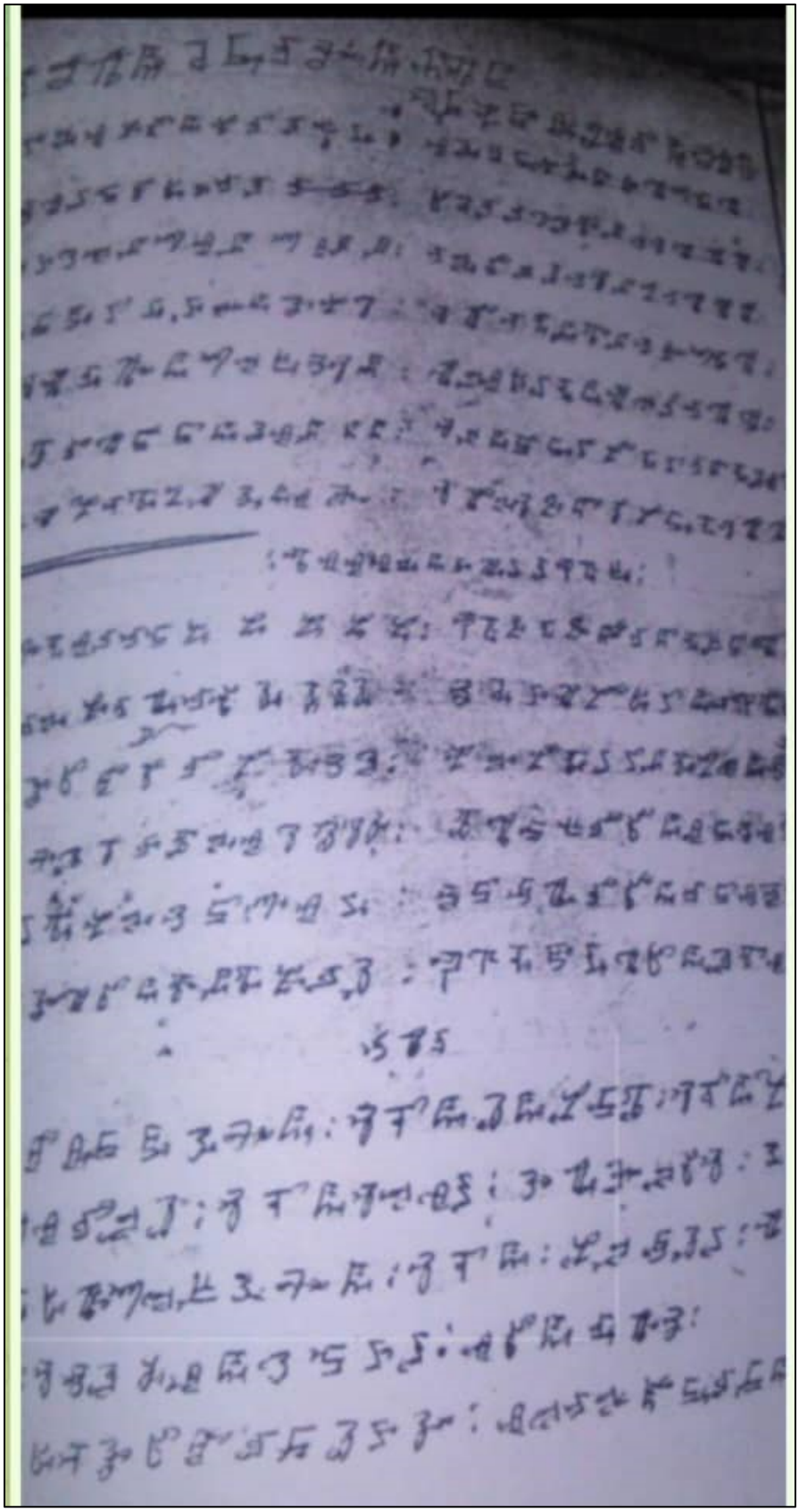


Figure 13. Excerpt of Sheikh Bakri Sapalo's handwriting.

Figure 14. Chemist Aneso Mohammed in front of a Shaaldaa teaching table.

Figure 15. Shaaldaa script teaching table. Letters displayed are the base glyphs as they have been used when teaching the script. The following base glyphs are missing from the above teaching table because they are used for foreign sounds. However, these letters are learned later.

IPA	Shaaldaa script Base Glyph
ʕ	𐆑
p	𐆒
v/β	𐆓
ʒ	𐆔
ts’	𐆕

Table 5. Shaaldaa graphemes used for non-native phonemes.

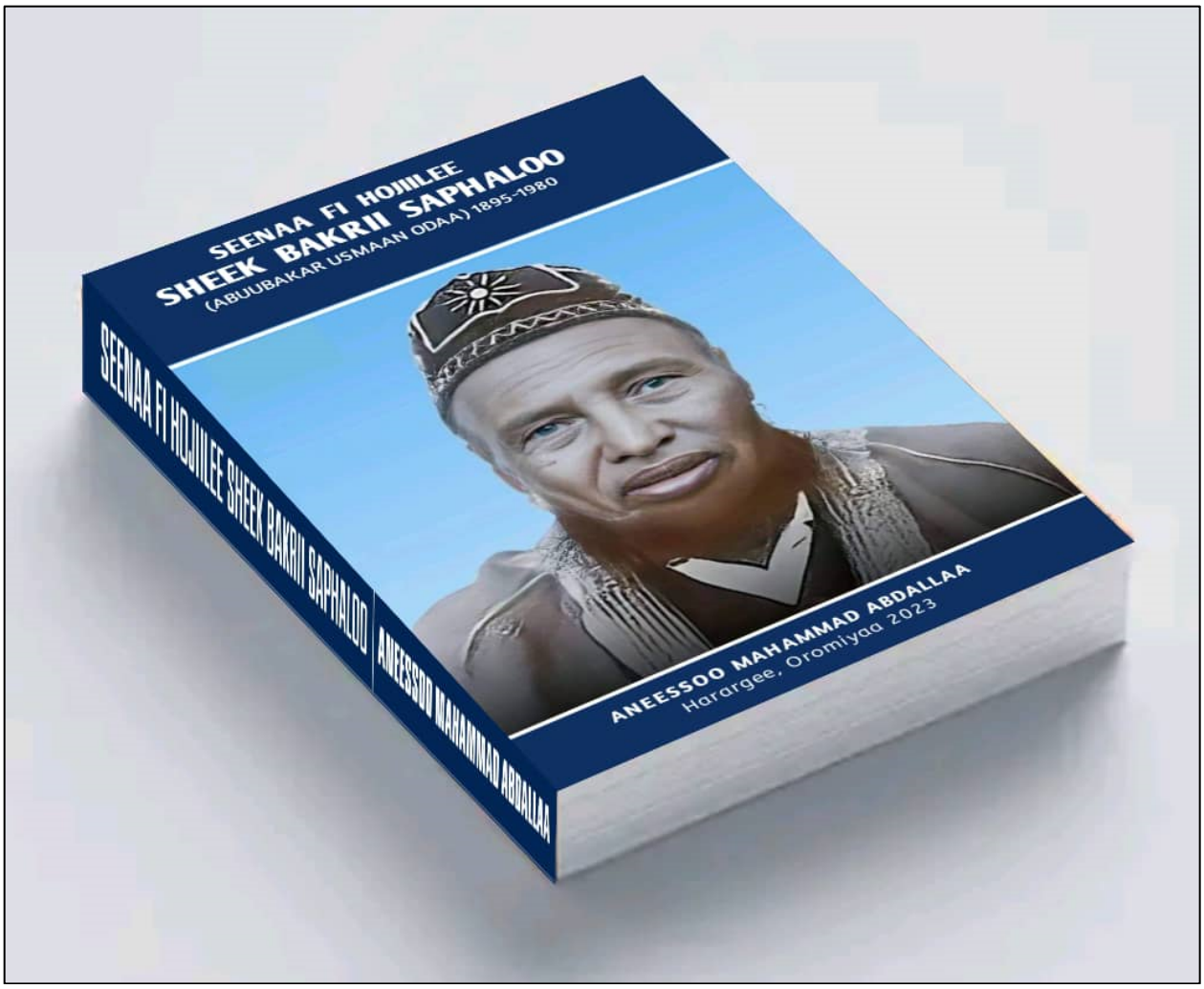


Figure 16. A book by Aneso Mohammed with a translated title of "*History and Works of Sheikh Bakri Sapalo*" published late 2023/early 2024 (Gregorian Calendar). Written in Oromo with the Latin-based Oromo orthography (Qubee).

Figure 17. Debut event of Aneso Mohammed's book on Sheikh Bakri Sapalo and the latter's script – late 2023/early 2024.

Figure 18. Debut event of Aneso Mohammed's book on Sheikh Bakri Sapalo and the latter's script – late 2023/early 2024.

Figure 19. Reader of Aneso Mohammed's book on Sheikh Bakri Sapalo. Engraving of the Shaaldaa script in the background.

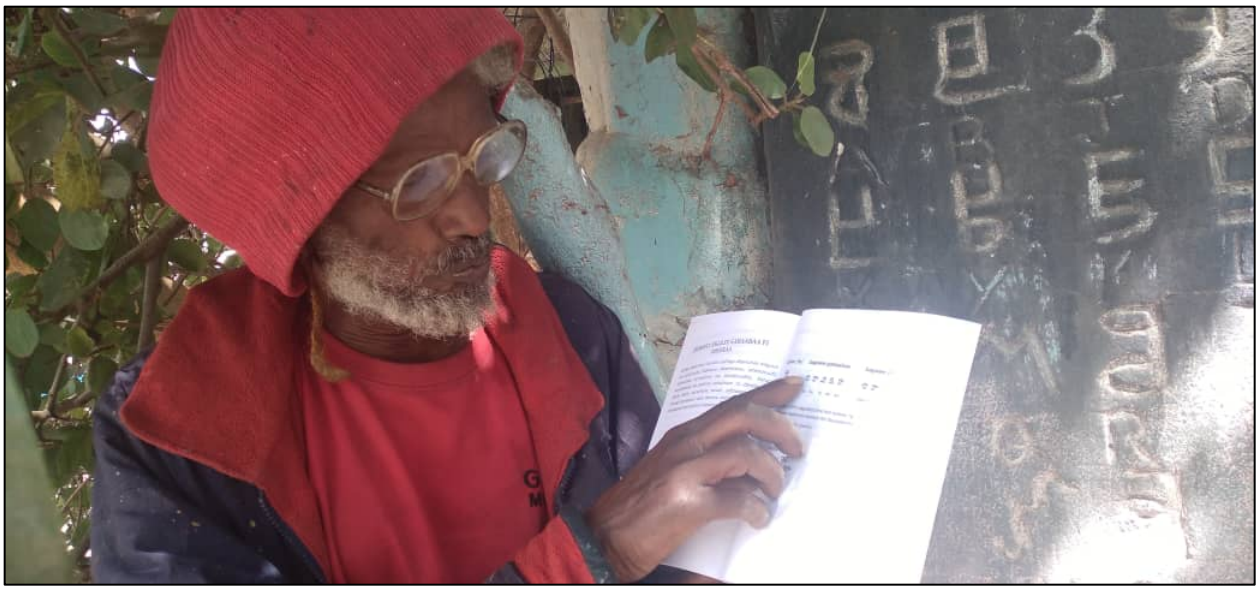


Figure 20. Reader of Aneso Mohammed's book on Sheikh Bakri Sapalo. Engraving of the Shaaldaa script in the background.

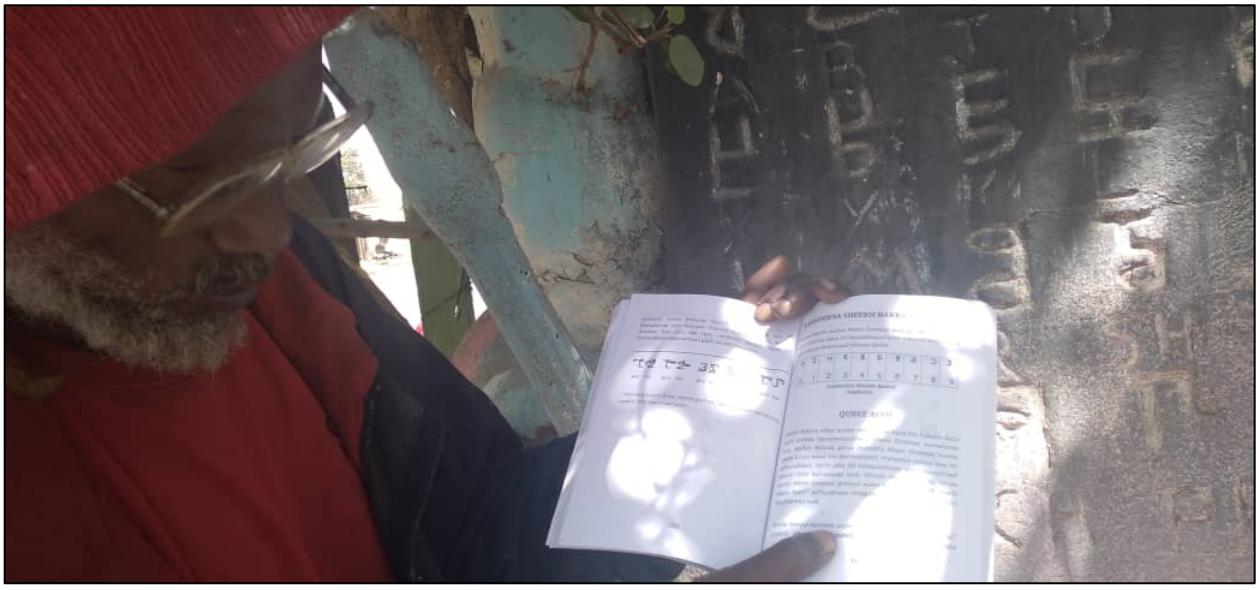


Figure 21. Reader of Aneso Mohammed's book on Sheikh Bakri Sapalo. Engraving of the Shaaldaa script in the background.

Figure 22. Engraving of the Shaaldaa script.

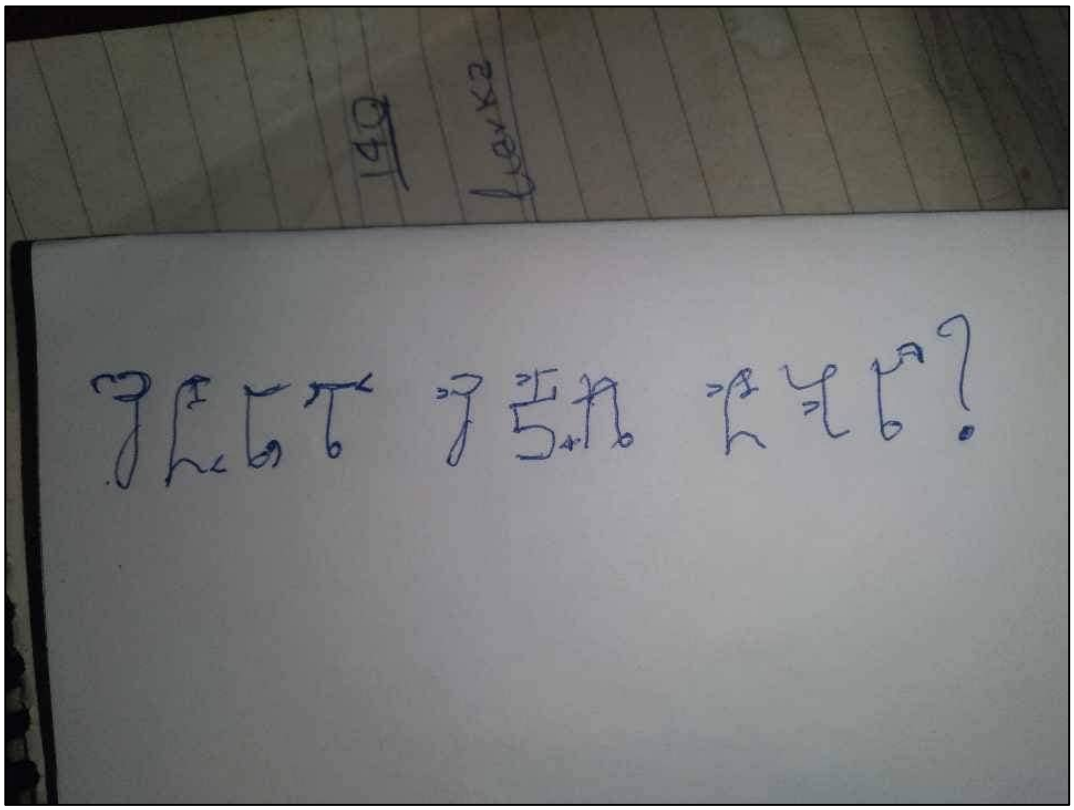


Figure 23. Handwritten note in the Shaaldaa script from Dire Dawa.

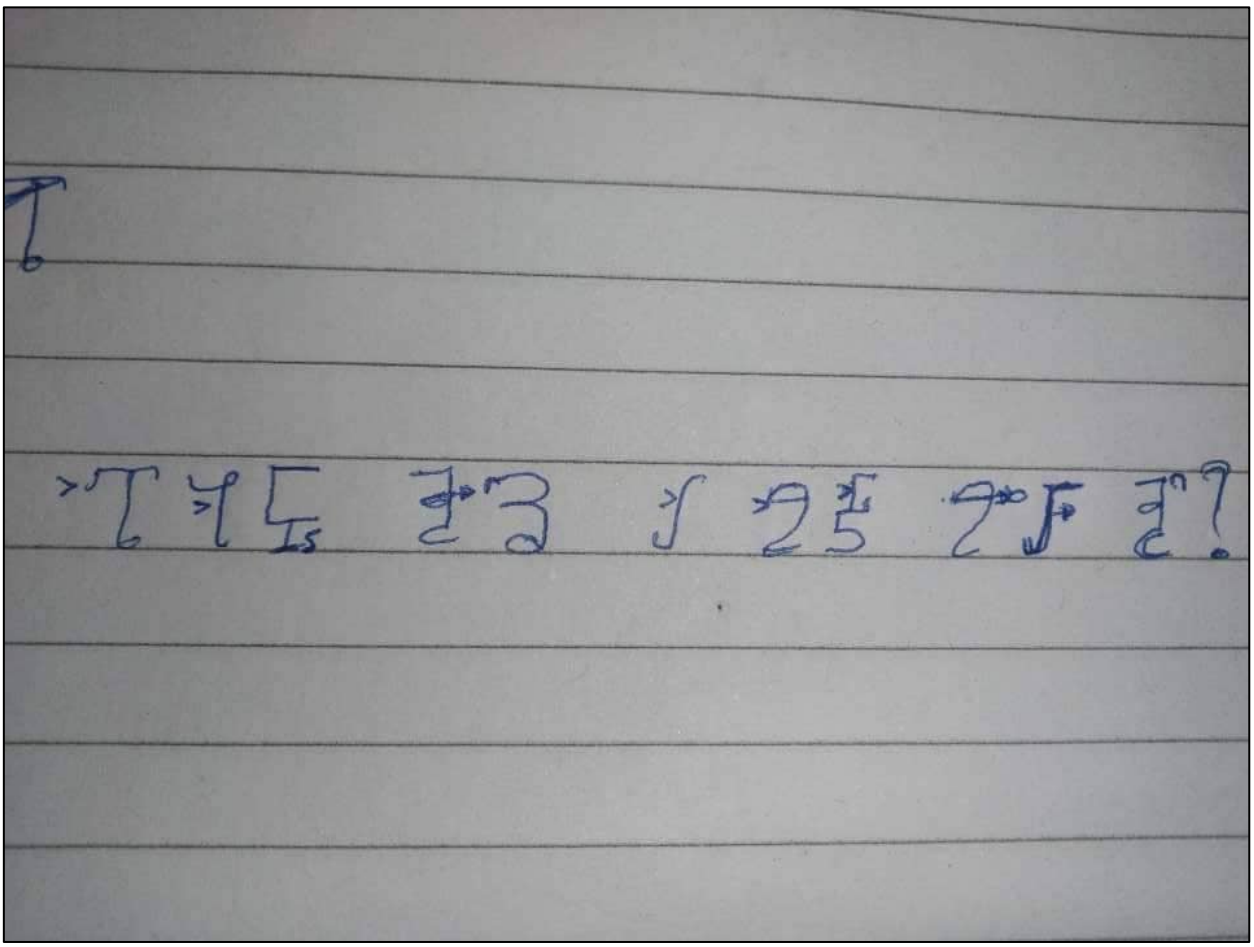


Figure 24. Handwritten note in the Shaaldaa script from Dire Dawa.

Figure 25. Oromo excerpt typed in the Shaaldaa script with a font. The user accidentally used 2 word separators to make a full stop similar the Ethiopic ። (U+1362). This does not mean a second full stop should be encoded into the Shaaldaa block, rather it reflects the user community's exposure to the dominant script in the region. Blue boxes highlight use of the script-specific numerals.

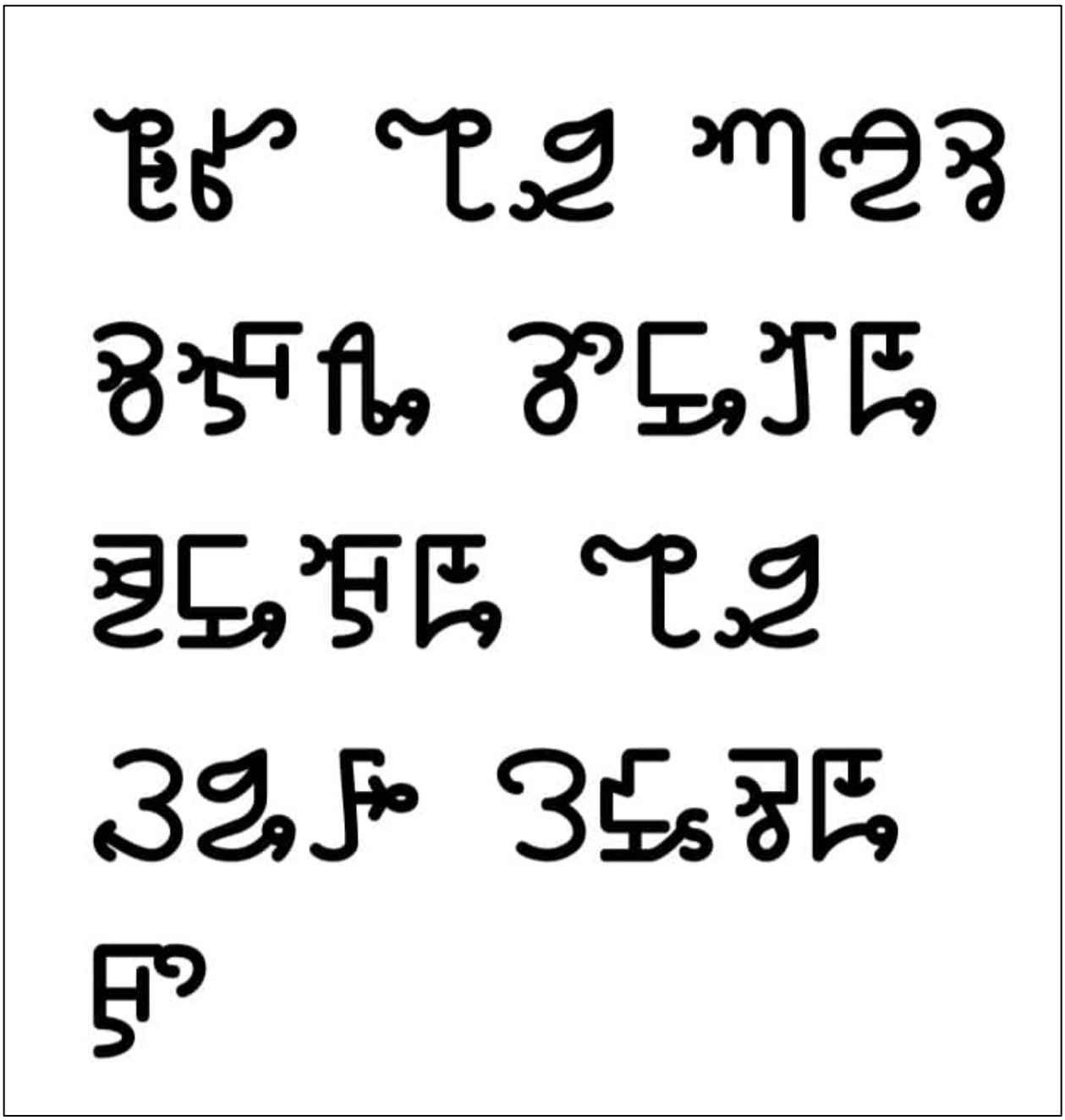


Figure 26. Oromo excerpt typed in the Shaaldaa script with a font.

Figure 27. Another independent group being educated in the Shaaldaa script.

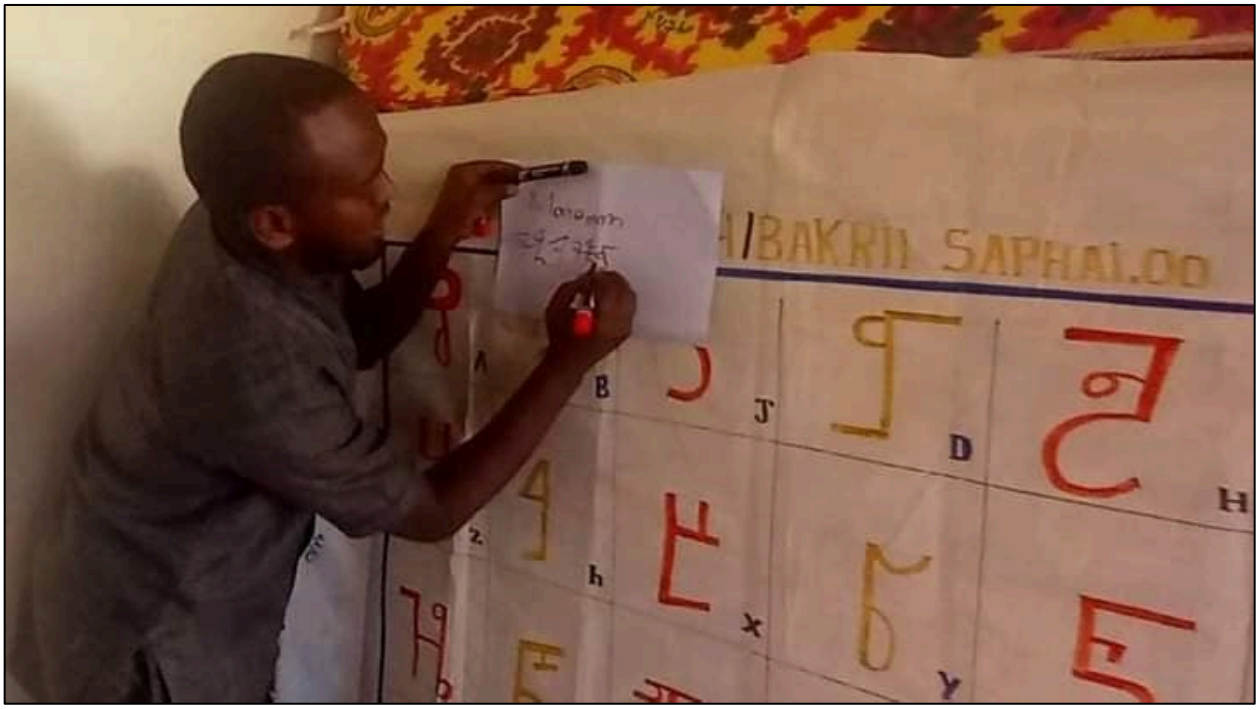


Figure 28. Another independent group being educated in the Shaaldaa script.

Figure 29. The Shaaldaa script being discussed on "*Dire Today*" news. See Reference 4, Section VII.

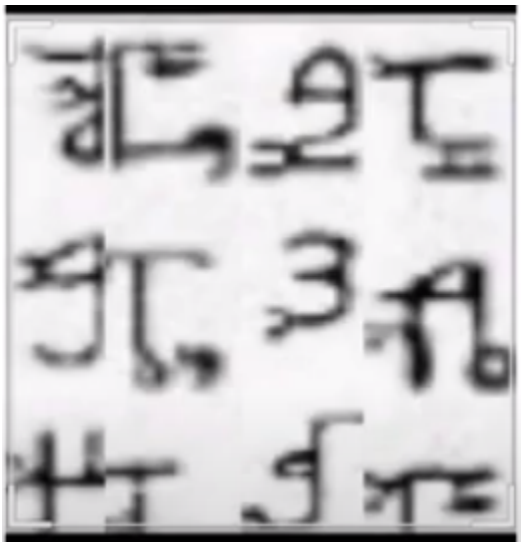


Figure 30. Shaaldaa script shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII.

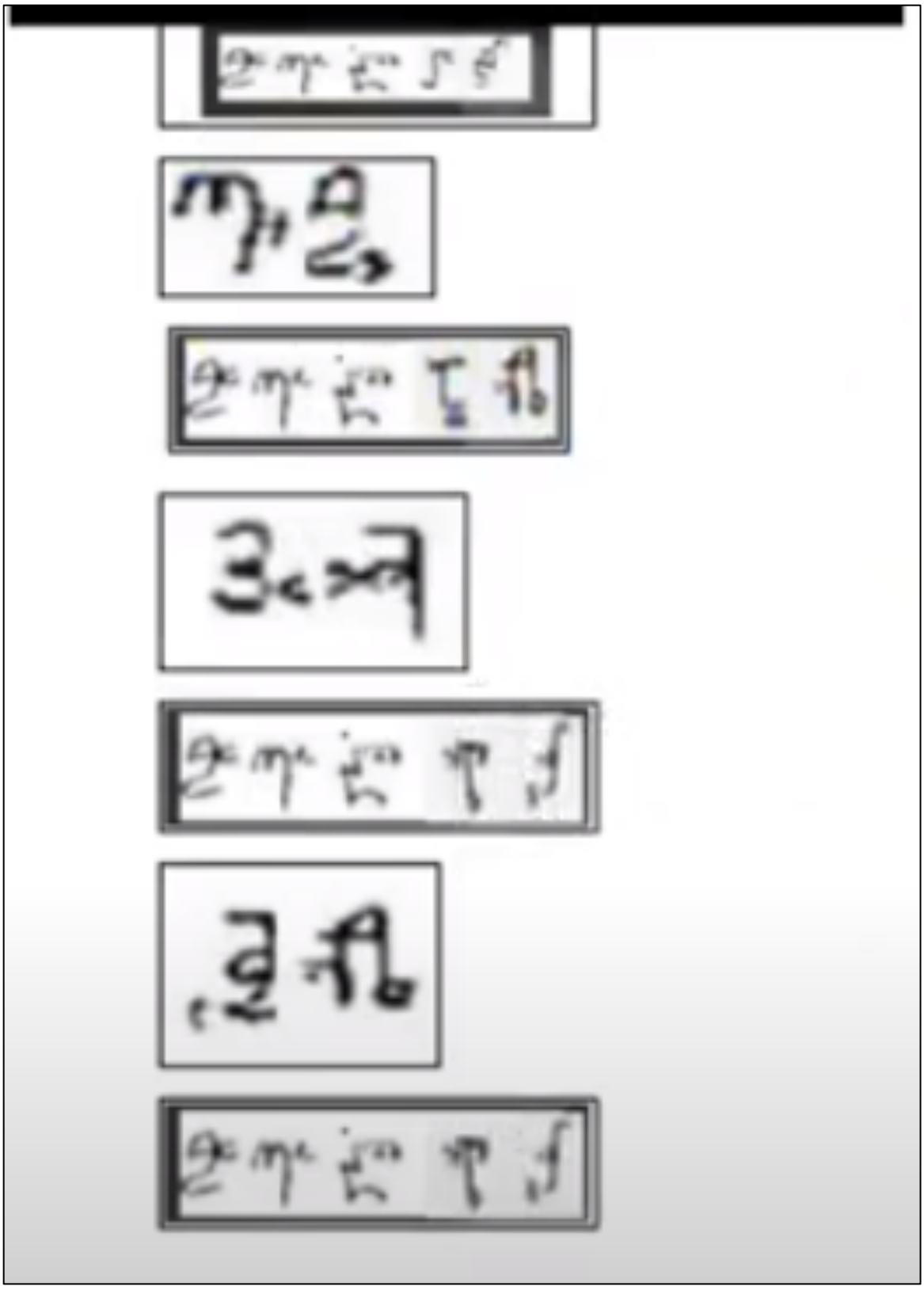


Figure 31. Shaaldaa script shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII.

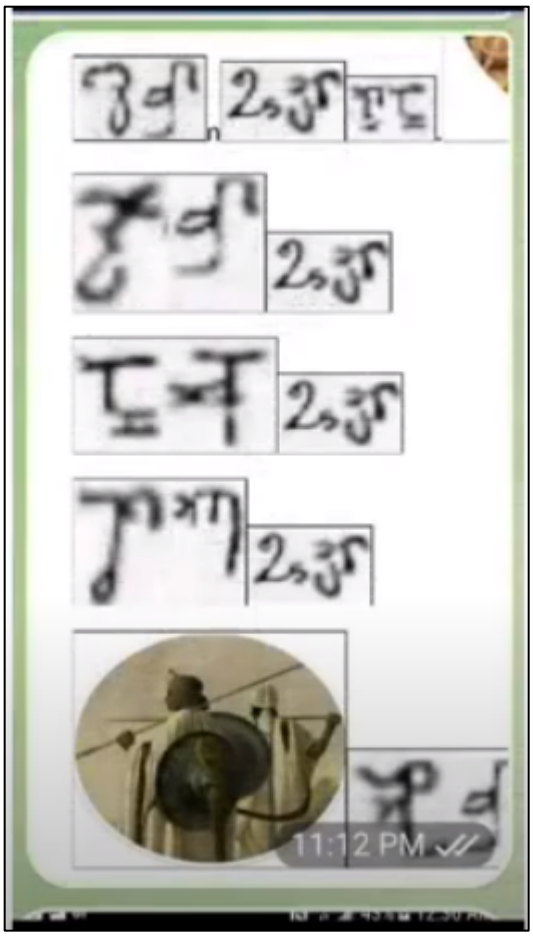


Figure 32. Various Oromo words in the Shaaldaa script shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII.

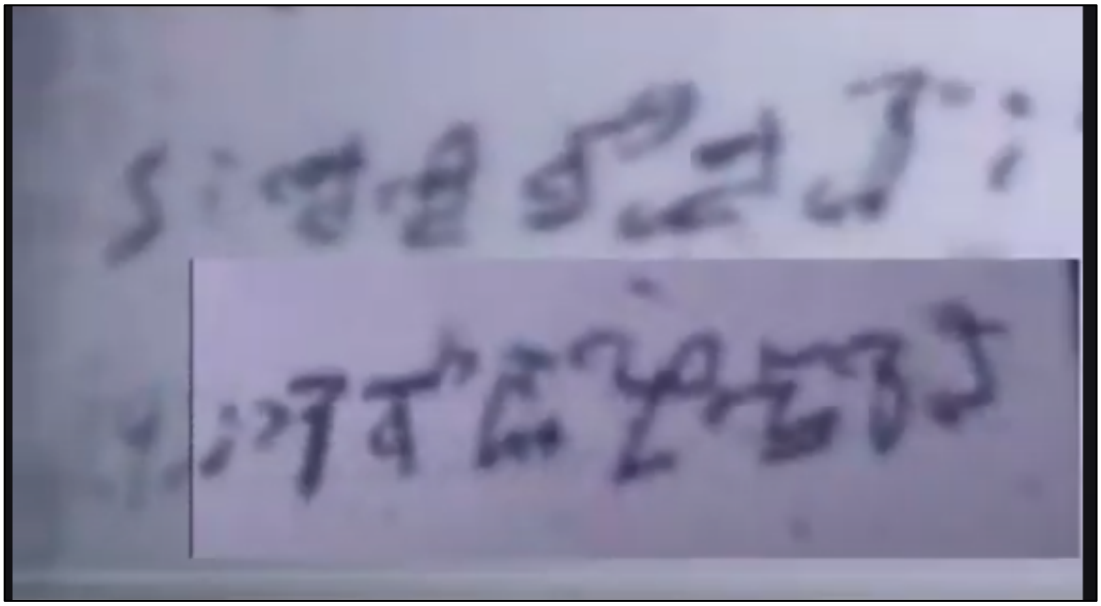


Figure 33. Shaaldaa script shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII. Appears to be from one of Sheikh Bakri's manuscripts.

Figure 34. The word "𐆑𐆒𐆓" (*Latin transliteration*: "gaala"; *IPA*: /gɑːlɐ/; *translation*: "camel") in the Shaaldaa script alongside a picture of a camel, shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII. An attempt to create digital educational content in the script.

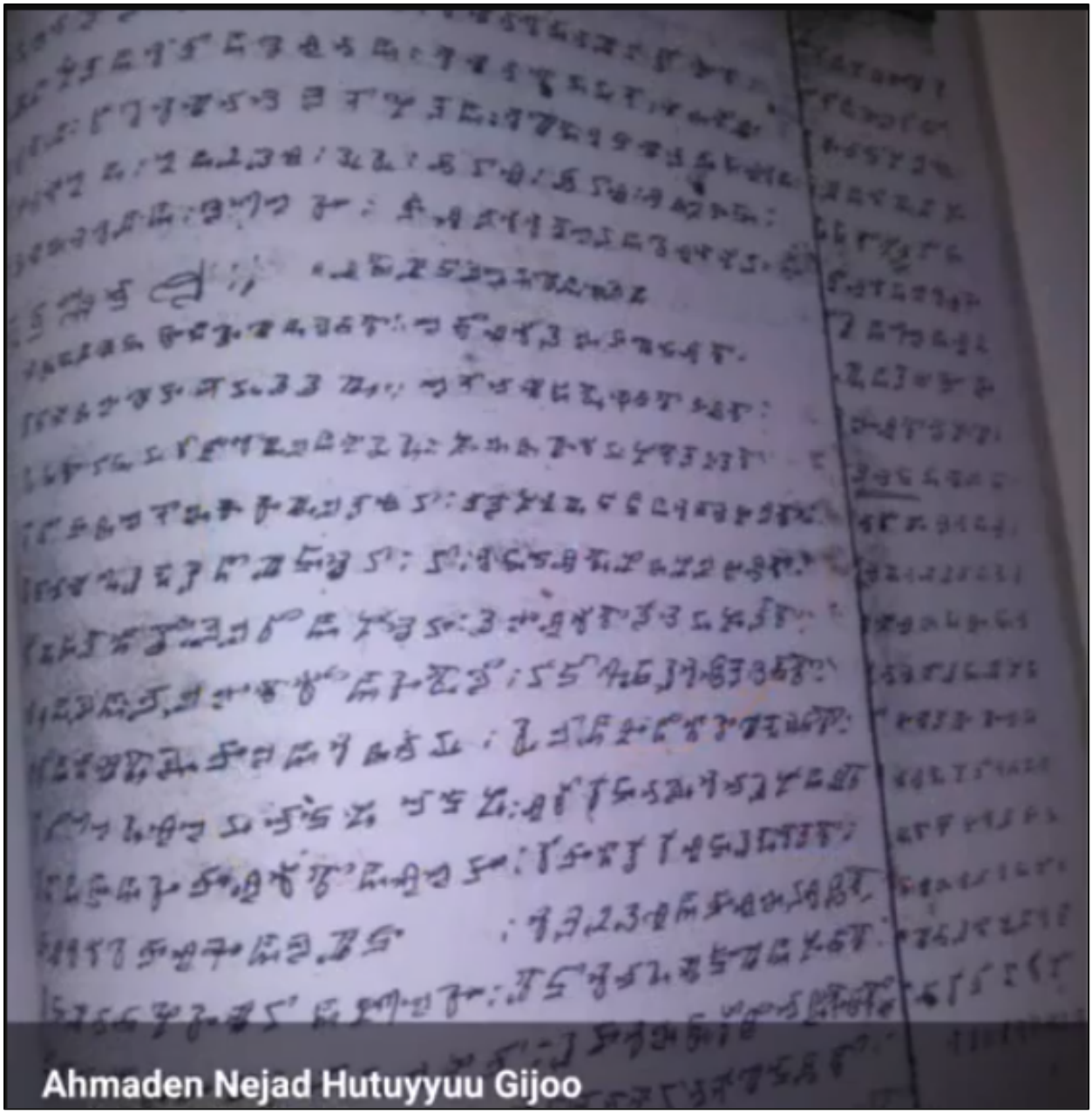


Figure 35. Shaaldaa script shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII. Appears to be from one of Sheikh Bakri's manuscripts.

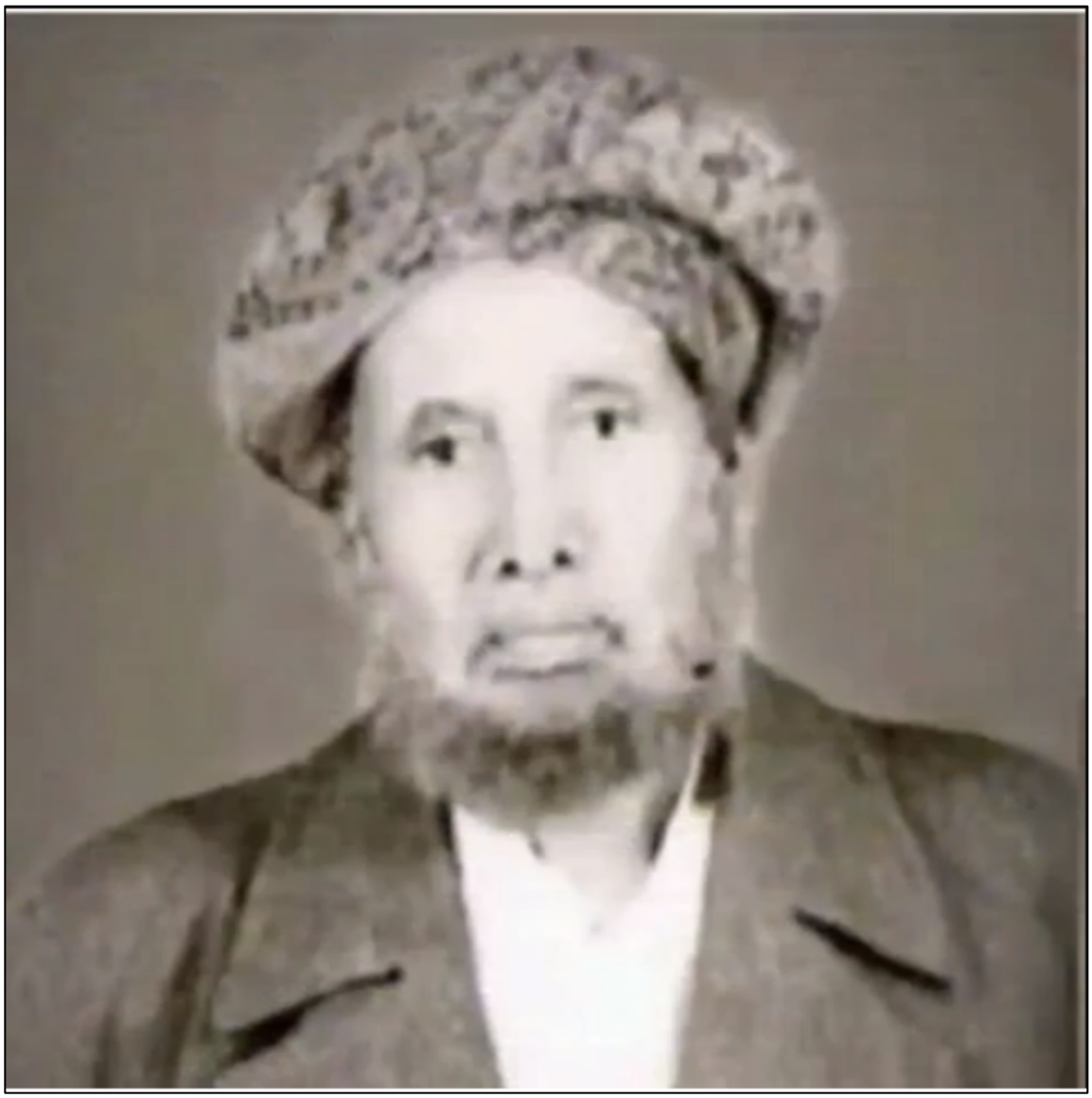


Figure 36. A picture of Sheikh Bakri Sapalo shown in a video on "*Dire Today*" about the script. See Reference 5, Section VII.

Figure 37. 3 handwritten instances of the script alongside images of Sheikh Bakri Sapalo (left) and 2 others (center and right) shown in a debate video about scripts on "*Dire Today*". See Reference 6, Section VII.

Figure 38. Street interview about the Shaaldaa script and it's creator, with another teaching chart to the left, on "*Dire Today*". See Reference 7, Section VII.

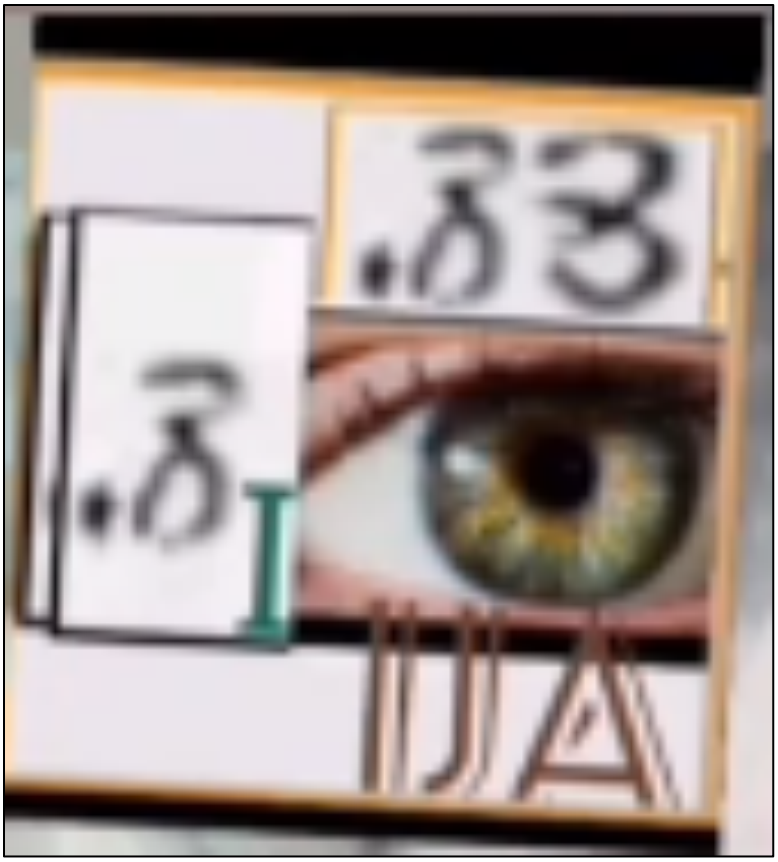


Figure 39. The word "𐑖𐑚" (*Latin transliteration*: "ija"; *IPA*: /ɪje/; *translation*: "eye") in the Shaaldaa script alongside a picture of an eye, shown in a video on "*Dire Today*" about the Sheikh Bakri and the script. See Reference 7, Section VII. Another attempt to create digital educational content in the script.

Figure 40. A Shaaldaa script font showcased in a video on "*Dire Today*".

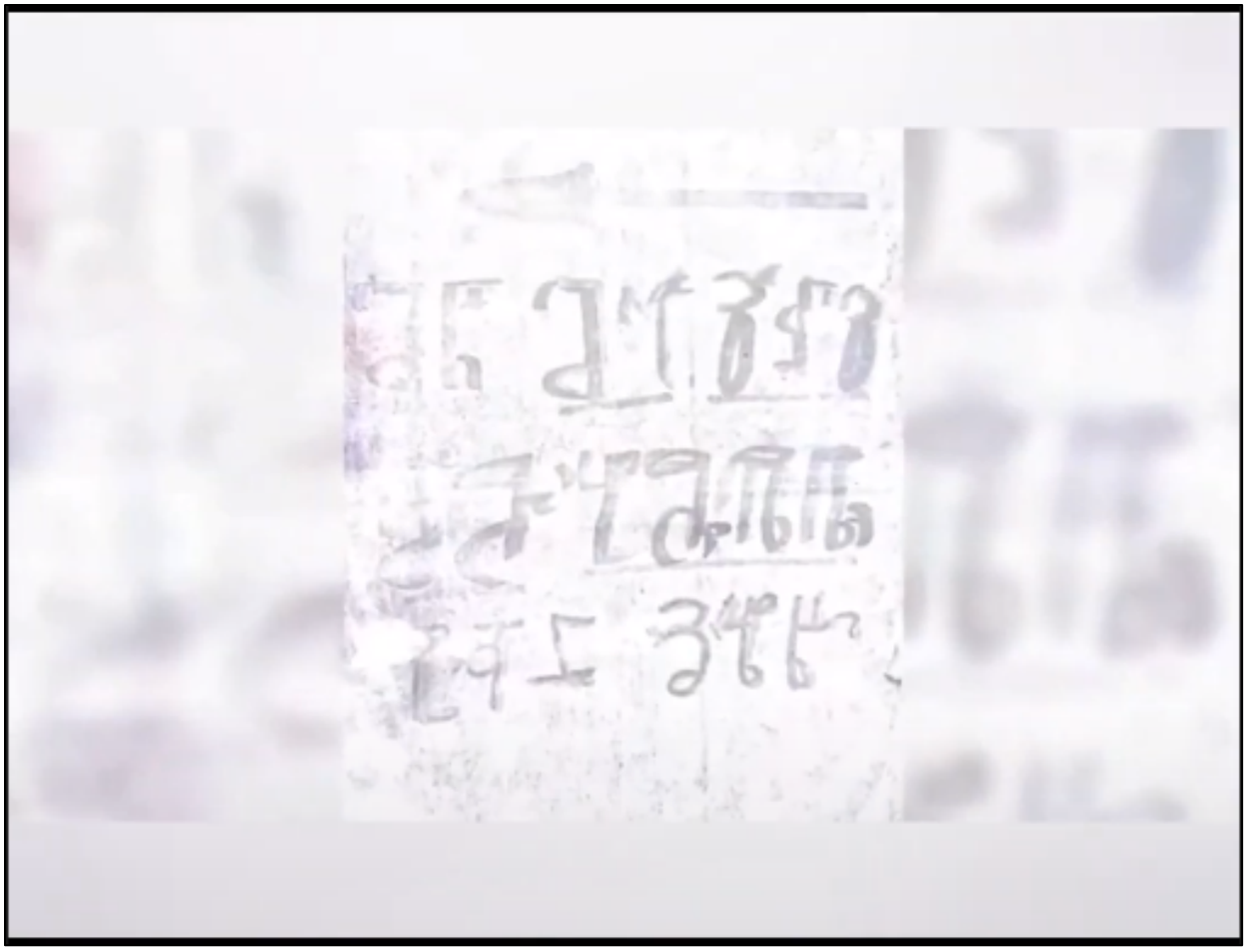


Figure 41. Handwritten material in the Shaaldaa script. See Reference 7, Section VII.

Figure 42. An inscribed monument dedicated to the Shaaldaa script in the village of Saphaloo.

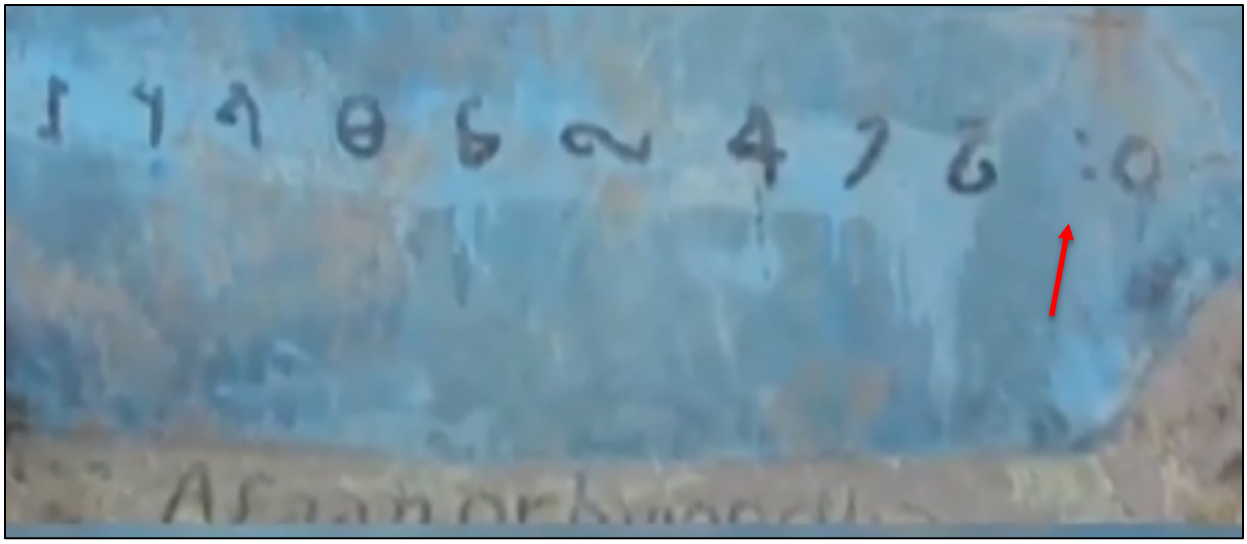


Figure 43. Shaaldaa script numerals inscribed on the script monument in Figure 42. The colon-like inscription (:) with a red arrow pointing to it is has been explained to the authors as the result of erosion and does not represent a writing element. Unfortunately, the appearance of ":0" has led some members of the user community to believe that this is prescribed way of writing the value "10".

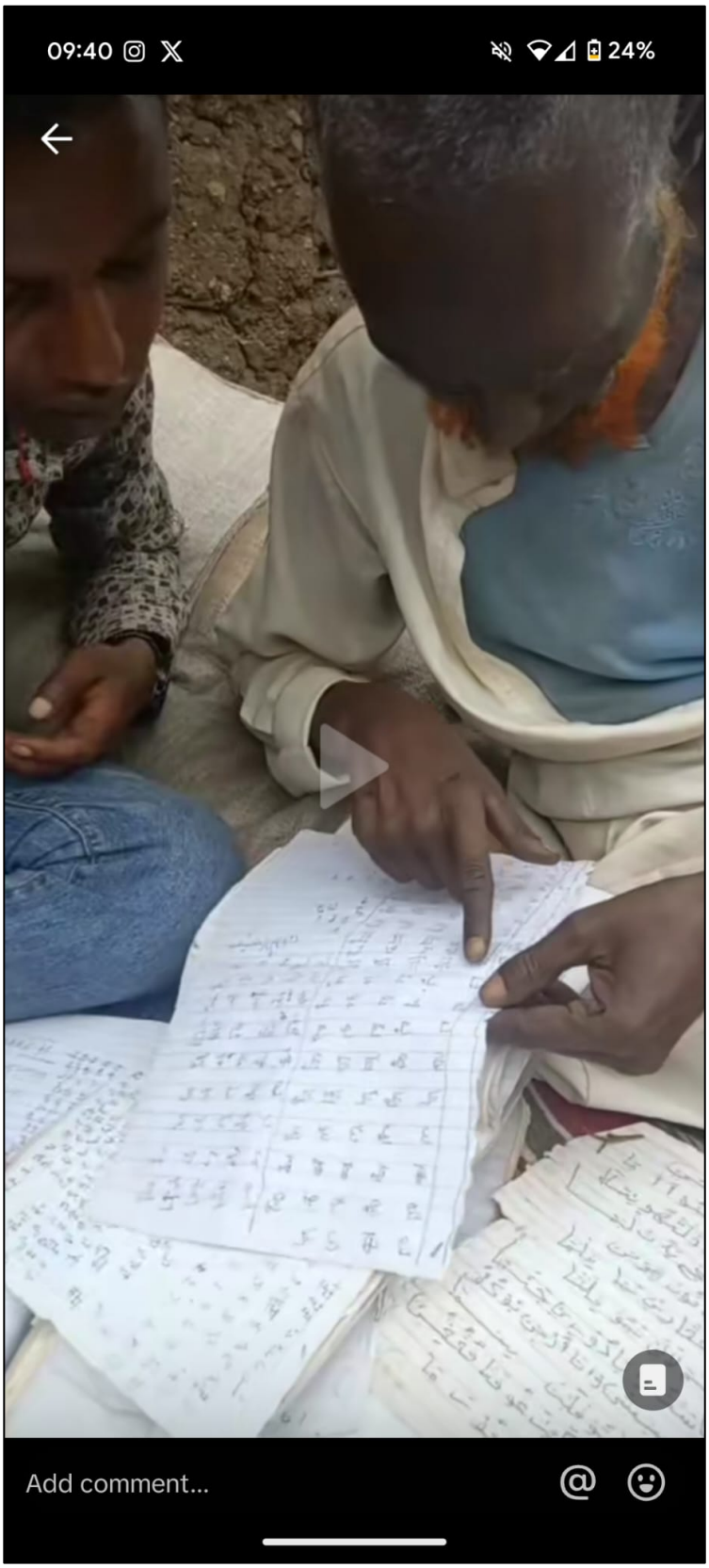


Figure 44. Sheikh Nuraddin Ahmad and Aneso Mohammed with documents in Shaaldaa script. See Reference 8; Section VII.

Figure 45. Sheikh Nuraddin Ahmad and Aneso Mohammed with documents in Shaaldaa script. See Reference 8; Section VII.

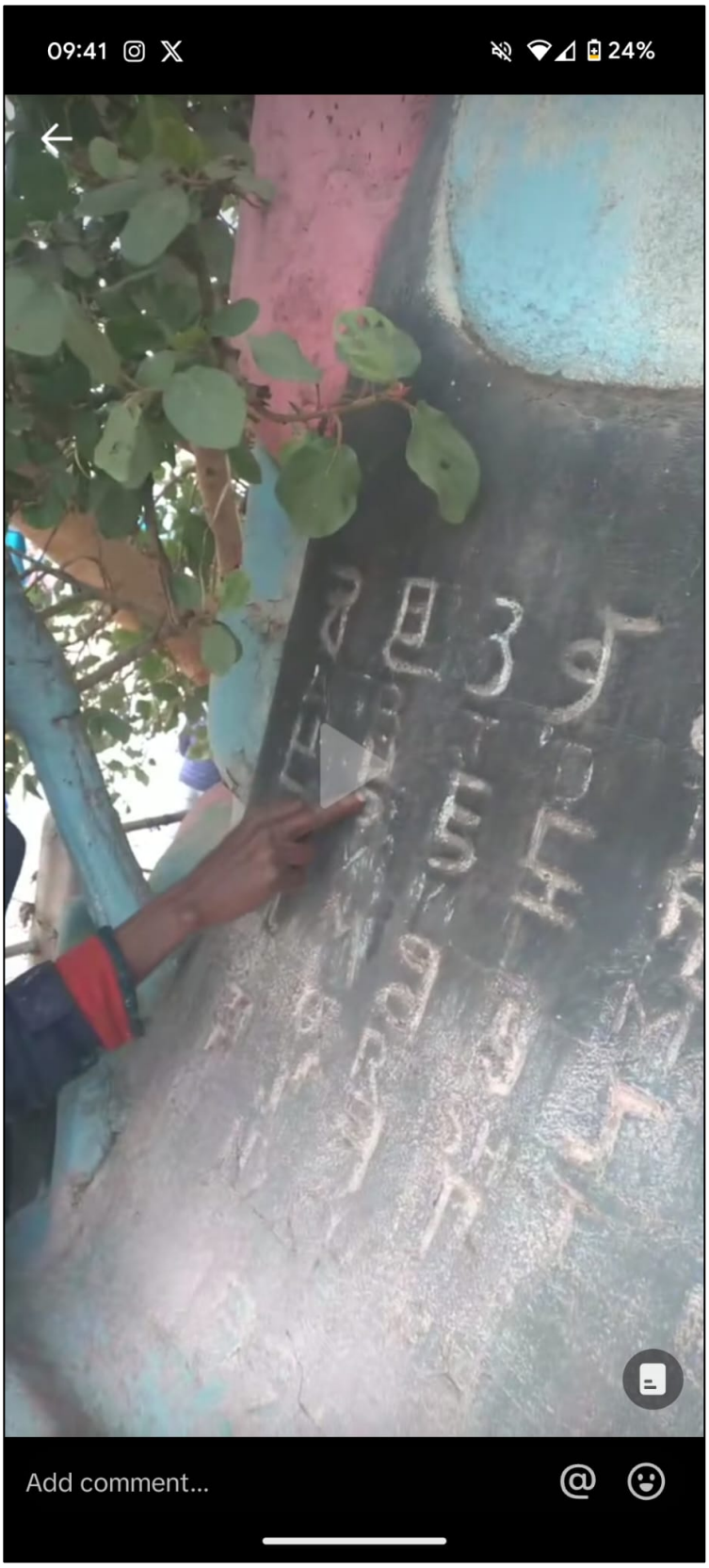


Figure 46. Shaaldaa script engravings. See Reference 9; Section VII.

Figure 47. Engravings of Oromo sentences written in the Shaaldaa script. There is a parallel engraving in the Latin script in Figure 46. See Reference 9; Section VII.

Figure 48. Engravings of Oromo sentences written in the Latin script, next to the same sentences in the Shaaldaa script seen in Figure 45. See Reference 9; Section VII.

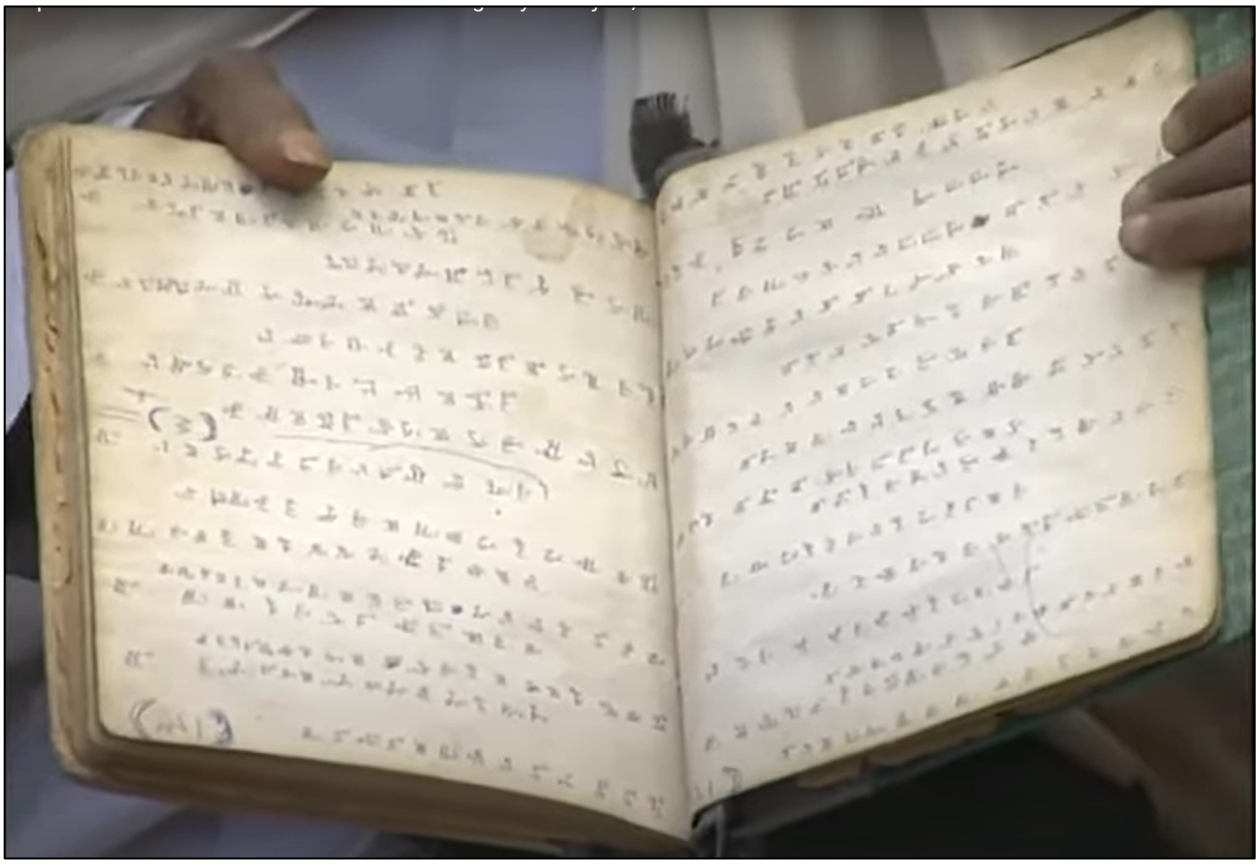


Figure 49. A book written in the Shaaldaa script held by Sheek Mahammad (English spelling: Sheikh Mohammed), a student of Sheikh Bakri Saphalo, who is mentioned as helping Hayward and Hassen in their 1981 paper (Reference 1; Section VII). See Reference 11; Section VII.

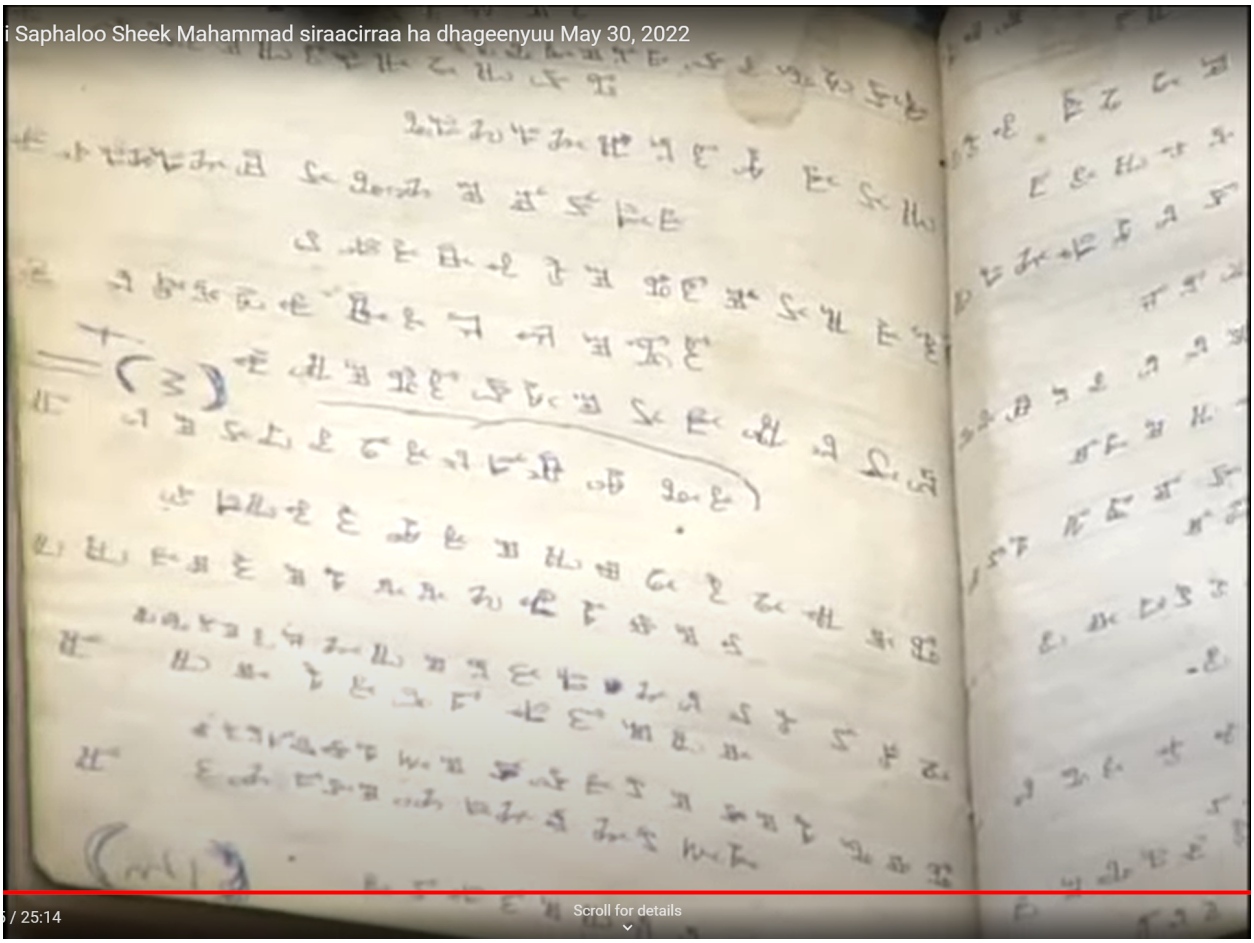


Figure 50. A book written in the Shaaldaa script held by Sheek Mahammad (English spelling: Sheikh Mohammed), a student of Sheikh Bakri Saphalo, who is mentioned as helping Hayward and Hassen in their 1981 paper (Reference 1; Section VII). See Reference 11; Section VII.

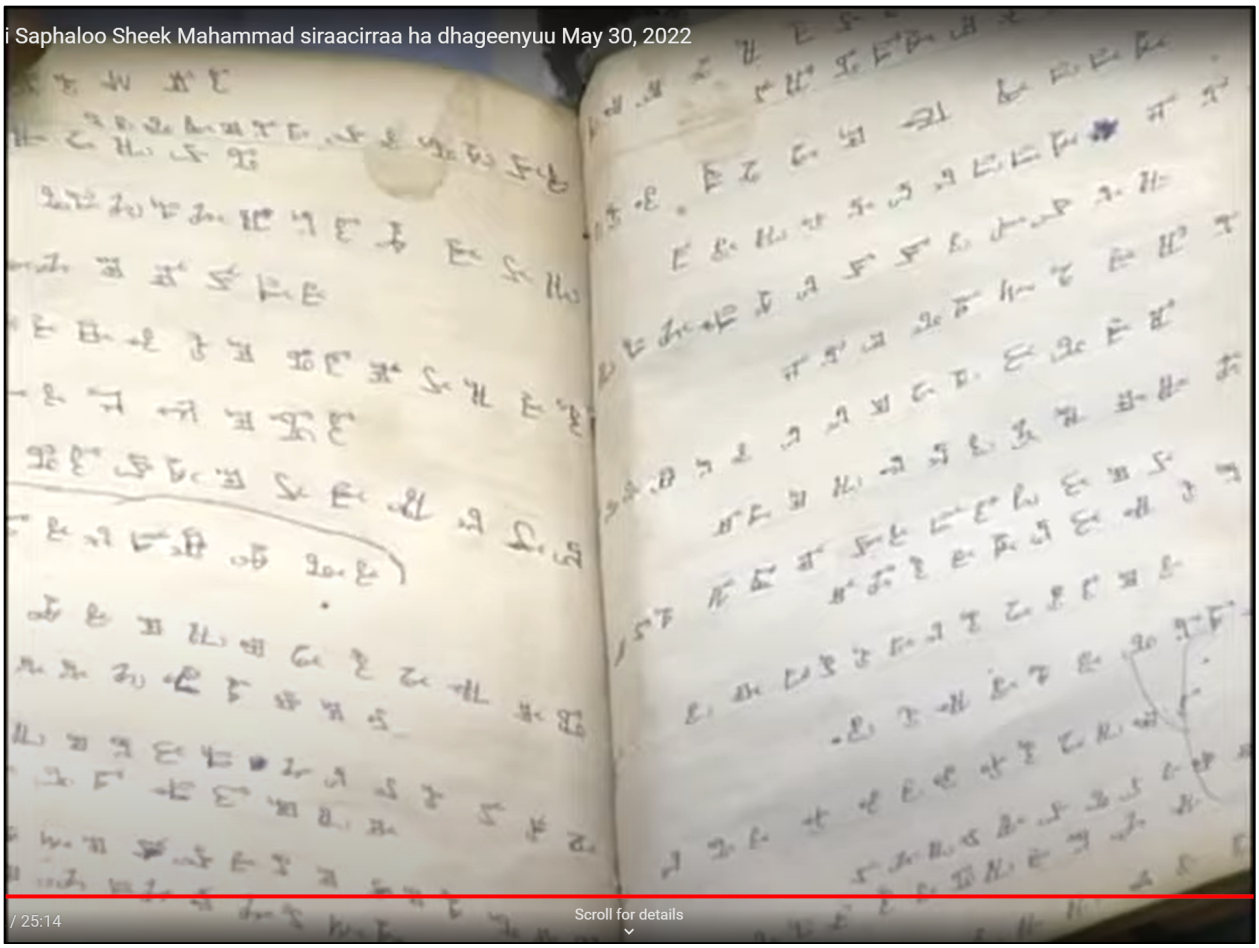


Figure 51. A book written in the Shaaldaa script held by Sheek Mahammad (English spelling: Sheikh Mohammed), a student of Sheikh Bakri Saphalo, who is mentioned as helping Hayward and Hassen in their 1981 paper (Reference 1; Section VII). See Reference 11; Section VII.

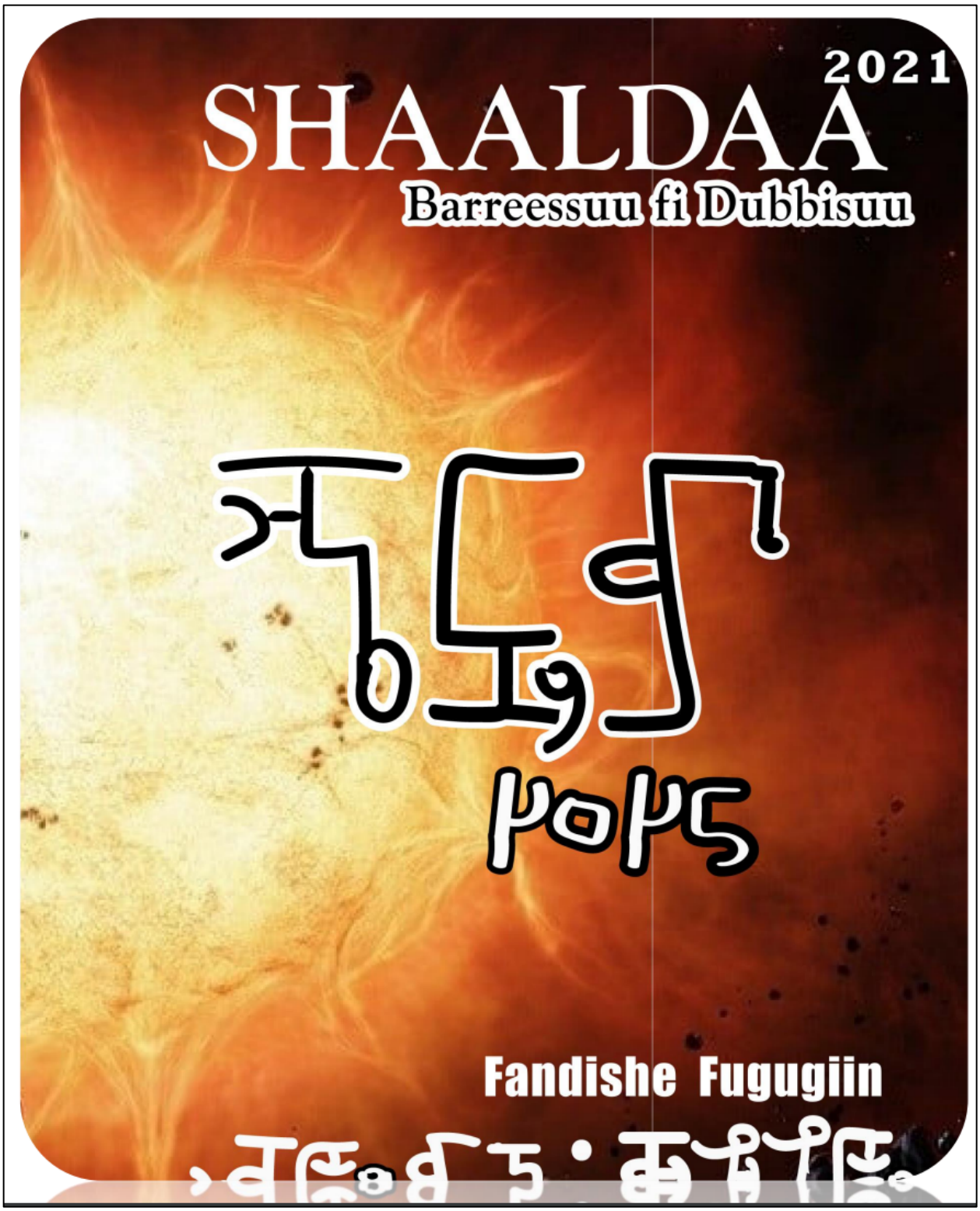
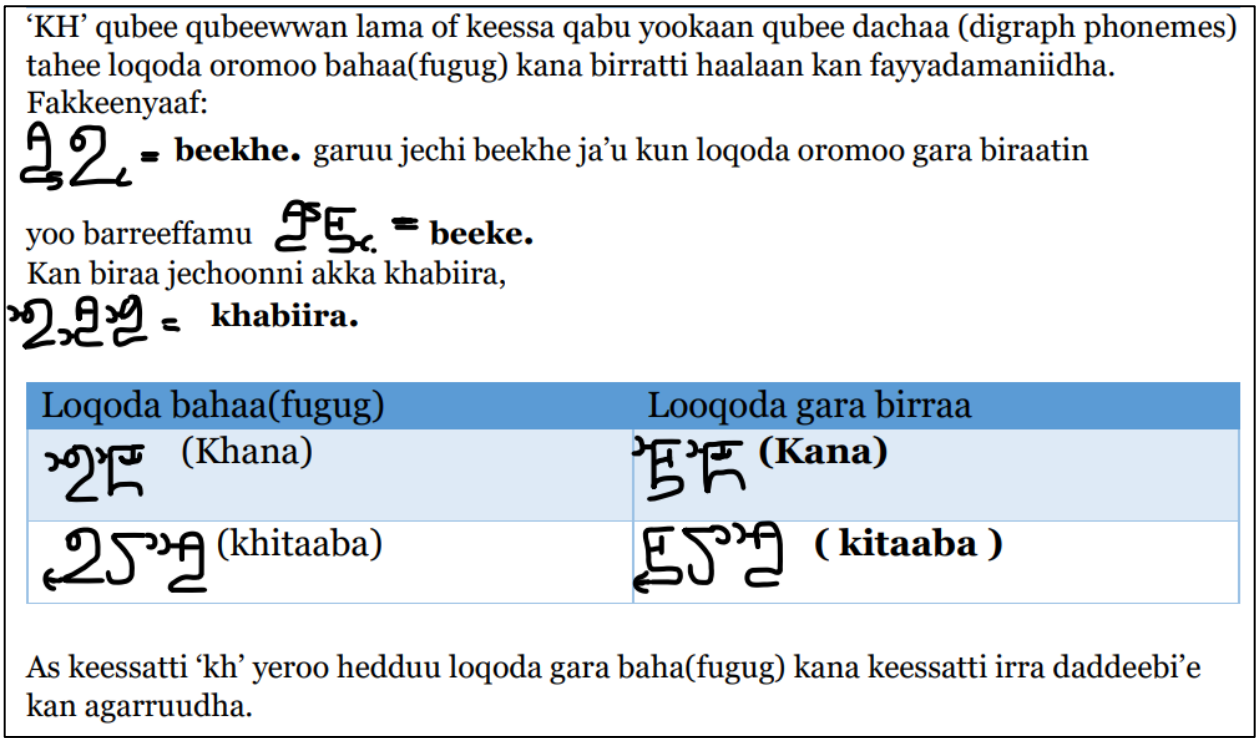


Figure 52. A document about the Shaaldaa script by Fandishe Fugug, Professor of software engineering at Haramaya University.

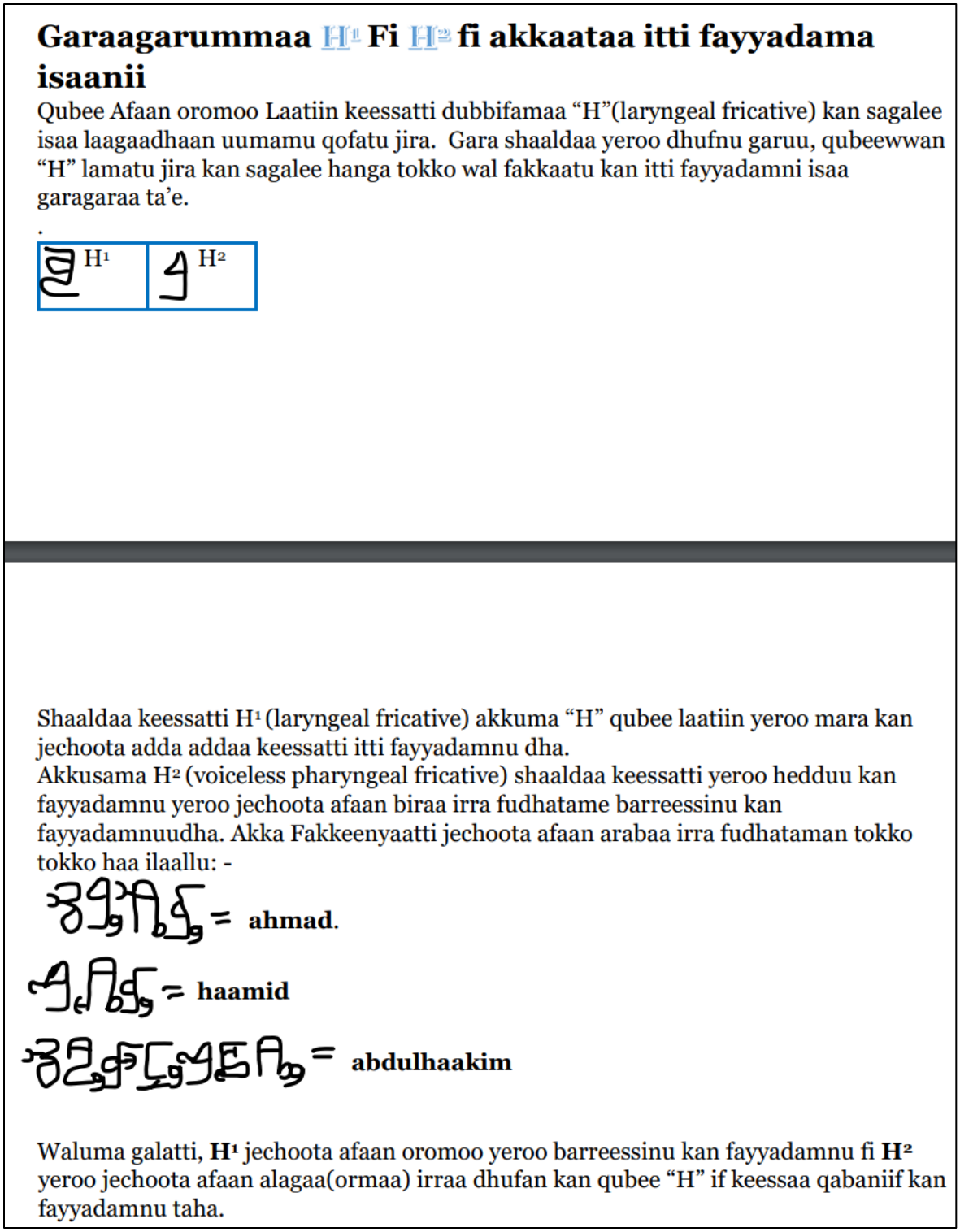


‘KH’ qubee qubeewwan lama of keessa qabu yookaan qubee dachaa (digraph phonemes) tahee loqoda oromoo bahaa(fugug) kana birratti haalaan kan fayyadamaniidha.
Fakkeenyaaf:
ቤኽ = **beekhe.** garuu jechi beekhe ja’u kun loqoda oromoo gara biraatin
yoo barreeffamu ቤክ = **beeke.**
Kan biraa jechoonni akka khabiira,
ኸቢኢ = **khabiira.**

Loqoda bahaa(fugug)	Looqoda gara birraa
ኸክ (Khana)	ካክ **(Kana)**
ኸተኣ (khitaaba)	ኪተኣ **(kitaaba)**

As keessatti ‘kh’ yeroo hedduu loqoda gara baha(fugug) kana keessatti irra daddeebi’e kan agarruudha.

Figure 53. A noteworthy page from Fandishe Fugug’s document that illustrates how ኽ /x/ occurs instead of ክ /k/ for certain words in the eastern Oromo dialect, “Loqodo bahaa”.



Garaagarummaa H¹ Fi H² fi akkaataa itti fayyadama isaanii

Qubee Afaan oromoo Laatiin keessatti dubbifamaa “H”(laryngeal fricative) kan sagalee isaa laagaadhaan uumamu qofatu jira. Gara shaaldaa yeroo dhufnu garuu, qubeewwan “H” lamatu jira kan sagalee hanga tokko wal fakkaatu kan itti fayyadamni isaa garagaraa ta’e.

.

H¹	H²

Shaaldaa keessatti H¹ (laryngeal fricative) akkuma “H” qubee laatiin yeroo mara kan jechoota adda addaa keessatti itti fayyadamnu dha.
Akkusama H² (voiceless pharyngeal fricative) shaaldaa keessatti yeroo hedduu kan fayyadamnu yeroo jechoota afaan biraa irra fudhatame barreessinu kan fayyadamnuudha. Akka Fakkeenyaatti jechoota afaan arabaa irra fudhataman tokko tokko haa ilaallu: -

= **ahmad**.

= **haamid**

= **abdulhaakim**

Waluma galatti, **H¹** jechoota afaan oromoo yeroo barreessinu kan fayyadamnu fi **H²** yeroo jechoota afaan alagaa(ormaa) irraa dhufan kan qubee “H” if keessaa qabaniif kan fayyadamnu taha.

Figure 54. A page from Fandishe Fugug’s document that illustrates the difference between ℍ /h/ and ℌ /ħ/, with examples of Arabic-origin names like أَحْمَد (ʾAḥmad), حَامِد (ḥāmid) عبد الحكيم (ʿAbd al-Ḥakīm), highlighting the retention of the Arabic letter ح /ħ/. Note, the latter name does not retain the Arabic ع /ʕ/ sound in writing in this specific example, but this is common in many examples of language contact and perhaps other users would retain the sound when writing in the Shaaldaa script via 𝔥 /ʕ/.

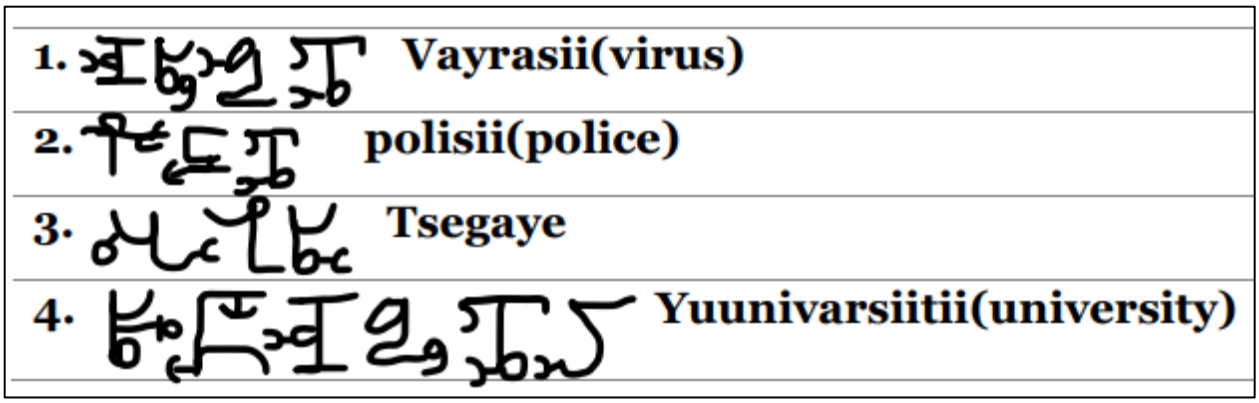


Figure 55. A page from Fandishe Fugug's document that showcases words that use 3 of the 5 Shaaldaa letters intended for foreign phonemes, 𐑓 /p/, 𐑝 /v/β/, and 𐑡 /ts'/.

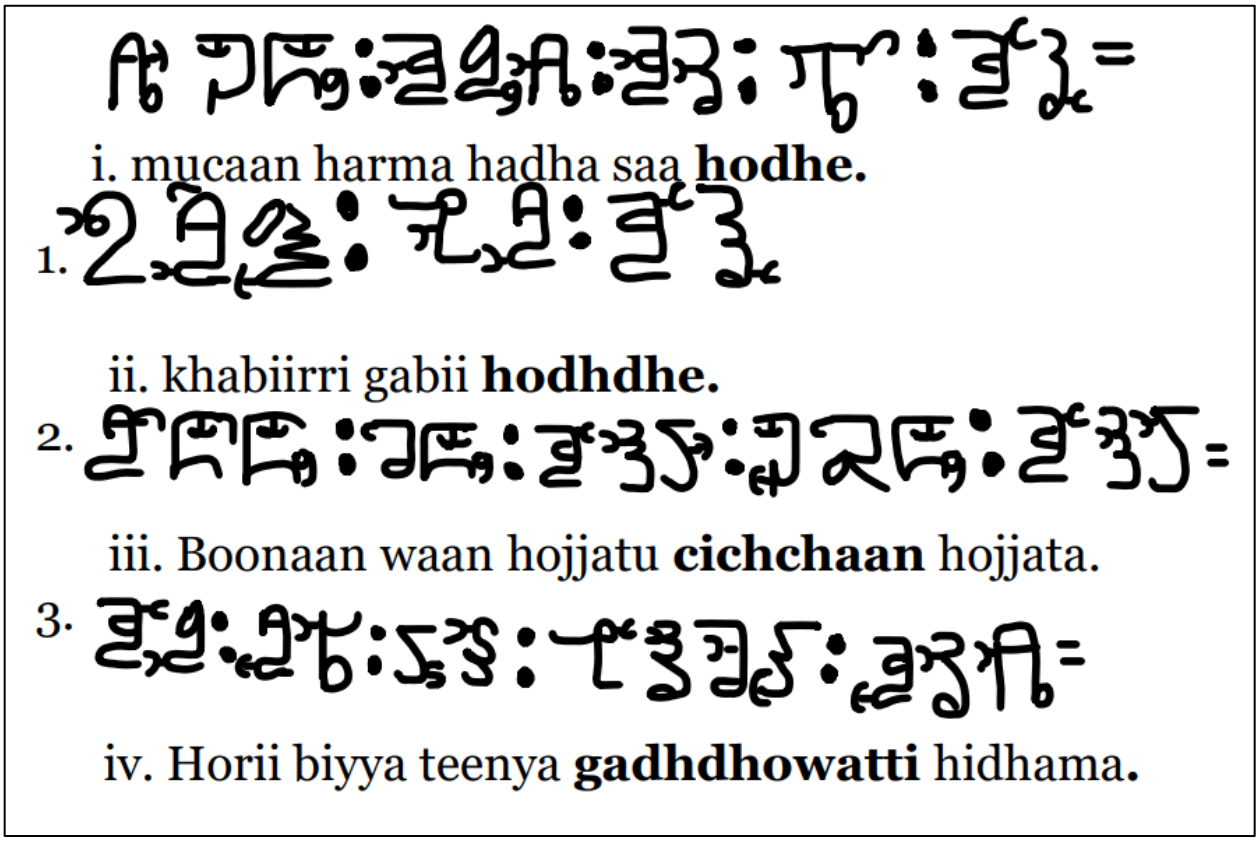


Figure 56. A noteworthy page from Fandishe Fugug's document that exemplifies how the Shaaldaa script can explicitly account for geminated consonants that aren't written in Latin based Qubee alphabet for Oromo. The digraphs 'dh' and 'ch' aren't written twice (i.e., as 'dhdh', 'chch') in Qubee; Fandishe wrote them here to illustrate that point.

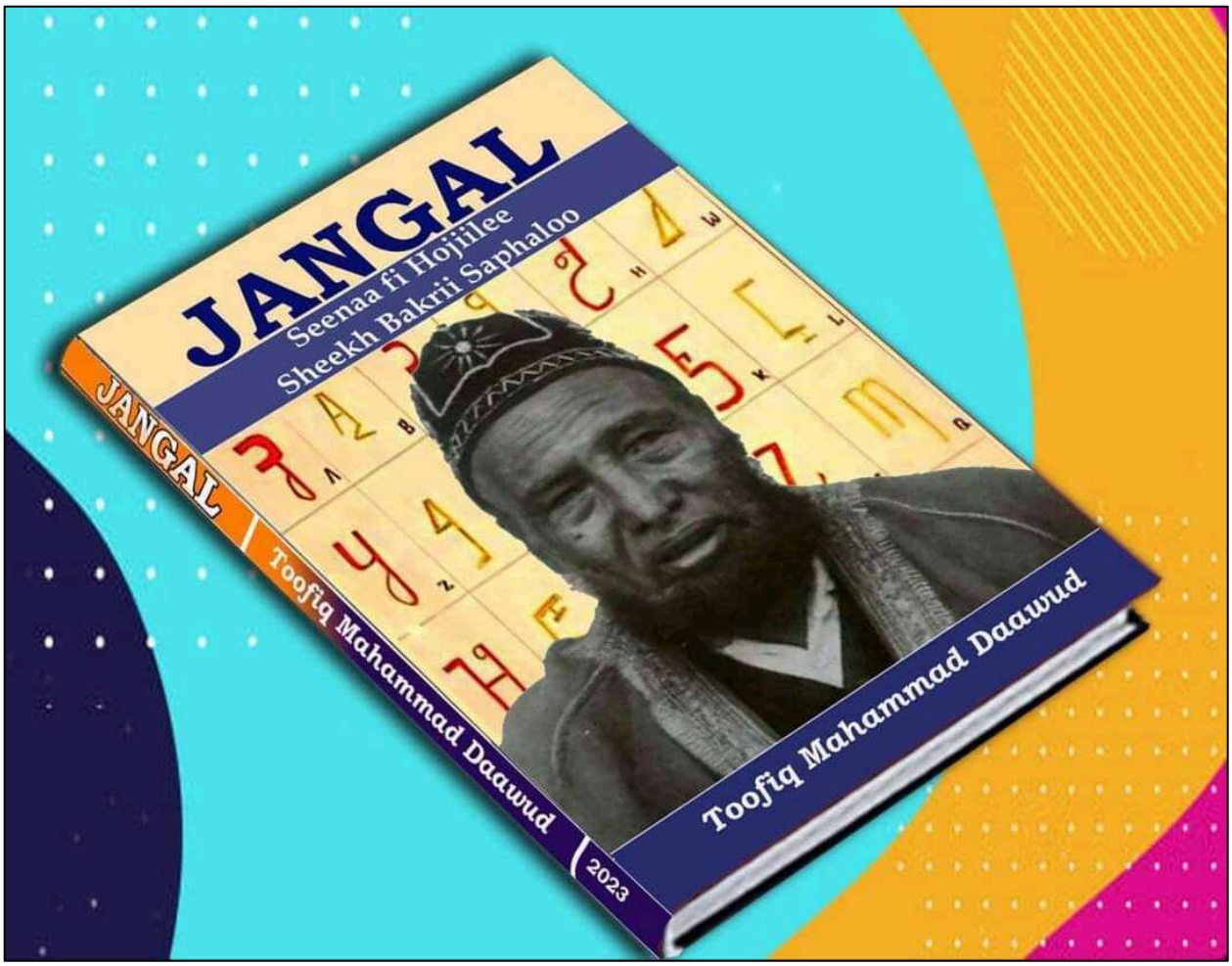


Figure 57. Another book about Sheikh Bakri Saphalo, (translated) entitled "*Jangal – History and Works of Sheikh Bakri Saphalo*"

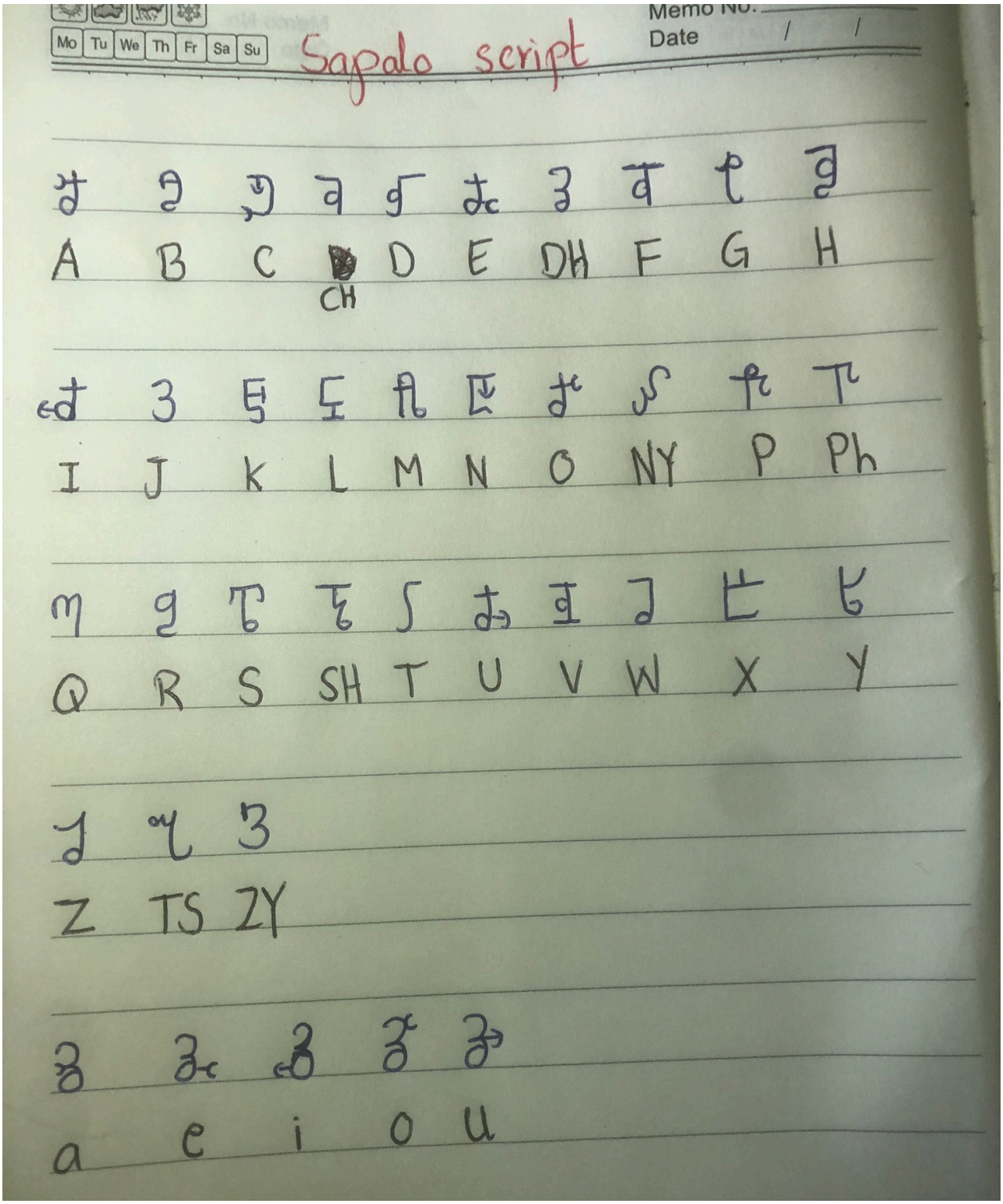


Figure 58. Handwriting of the Shaaldaa script letters by a user. Standalone vowels are written at the bottom, and the Shaaldaa script letters under the Latin A, E, I, O, U are the ʕ letters (𐑓,𐑔, 𐑕, 𐑖, 𐑗).

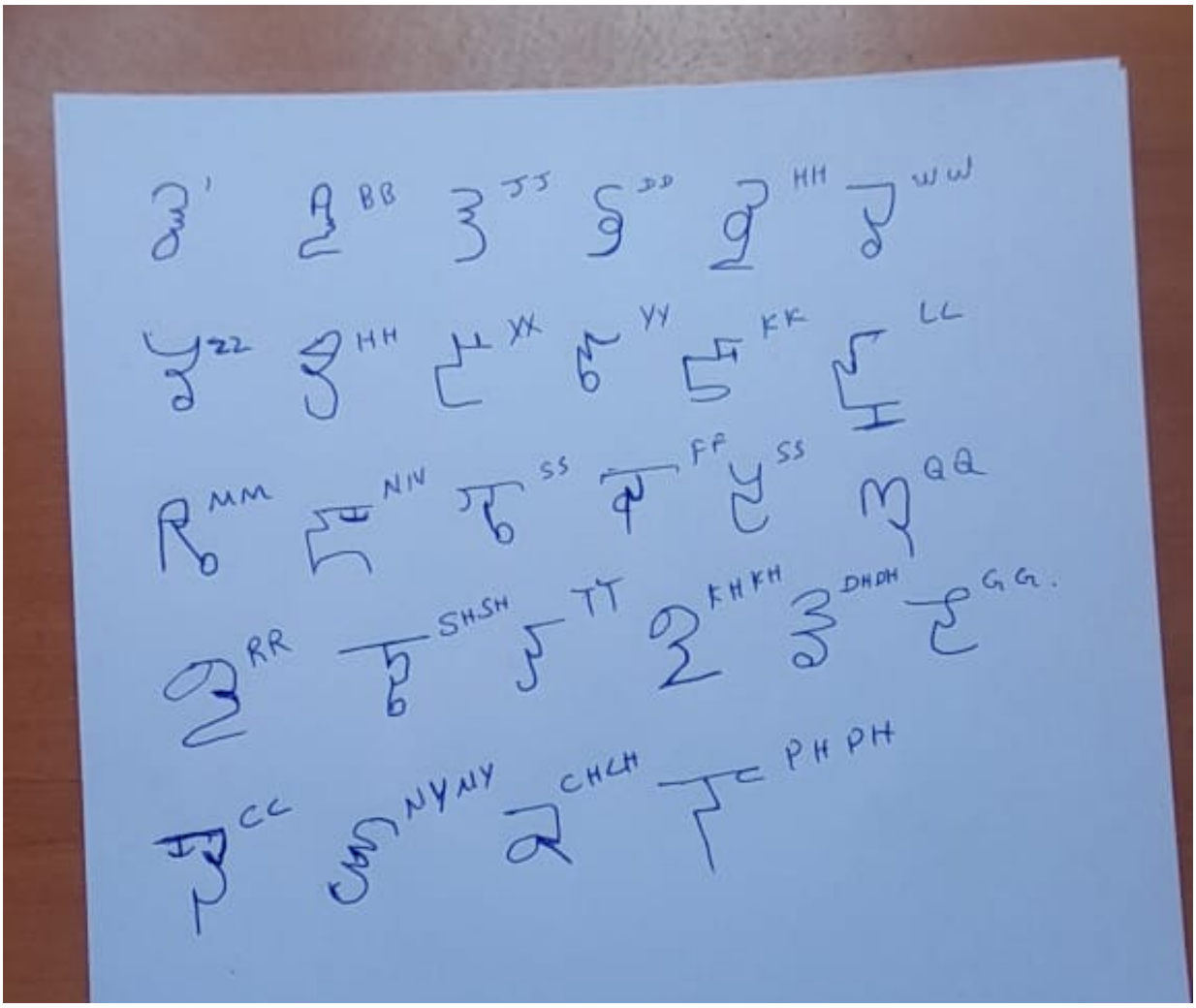


Figure 59. Handwritten geminated base glyphs for native Oromo phonemes.

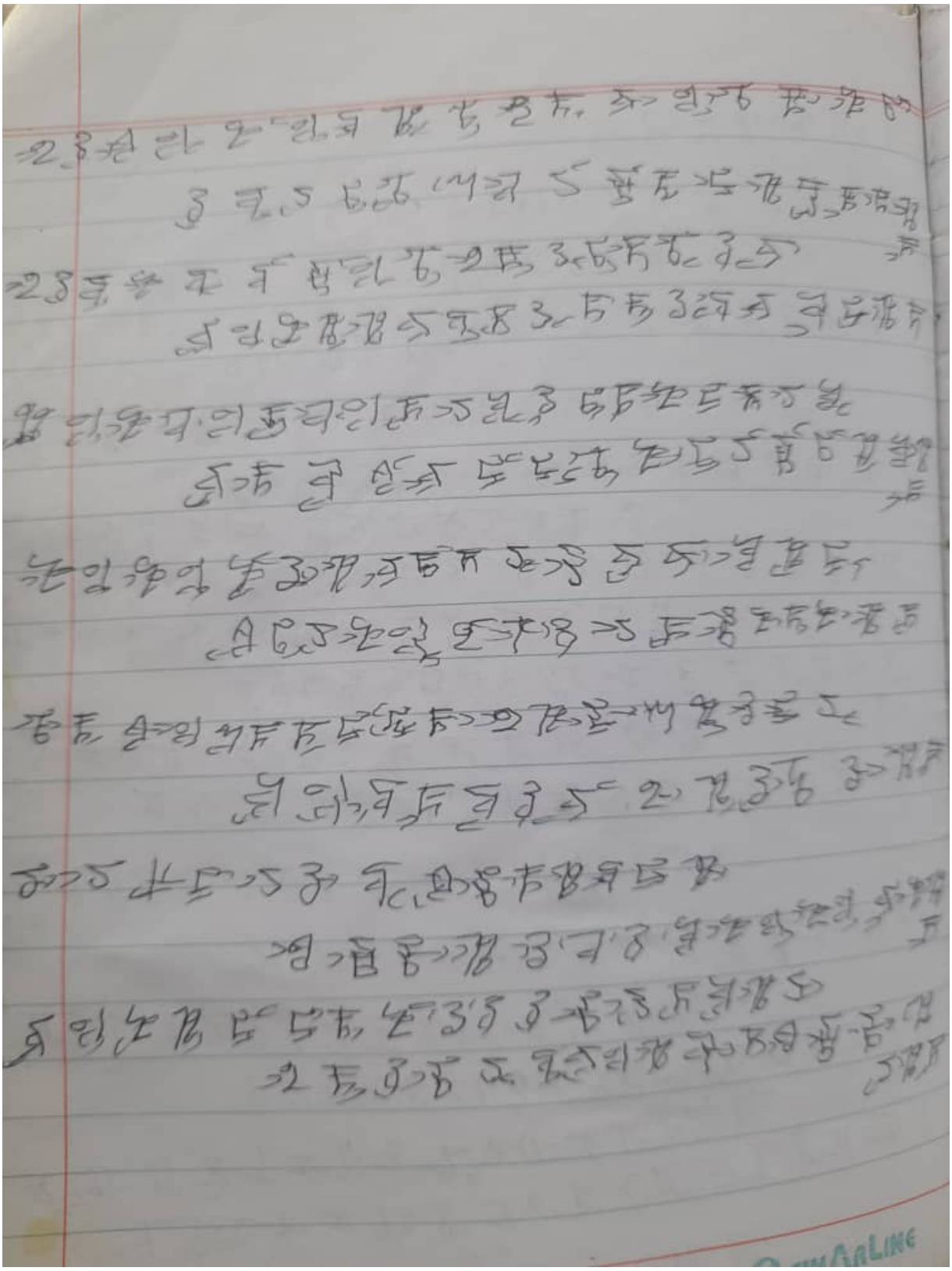


Figure 60. Shaaldaa-script manuscript written by Sheikh Nuradin Ahmad in 1957.

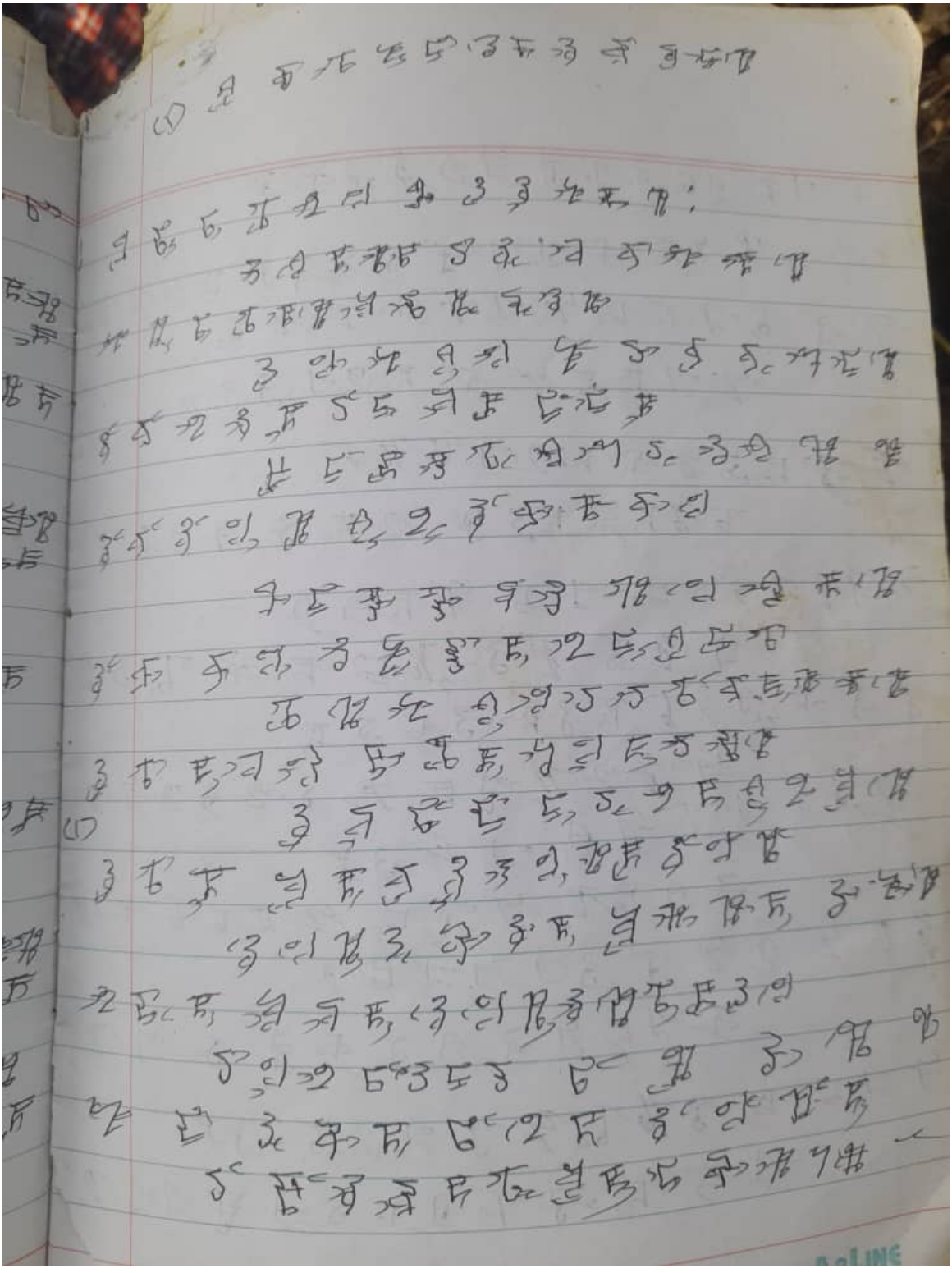


Figure 61. Shaaldaa-script manuscript written by Sheikh Nuradin Ahmad in 1957.

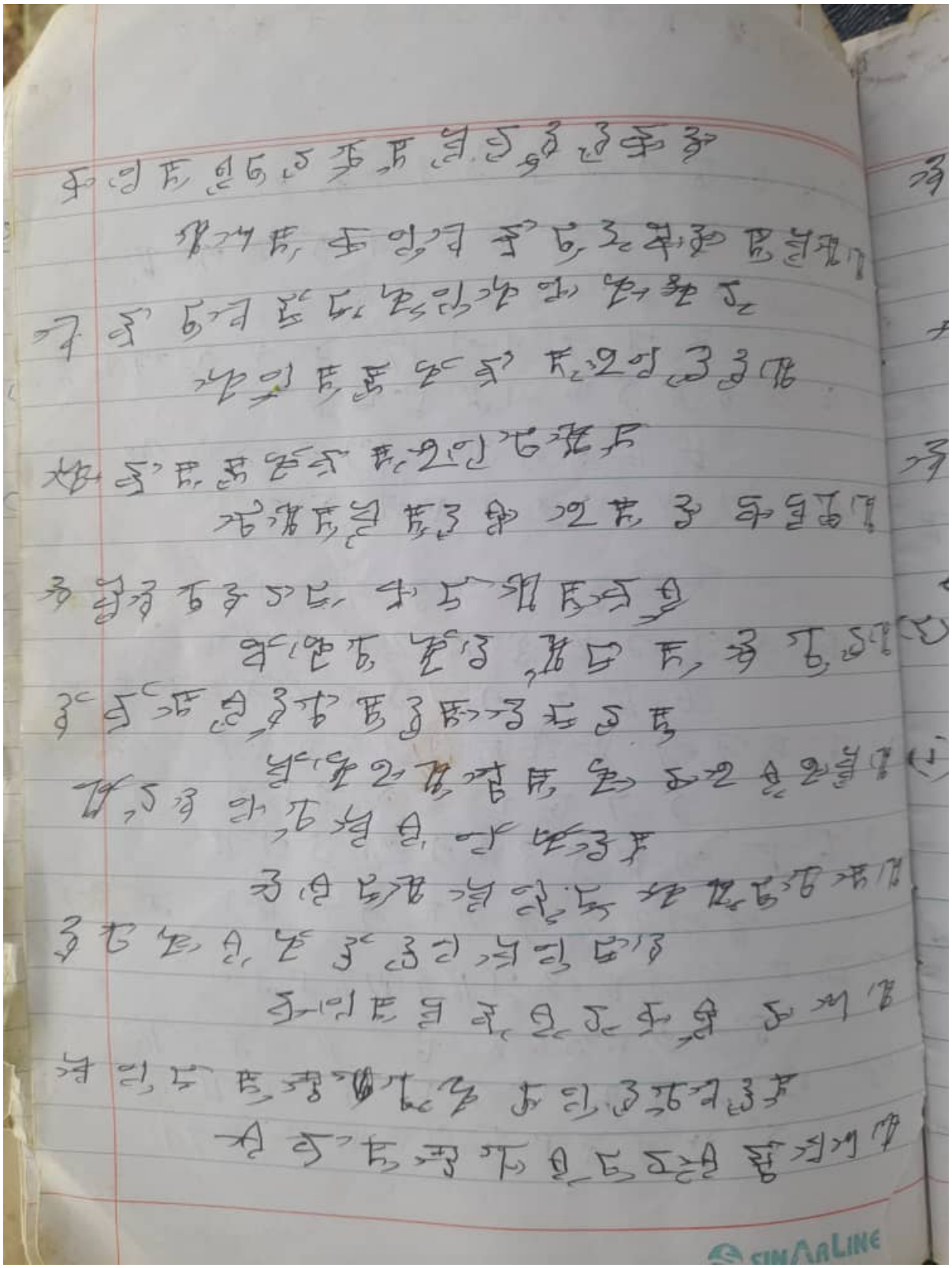


Figure 62. Shaaldaa-script manuscript written by Sheikh Nuradin Ahmad in 1957.

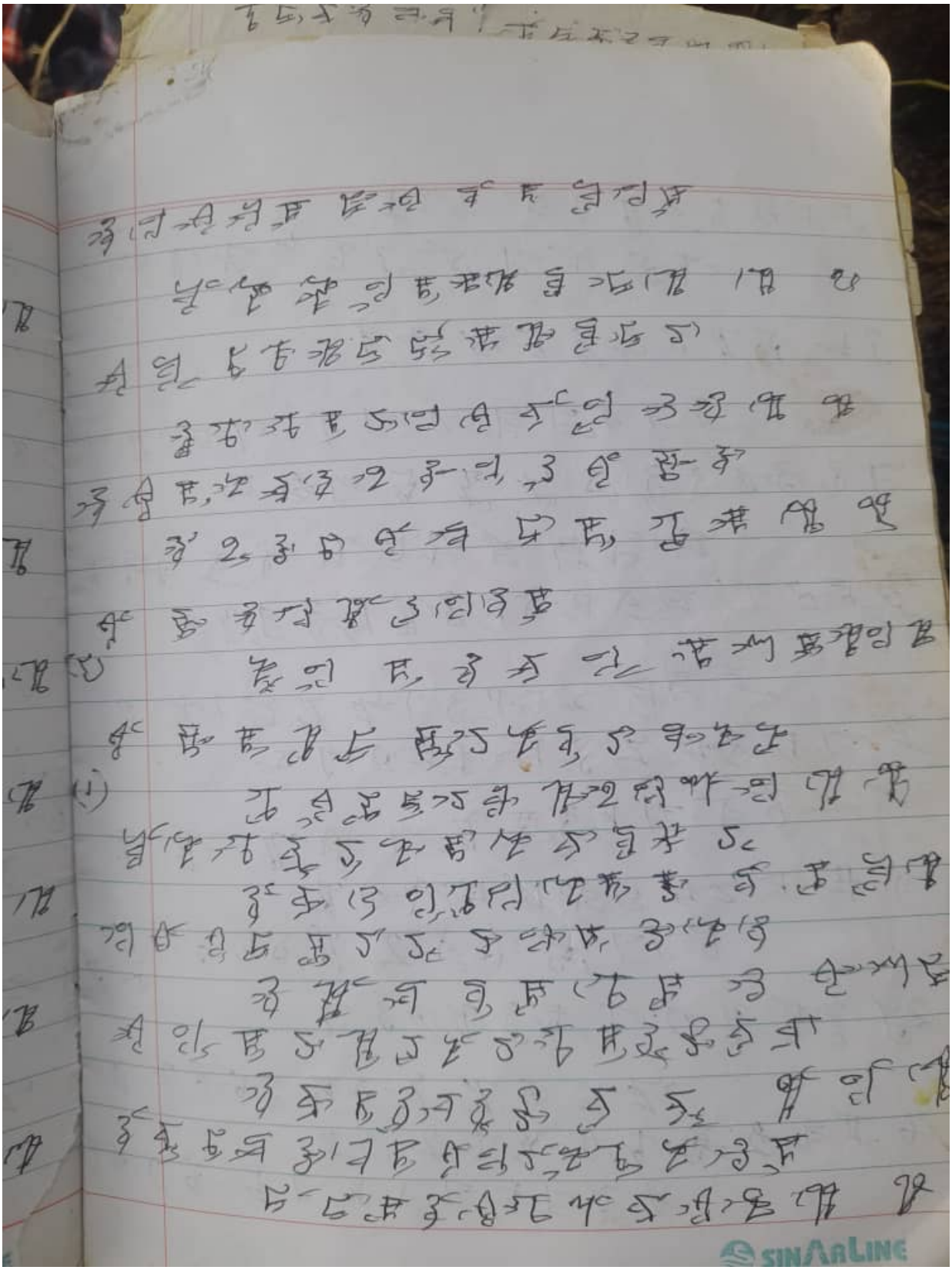


Figure 63. Shaaldaa-script manuscript written by Sheikh Nuradin Ahmad in 1957.

Figure 64. Shaaldaa-script manuscript written by Sheikh Nuradin Ahmad in 1957. Sheikh Mahammadmansur Sheikh Bakri Saphaloo is holding the manuscript.

Figure 65. Sheikh Mahammadmansur Sheikh Bakri Saphaloo (a son of Sheikh Bakri Saphaloo) being interviewed by chemist and Shaaldaa-script teacher Aneso Mohammed.

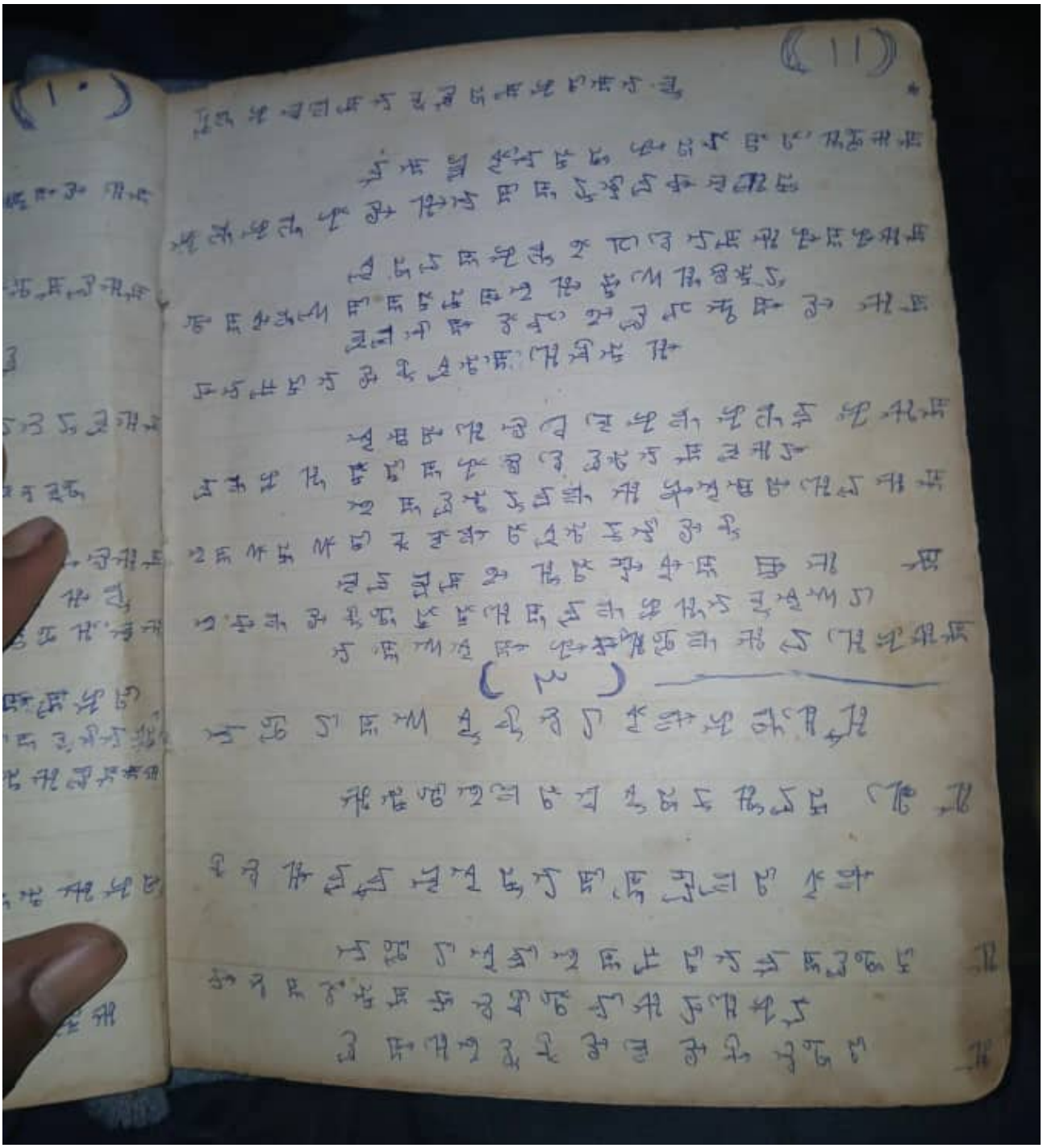


Figure 66.1. Page from Sheikh Bakrii's "Shaaldaa" manuscript written by Sheikh Bakrii circa 1968. Figures 66.2-66.18 are from the same manuscript.

Figure 66.2. The “Shaaldaa” manuscript continued.

Figure 66.3. The “Shaaldaa” manuscript continued.

Figure 66.4. The “Shaaldaa” manuscript continued.

Figure 66.5. The “Shaaldaa” manuscript continued.

Figure 66.6. The “Shaaldaa” manuscript continued.

Figure 66.7. The “Shaaldaa” manuscript continued.

Figure 66.8. The “Shaaldaa” manuscript continued.

Figure 66.9. The “Shaaldaa” manuscript continued.

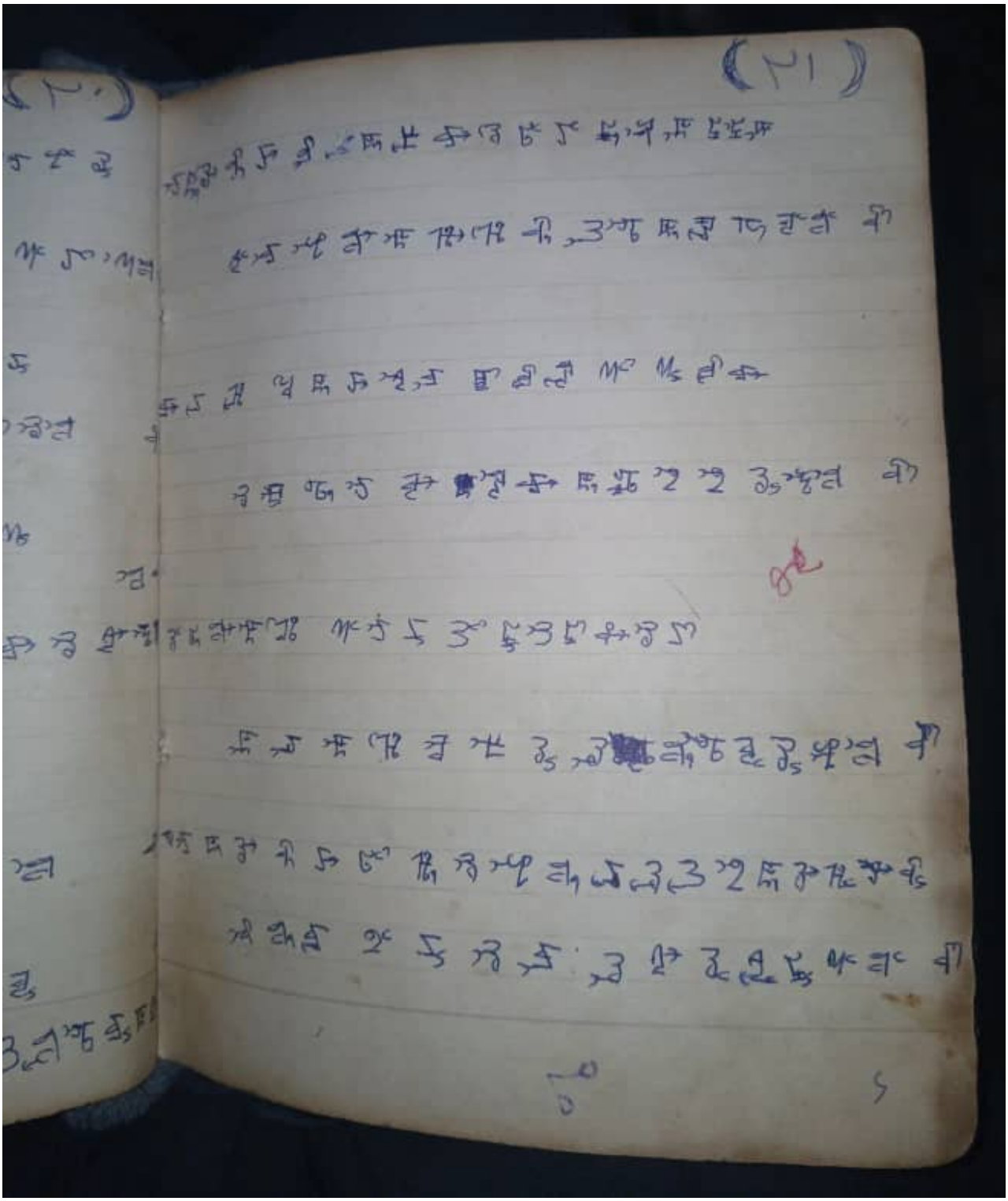


Figure 66.10. The “Shaaldaa” manuscript continued.

Figure 66.11. The “Shaaldaa” manuscript continued.

Figure 66.12. The “Shaaldaa” manuscript continued.

Figure 66.13. The “Shaaldaa” manuscript continued.

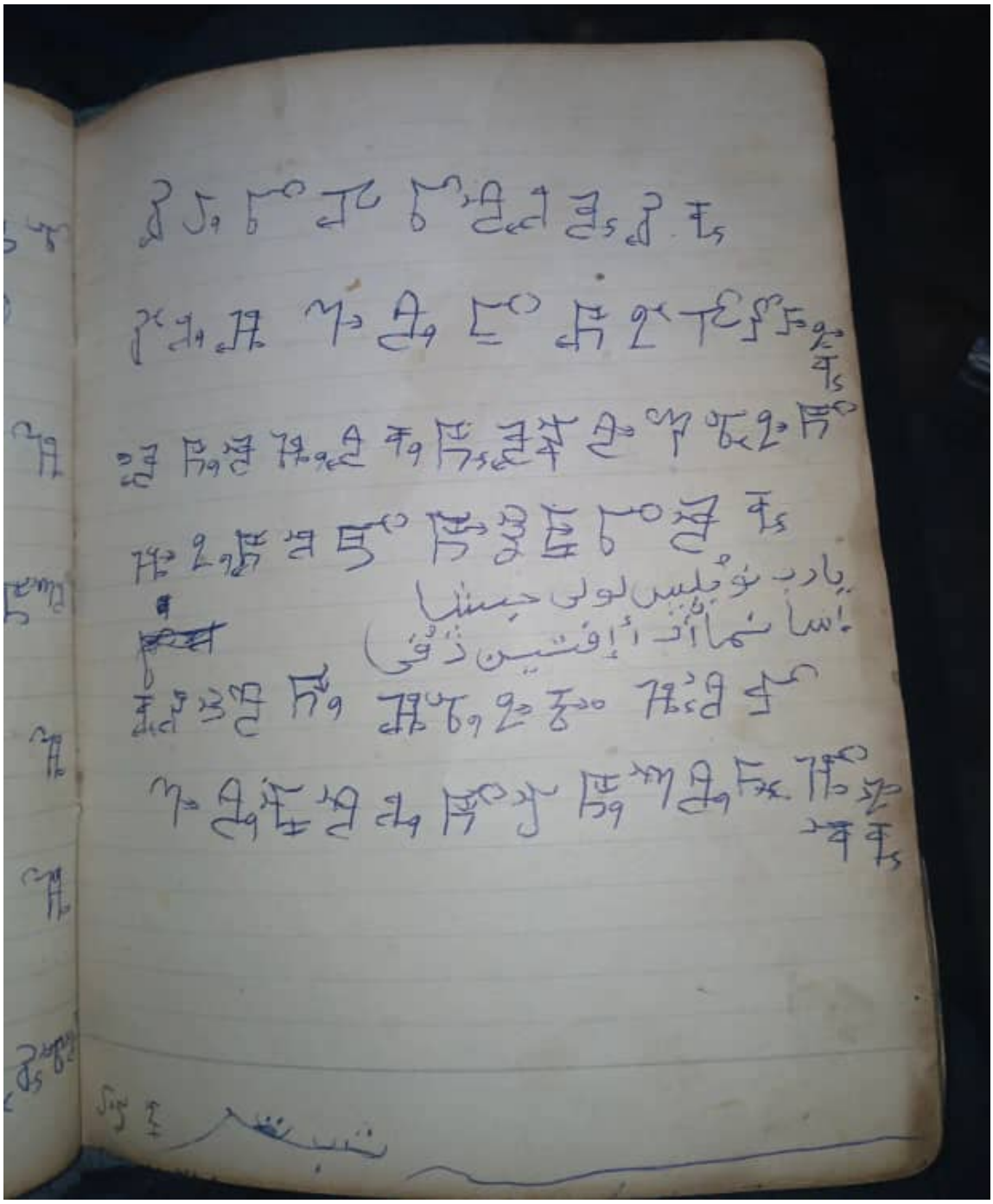


Figure 66.14. The “Shaaldaa” manuscript continued.

Figure 66.15. The “Shaaldaa” manuscript continued.

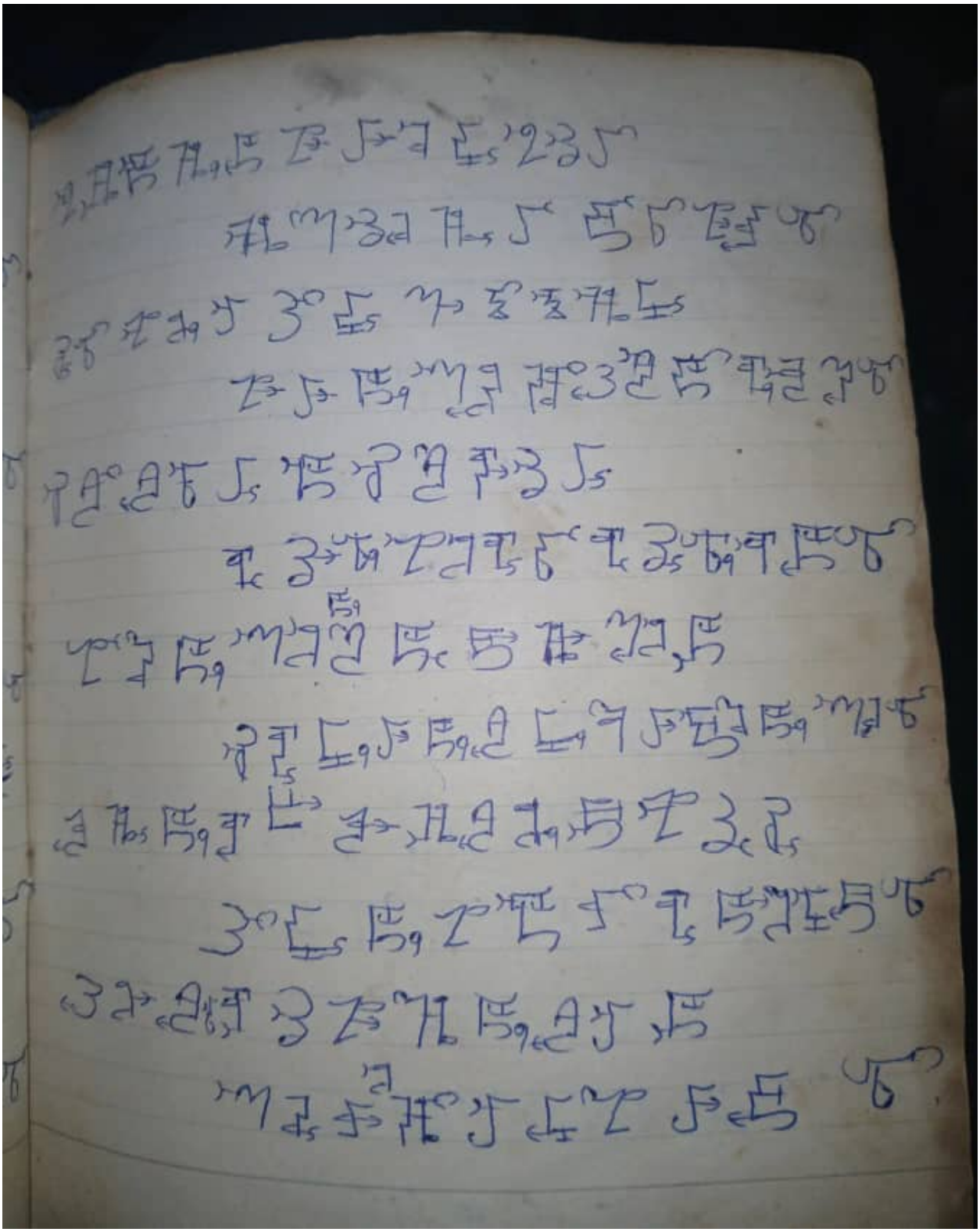


Figure 66.16. The “Shaaldaa” manuscript continued.

Figure 66.17. The “Shaaldaa” manuscript continued.

Figure 66.18. The “Shaaldaa” manuscript continued.

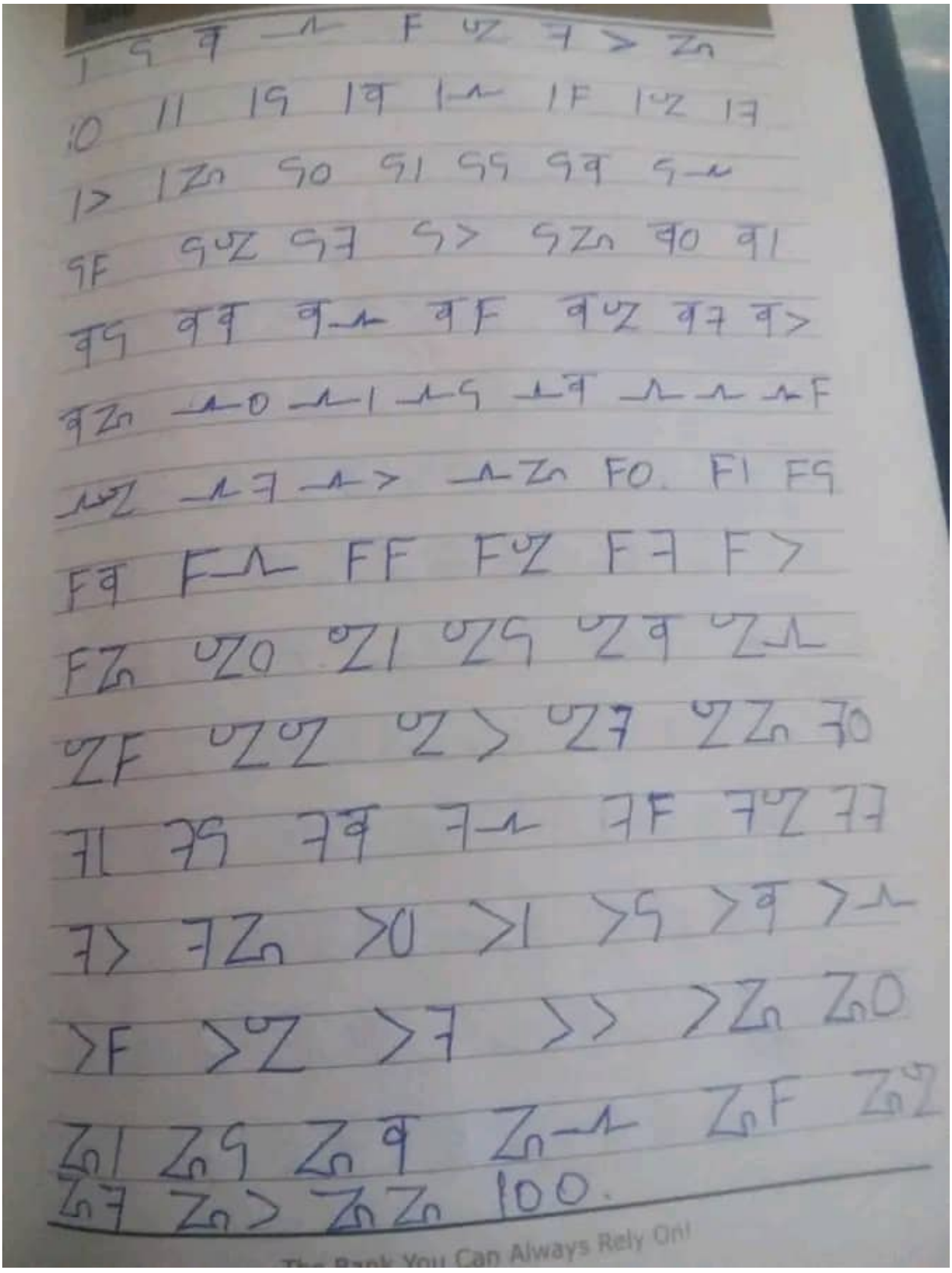


Figure 67. Shaaldaa numbers by Ibsa Sheikh Mahammadsiraac.

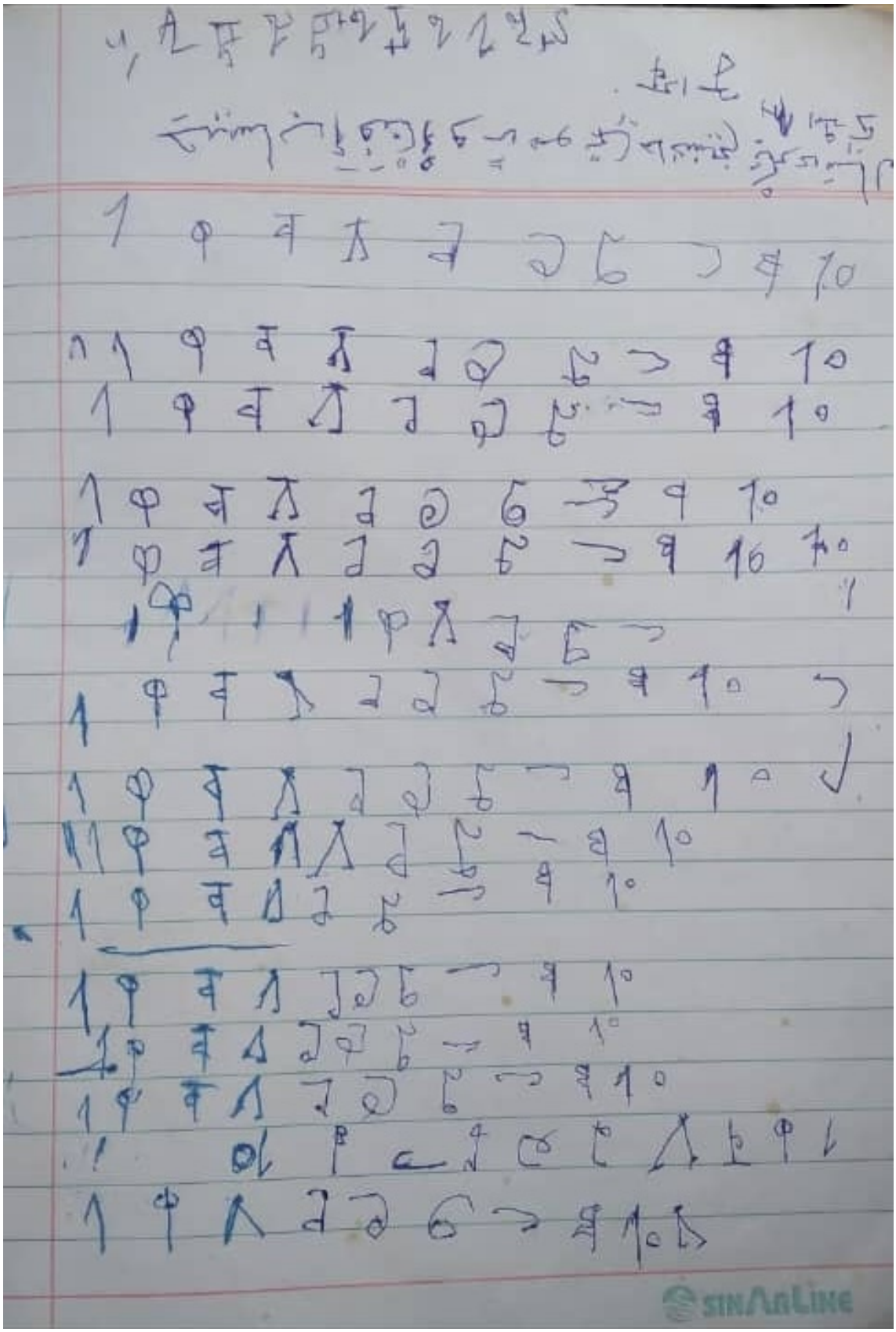


Figure 68. Shaaldaa numbers by Sheikh Nuradin Ahmad.

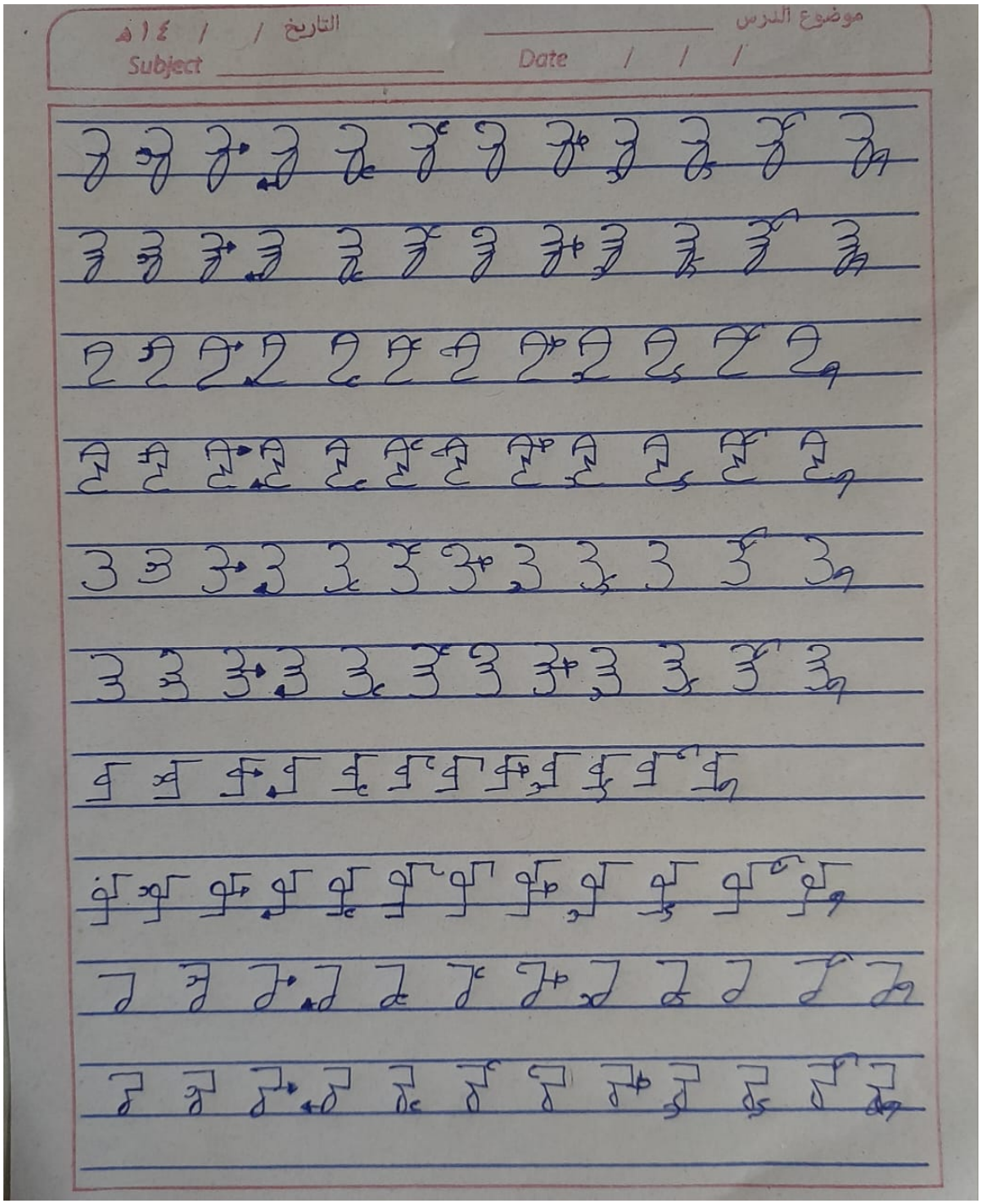


Figure 69.1. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (1 of 8)

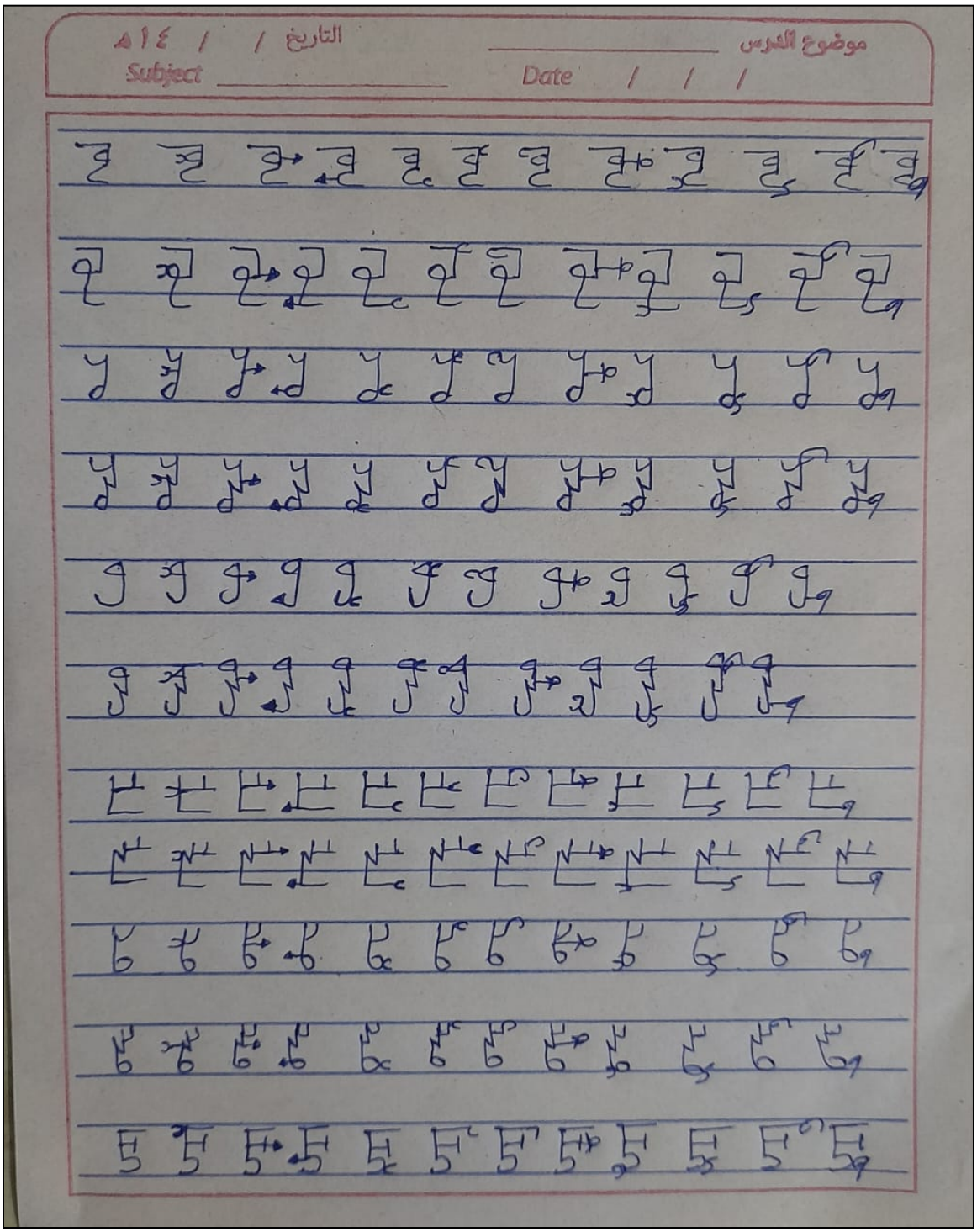


Figure 69.2. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (2 of 8)

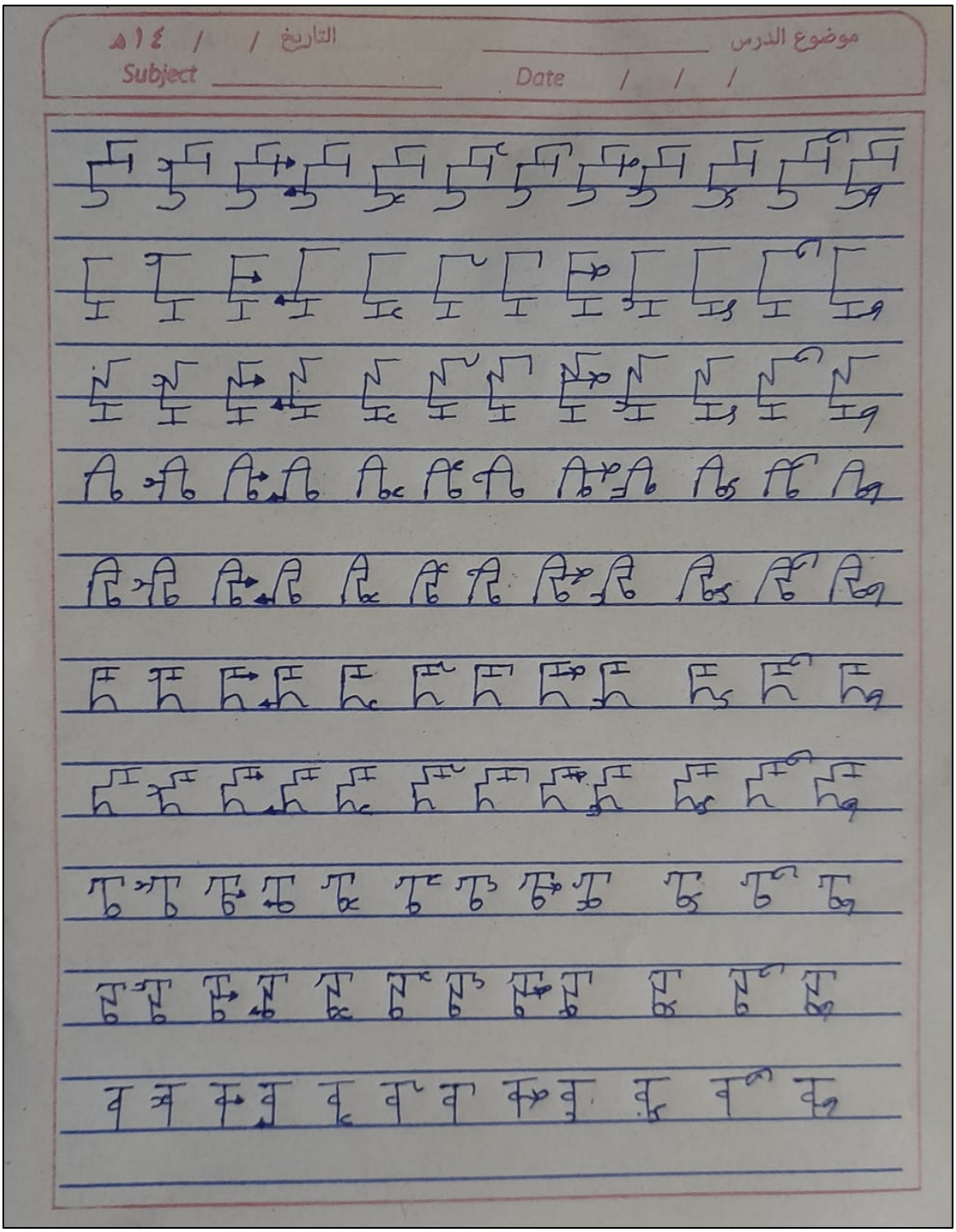


Figure 69.3. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (3 of 8)

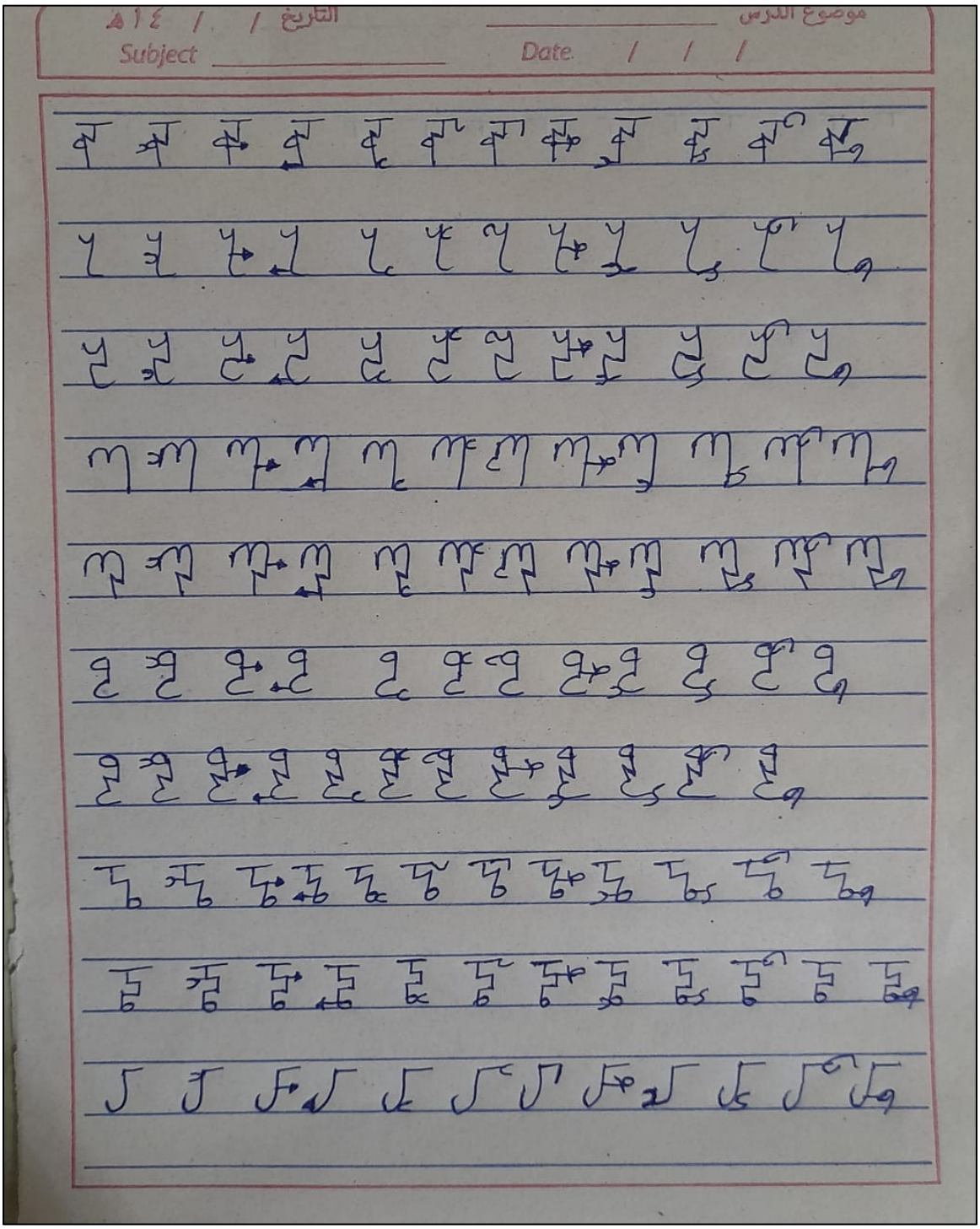


Figure 69.4. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (4 of 8)

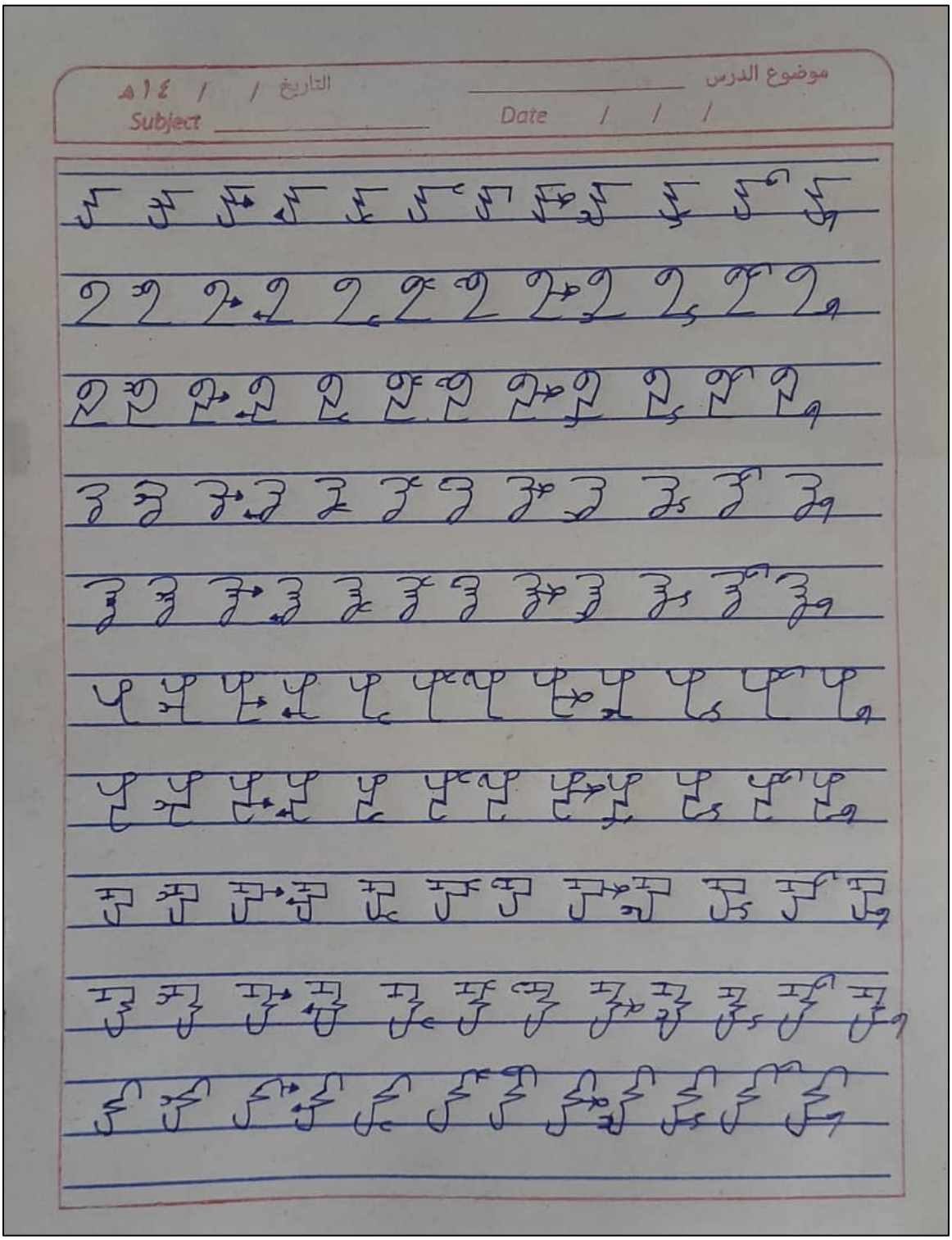


Figure 69.5. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (5 of 8)

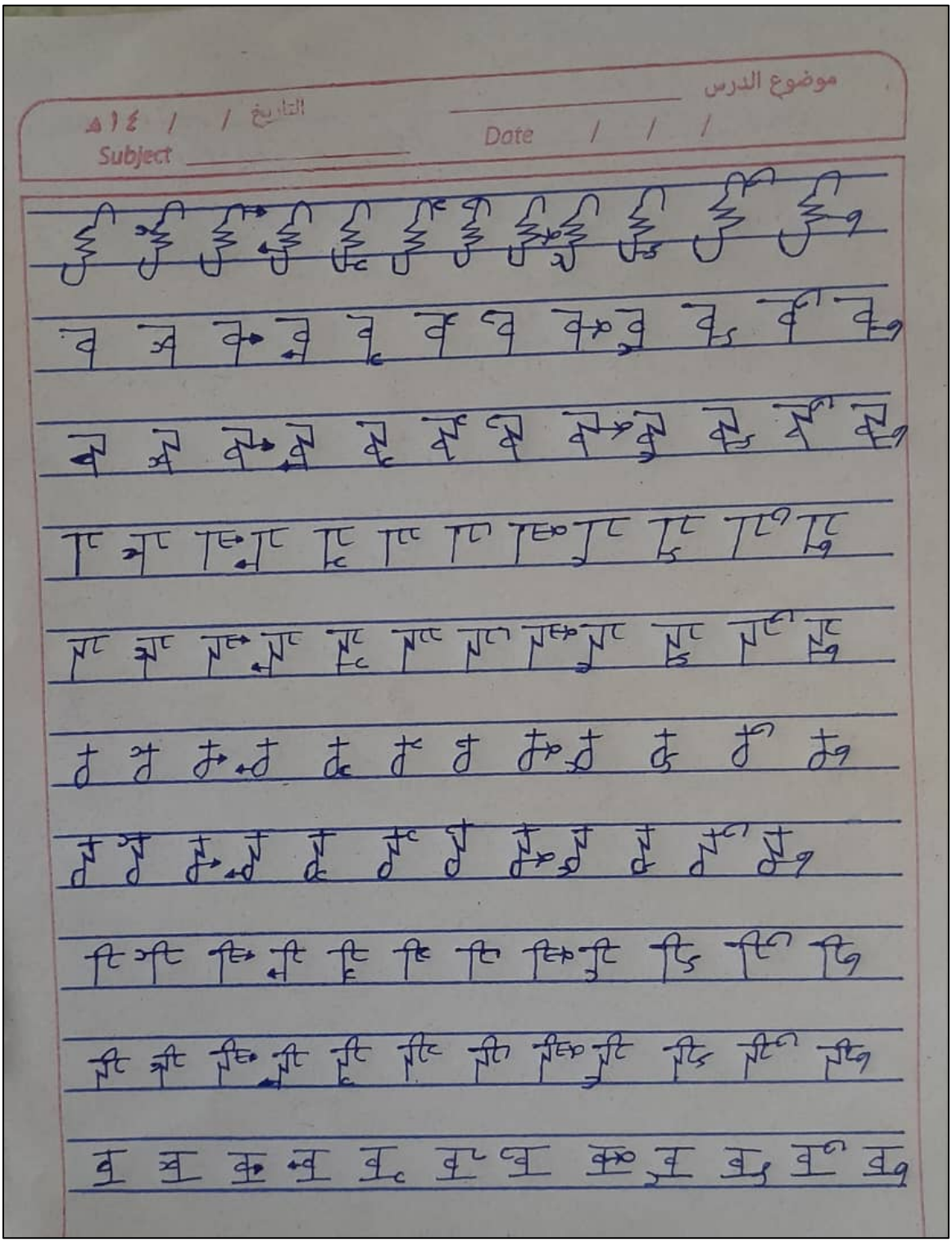


Figure 69.6. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (6 of 8)

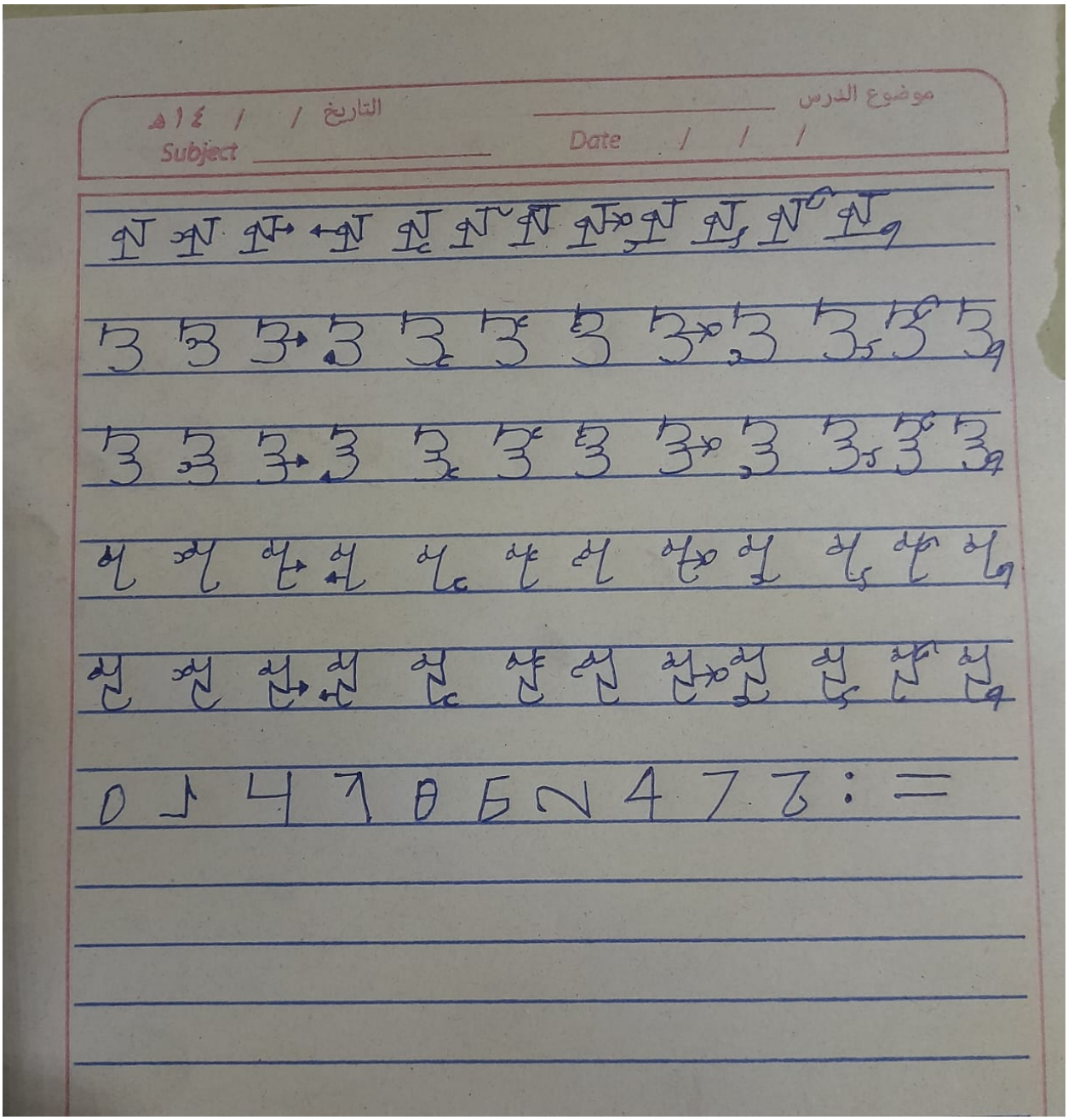


Figure 69.7. The Shaaldaa syllabary as written by Martu Si Malee Gadaa (7 of 8)

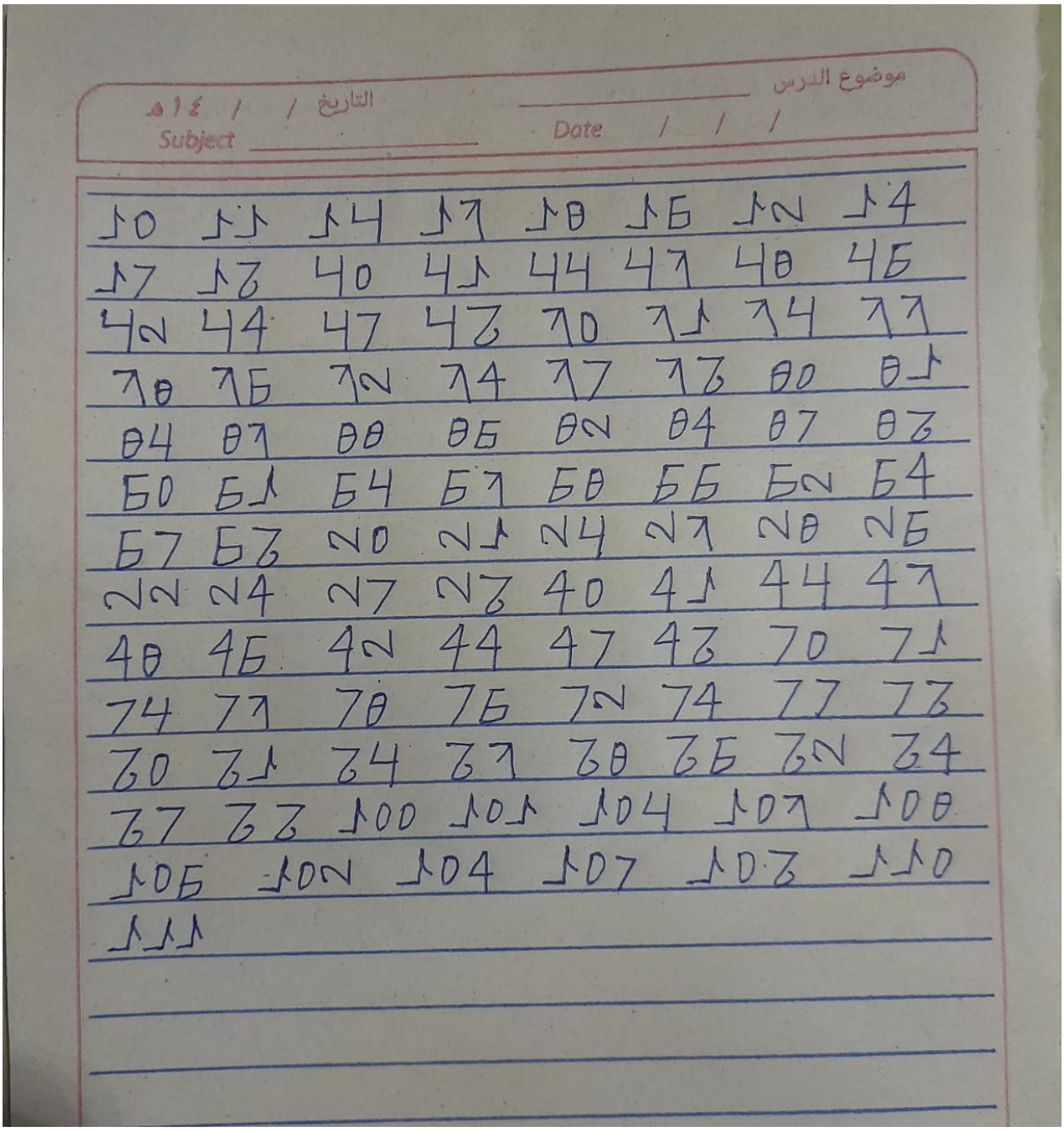


Figure 69.8. The Shaaldaa numeral samples for values “10” and above
as written by Martu Si Malee Gadaa (8 of 8)

Graphic Irregularity in the Shaaldaa script

Blue cells indicate the 26 cases where a typical left-side hook used for the majority of the <aa> syllables has *not* been used, in favor of a right-side downward stroke or hook.	Orange cells indicate the 103 cases where the typical “c”, “ɔ”, “s”-esque shape component of graphemes has an additional “-” stroke. The bottom stroke of the glyph body may also have bent upward to join the mark.

Current Oromo Orthography	Base Glyph	<a> /ɐ/	<u> /ʊ/	<i> /ɪ/	<e> /ɛ/	<o> /ɔ/	<aa> /ɑː/	<uu> /uː/	<ii> /iː/	<ee> /eː/	<oo> /oː/	/C/
vowel / ‘	𐓀	𐓁	𐓂	𐓃	𐓄	𐓅	𐓆	𐓇	𐓈	𐓉	𐓊	𐓋
vowel / ‘	𐓌	𐓍	𐓎	𐓏	𐓐	𐓑	𐓒	𐓓	𐓔	𐓕	𐓖	𐓗
b	𐓘	𐓙	𐓚	𐓛	𐓜	𐓝	𐓞	𐓟	𐓠	𐓡	𐓢	𐓣
bb	𐓤	𐓥	𐓦	𐓧	𐓨	𐓩	𐓪	𐓫	𐓬	𐓭	𐓮	𐓯
j	𐓰	𐓱	𐓲	𐓳	𐓴	𐓵	𐓶	𐓷	𐓸	𐓹	𐓺	𐓻
jj	𐓼	𐓽	𐓾	𐓿	𐔀	𐔁	𐔂	𐔃	𐔄	𐔅	𐔆	𐔇
d	𐔈	𐔉	𐔊	𐔋	𐔌	𐔍	𐔎	𐔏	𐔐	𐔑	𐔒	𐔓
dd	𐔔	𐔕	𐔖	𐔗	𐔘	𐔙	𐔚	𐔛	𐔜	𐔝	𐔞	𐔟
h	𐔠	𐔡	𐔢	𐔣	𐔤	𐔥	𐔦	𐔧	𐔨	𐔩	𐔪	𐔫
hh	𐔬	𐔭	𐔮	𐔯	𐔰	𐔱	𐔲	𐔳	𐔴	𐔵	𐔶	𐔷
w	𐔸	𐔹	𐔺	𐔻	𐔼	𐔽	𐔾	𐔿	𐕀	𐕁	𐕂	𐕃
ww	𐕄	𐕅	𐕆	𐕇	𐕈	𐕉	𐕊	𐕋	𐕌	𐕍	𐕎	𐕏
z	𐕐	𐕑	𐕒	𐕓	𐕔	𐕕	𐕖	𐕗	𐕘	𐕙	𐕚	𐕛
zz	𐕜	𐕝	𐕞	𐕟	𐕠	𐕡	𐕢	𐕣	𐕤	𐕥	𐕦	𐕧
h	𐕨	𐕩	𐕪	𐕫	𐕬	𐕭	𐕮	𐕯	𐕰	𐕱	𐕲	𐕳
hh	𐕴	𐕵	𐕶	𐕷	𐕸	𐕹	𐕺	𐕻	𐕼	𐕽	𐕾	𐕿
x	𐖀	𐖁	𐖂	𐖃	𐖄	𐖅	𐖆	𐖇	𐖈	𐖉	𐖊	𐖋
xx	𐖌	𐖍	𐖎	𐖏	𐖐	𐖑	𐖒	𐖓	𐖔	𐖕	𐖖	𐖗
y	𐖘	𐖙	𐖚	𐖛	𐖜	𐖝	𐖞	𐖟	𐖠	𐖡	𐖢	𐖣
yy	𐖤	𐖥	𐖦	𐖧	𐖨	𐖩	𐖪	𐖫	𐖬	𐖭	𐖮	𐖯
k	𐖰	𐖱	𐖲	𐖳	𐖴	𐖵	𐖶	𐖷	𐖸	𐖹	𐖺	𐖻
kk	𐖼	𐖽	𐖾	𐖿	𐗀	𐗁	𐗂	𐗃	𐗄	𐗅	𐗆	𐗇
l	𐗈	𐗉	𐗊	𐗋	𐗌	𐗍	𐗎	𐗏	𐗐	𐗑	𐗒	𐗓
ll	𐗔	𐗕	𐗖	𐗗	𐗘	𐗙	𐗚	𐗛	𐗜	𐗝	𐗞	𐗟
m	𐗠	𐗡	𐗢	𐗣	𐗤	𐗥	𐗦	𐗧	𐗨	𐗩	𐗪	𐗫
mm	𐗬	𐗭	𐗮	𐗯	𐗰	𐗱	𐗲	𐗳	𐗴	𐗵	𐗶	𐗷
n	𐗸	𐗹	𐗺	𐗻	𐗼	𐗽	𐗾	𐗿	𐘀	𐘁	𐘂	𐘃
nn	𐘄	𐘅	𐘆	𐘇	𐘈	𐘉	𐘊	𐘋	𐘌	𐘍	𐘎	𐘏
s	𐘐	𐘑	𐘒	𐘓	𐘔	𐘕	𐘖	𐘗	𐘘	𐘙	𐘚	𐘛

Table 6. Graphic irregularities in the Shaaldaa script.

ss	𑆯	𑆯𑆳	𑆯𑆴	𑆯𑆵	𑆯𑆶	𑆯𑆷	𑆯𑆸	𑆯𑆹	𑆯𑆺	𑆯𑆻	𑆯𑆼	𑆯𑆽
f	𑆦	𑆦𑆳	𑆦𑆴	𑆦𑆵	𑆦𑆶	𑆦𑆷	𑆦𑆸	𑆦𑆹	𑆦𑆺	𑆦𑆻	𑆦𑆼	𑆦𑆽
ff	𑆧	𑆧𑆳	𑆧𑆴	𑆧𑆵	𑆧𑆶	𑆧𑆷	𑆧𑆸	𑆧𑆹	𑆧𑆺	𑆧𑆻	𑆧𑆼	𑆧𑆽
s	𑆩	𑆩𑆳	𑆩𑆴	𑆩𑆵	𑆩𑆶	𑆩𑆷	𑆩𑆸	𑆩𑆹	𑆩𑆺	𑆩𑆻	𑆩𑆼	𑆩𑆽
ss	𑆪	𑆪𑆳	𑆪𑆴	𑆪𑆵	𑆪𑆶	𑆪𑆷	𑆪𑆸	𑆪𑆹	𑆪𑆺	𑆪𑆻	𑆪𑆼	𑆪𑆽
q	𑆫	𑆫𑆳	𑆫𑆴	𑆫𑆵	𑆫𑆶	𑆫𑆷	𑆫𑆸	𑆫𑆹	𑆫𑆺	𑆫𑆻	𑆫𑆼	𑆫𑆽
qq	𑆬	𑆬𑆳	𑆬𑆴	𑆬𑆵	𑆬𑆶	𑆬𑆷	𑆬𑆸	𑆬𑆹	𑆬𑆺	𑆬𑆻	𑆬𑆼	𑆬𑆽
r	𑆭	𑆭𑆳	𑆭𑆴	𑆭𑆵	𑆭𑆶	𑆭𑆷	𑆭𑆸	𑆭𑆹	𑆭𑆺	𑆭𑆻	𑆭𑆼	𑆭𑆽
rr	𑆮	𑆮𑆳	𑆮𑆴	𑆮𑆵	𑆮𑆶	𑆮𑆷	𑆮𑆸	𑆮𑆹	𑆮𑆺	𑆮𑆻	𑆮𑆼	𑆮𑆽
sh	𑆱	𑆱𑆳	𑆱𑆴	𑆱𑆵	𑆱𑆶	𑆱𑆷	𑆱𑆸	𑆱𑆹	𑆱𑆺	𑆱𑆻	𑆱𑆼	𑆱𑆽
shsh	𑆲	𑆲𑆳	𑆲𑆴	𑆲𑆵	𑆲𑆶	𑆲𑆷	𑆲𑆸	𑆲𑆹	𑆲𑆺	𑆲𑆻	𑆲𑆼	𑆲𑆽
t	𑆰	𑆰𑆳	𑆰𑆴	𑆰𑆵	𑆰𑆶	𑆰𑆷	𑆰𑆸	𑆰𑆹	𑆰𑆺	𑆰𑆻	𑆰𑆼	𑆰𑆽
tt	𑆯	𑆯𑆳	𑆯𑆴	𑆯𑆵	𑆯𑆶	𑆯𑆷	𑆯𑆸	𑆯𑆹	𑆯𑆺	𑆯𑆻	𑆯𑆼	𑆯𑆽
kh	𑆒	𑆒𑆳	𑆒𑆴	𑆒𑆵	𑆒𑆶	𑆒𑆷	𑆒𑆸	𑆒𑆹	𑆒𑆺	𑆒𑆻	𑆒𑆼	𑆒𑆽
khkh	𑆓	𑆓𑆳	𑆓𑆴	𑆓𑆵	𑆓𑆶	𑆓𑆷	𑆓𑆸	𑆓𑆹	𑆓𑆺	𑆓𑆻	𑆓𑆼	𑆓𑆽
dh	𑆝	𑆝𑆳	𑆝𑆴	𑆝𑆵	𑆝𑆶	𑆝𑆷	𑆝𑆸	𑆝𑆹	𑆝𑆺	𑆝𑆻	𑆝𑆼	𑆝𑆽
dhdh	𑆞	𑆞𑆳	𑆞𑆴	𑆞𑆵	𑆞𑆶	𑆞𑆷	𑆞𑆸	𑆞𑆹	𑆞𑆺	𑆞𑆻	𑆞𑆼	𑆞𑆽
g	𑆐	𑆐𑆳	𑆐𑆴	𑆐𑆵	𑆐𑆶	𑆐𑆷	𑆐𑆸	𑆐𑆹	𑆐𑆺	𑆐𑆻	𑆐𑆼	𑆐𑆽
gg	𑆑	𑆑𑆳	𑆑𑆴	𑆑𑆵	𑆑𑆶	𑆑𑆷	𑆑𑆸	𑆑𑆹	𑆑𑆺	𑆑𑆻	𑆑𑆼	𑆑𑆽
c	𑆕	𑆕𑆳	𑆕𑆴	𑆕𑆵	𑆕𑆶	𑆕𑆷	𑆕𑆸	𑆕𑆹	𑆕𑆺	𑆕𑆻	𑆕𑆼	𑆕𑆽
cc	𑆖	𑆖𑆳	𑆖𑆴	𑆖𑆵	𑆖𑆶	𑆖𑆷	𑆖𑆸	𑆖𑆹	𑆖𑆺	𑆖𑆻	𑆖𑆼	𑆖𑆽
ny	𑆘	𑆘𑆳	𑆘𑆴	𑆘𑆵	𑆘𑆶	𑆘𑆷	𑆘𑆸	𑆘𑆹	𑆘𑆺	𑆘𑆻	𑆘𑆼	𑆘𑆽
nyny	𑆙	𑆙𑆳	𑆙𑆴	𑆙𑆵	𑆙𑆶	𑆙𑆷	𑆙𑆸	𑆙𑆹	𑆙𑆺	𑆙𑆻	𑆙𑆼	𑆙𑆽
ch	𑆗	𑆗𑆳	𑆗𑆴	𑆗𑆵	𑆗𑆶	𑆗𑆷	𑆗𑆸	𑆗𑆹	𑆗𑆺	𑆗𑆻	𑆗𑆼	𑆗𑆽
chch	𑆚	𑆚𑆳	𑆚𑆴	𑆚𑆵	𑆚𑆶	𑆚𑆷	𑆚𑆸	𑆚𑆹	𑆚𑆺	𑆚𑆻	𑆚𑆼	𑆚𑆽
ph	𑆛	𑆛𑆳	𑆛𑆴	𑆛𑆵	𑆛𑆶	𑆛𑆷	𑆛𑆸	𑆛𑆹	𑆛𑆺	𑆛𑆻	𑆛𑆼	𑆛𑆽
phph	𑆜	𑆜𑆳	𑆜𑆴	𑆜𑆵	𑆜𑆶	𑆜𑆷	𑆜𑆸	𑆜𑆹	𑆜𑆺	𑆜𑆻	𑆜𑆼	𑆜𑆽
a	𑆠	𑆠𑆳	𑆠𑆴	𑆠𑆵	𑆠𑆶	𑆠𑆷	𑆠𑆸	𑆠𑆹	𑆠𑆺	𑆠𑆻	𑆠𑆼	𑆠𑆽
aa	𑆡	𑆡𑆳	𑆡𑆴	𑆡𑆵	𑆡𑆶	𑆡𑆷	𑆡𑆸	𑆡𑆹	𑆡𑆺	𑆡𑆻	𑆡𑆼	𑆡𑆽
p	𑆢	𑆢𑆳	𑆢𑆴	𑆢𑆵	𑆢𑆶	𑆢𑆷	𑆢𑆸	𑆢𑆹	𑆢𑆺	𑆢𑆻	𑆢𑆼	𑆢𑆽
pp	𑆣	𑆣𑆳	𑆣𑆴	𑆣𑆵	𑆣𑆶	𑆣𑆷	𑆣𑆸	𑆣𑆹	𑆣𑆺	𑆣𑆻	𑆣𑆼	𑆣𑆽
v	𑆤	𑆤𑆳	𑆤𑆴	𑆤𑆵	𑆤𑆶	𑆤𑆷	𑆤𑆸	𑆤𑆹	𑆤𑆺	𑆤𑆻	𑆤𑆼	𑆤𑆽
vv	𑆥	𑆥𑆳	𑆥𑆴	𑆥𑆵	𑆥𑆶	𑆥𑆷	𑆥𑆸	𑆥𑆹	𑆥𑆺	𑆥𑆻	𑆥𑆼	𑆥𑆽
zy	𑆧	𑆧𑆳	𑆧𑆴	𑆧𑆵	𑆧𑆶	𑆧𑆷	𑆧𑆸	𑆧𑆹	𑆧𑆺	𑆧𑆻	𑆧𑆼	𑆧𑆽
zyzy	𑆨	𑆨𑆳	𑆨𑆴	𑆨𑆵	𑆨𑆶	𑆨𑆷	𑆨𑆸	𑆨𑆹	𑆨𑆺	𑆨𑆻	𑆨𑆼	𑆨𑆽
ts	𑆩	𑆩𑆳	𑆩𑆴	𑆩𑆵	𑆩𑆶	𑆩𑆷	𑆩𑆸	𑆩𑆹	𑆩𑆺	𑆩𑆻	𑆩𑆼	𑆩𑆽
tsts	𑆪	𑆪𑆳	𑆪𑆴	𑆪𑆵	𑆪𑆶	𑆪𑆷	𑆪𑆸	𑆪𑆹	𑆪𑆺	𑆪𑆻	𑆪𑆼	𑆪𑆽

Handwriting Dissemination of the Shaaldaa Script

The following diagram depicts the transfer of knowledge of the Shaaldaa script along with the glyph preferences of the educators. Table 3 is reproduced here for convenience and the numeral sets are given labels *N1-N4* which are then applied in the diagram to show their origin and propagation.

		0	1	2	3	4	5	6	7	8	9
N1	Sheikh Mahammadsiraac Sheikh Bakrii	o	𞤁	𞤄	𞤇	𞤈	𞤋	𞤎	𞤐	𞤑	𞤔
N2	Sheikh Mahammad Rashad	o	𞤅	𞤄	𞤈	𞤀	𞤋	𞤍	𞤃	𞤒	𞤖
N3	Ibsa Sheikh Mahammadsiraac	o	𞤂	𞤆	𞤈	𞤉	𞤌	𞤔	𞤗	𞤒	𞤕
N4	Sheikh Nuradin Ahmad	o	𞤇	𞤍	𞤈	𞤊	𞤃	𞤏	𞤋	𞤒	𞤘

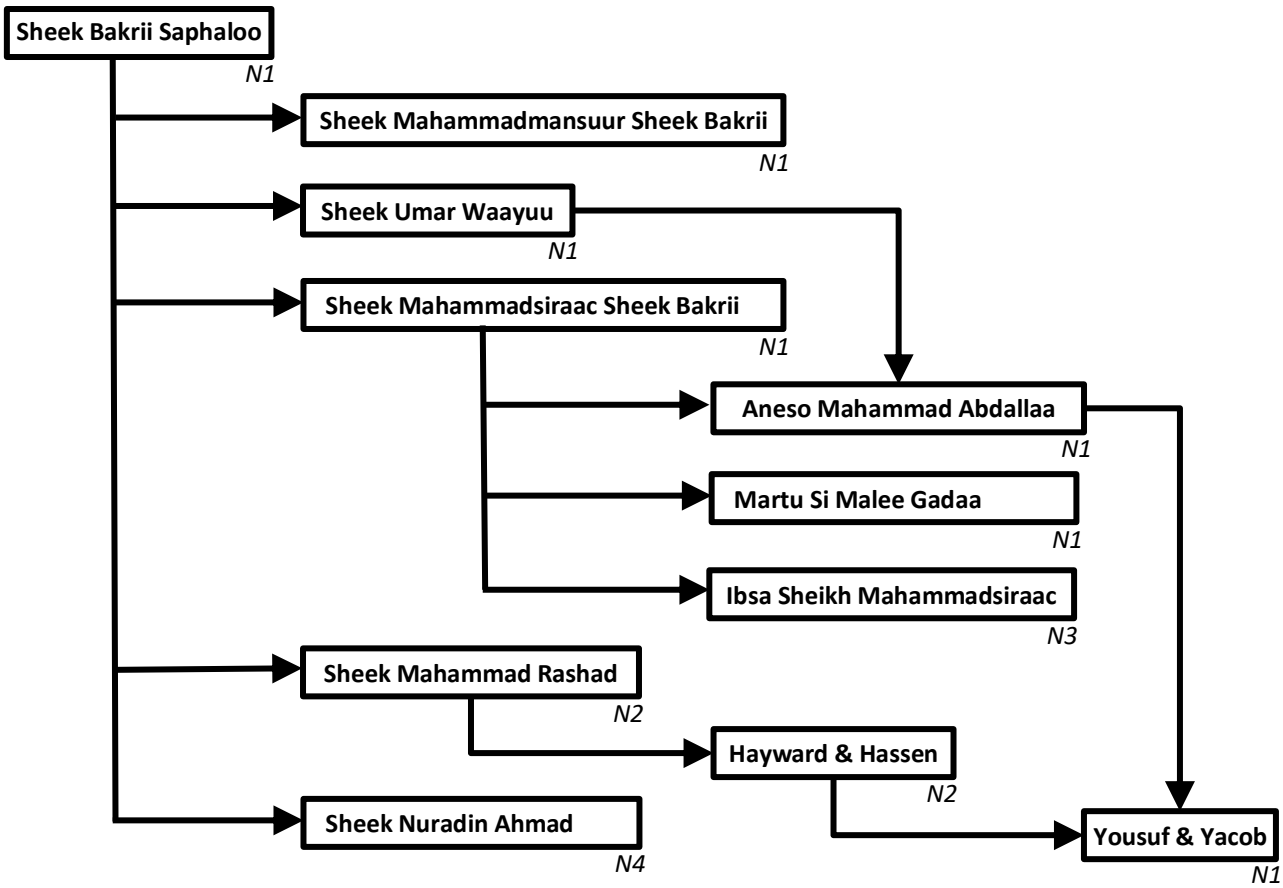


Figure 70. Shaaldaa glyph dissemination through educators from their origin to the authors.

X ISO Proposal Summary Forms

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html**.**
See also http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**
See also http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

A. Administrative

1. **Title:** ***Proposal to Encode Shaaldaa script in the USC***
2. Requester's name: *Oreen Yousuf, Daniel Yacob*
3. Requester type (Member body/Liaison/Individual contribution): *Individual Contribution*
4. Submission date: *2025-11-07*
5. Requester's reference (if applicable):
6. Choose one of the following:
   This is a complete proposal: *Yes*
   (or) More information will be provided later:

B. Technical – General

1. Choose one of the following:
   a. This proposal is for a new script (set of characters): *Yes*
      Proposed name of script: *Shaaldaa*
   b. The proposal is for addition of character(s) to an existing block:
      Name of the existing block:
2. Number of characters in proposal: *804*
3. Proposed category (select one from below - see section 2.2 of P&P document):
   A-Contemporary X B.1-Specialized (small collection) B.2-Specialized (large collection)
   C-Major extinct D-Attested extinct E-Minor extinct
   F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usage symbols
4. Is a repertoire including character names provided? *Yes*
   a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document? *Yes*
   b. Are the character shapes attached in a legible form suitable for review? *Yes*
5. Fonts related:
   a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? *Athinkra*
   b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): *Athinkra, LLC, yacob@geez.org, https://github.com/athinkra/sheek-bakrii-saphaloo*
6. References:
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? *Yes*
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? *Yes*
7. Special encoding issues:
   Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? *Yes*
   A sorting description is enclosed.

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see Unicode Character Database (http://www.unicode.org/reports/tr44/) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? *No*
   If YES explain
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? *Yes*
   If YES, with whom? *Teachers/students of the script, academic experts*
   If YES, available relevant documents: *Enclosed in the proposal.*
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? *Yes*
   Reference: *Enclosed in the proposal.*
4. The context of use for the proposed characters (type of use; common or rare) *Rare*
   Reference: *Enclosed in the proposal.*
5. Are the proposed characters in current use by the user community? *Yes*
   If YES, where? Reference: *Oromia Region, Ethiopia; Dire Dawa, Ethiopia; and likely elsewhere*
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? *No*
   If YES, is a rationale provided?
   If YES, reference:
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)? *Yes*
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? *Yes*
    If YES, is a rationale for its inclusion provided? *Yes*
    If YES, reference: *Enclosed in the proposal*
11. Does the proposal include use of combining characters and/or use of composite sequences? *No*
    If YES, is a rationale for such use provided?
    If YES, reference:
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?
    If YES, reference:
12. Does the proposal contain characters with any special properties such as control function or similar semantics? *No*
    If YES, describe in detail (include attachment if necessary)
13. Does the proposal contain any Ideographic compatibility characters? *No*
    If YES, are the equivalent corresponding unified ideographic characters identified?
    If YES, reference: