

Transition of the Kazakh Writing System from Cyrillic to Latin

Bora Kim

Center for Area Studies, Gyeongsang National University, Korea
borakim0602@gmail.com

Abstract

This article aims to discuss the transition of the Kazakh writing system from Cyrillic to Latin. First, the study investigates the relationship between the Kazakh Cyrillic alphabet and phonology, in order to linguistically evaluate the efficiency of the writing system. Second, the process of determining the Kazakh Latin alphabet is discussed in terms of the Kazakh phonological system. Third, the factors that determined the Latin alphabet of Kazakh language are analyzed. In Kazakh, the phonemic system is subject to controversy among linguists, but it can be said that the phonological system basically follows the one-to-one correspondence to the Russian and Kazakh phonemes. As for the depth of orthographies, Kazakh Cyrillic writing system is not based on the shallow orthographies, so it incorporates morphophonemic information to make skilled readers understand easier. The political and social aspects are considered as a cause of the alphabet change. Although there are studies suggesting the conversion of the writing system is caused by the extrinsic factors rather than the intrinsic factors, the five criteria of Smalley (1964), which compromise the intrinsic and extrinsic factors, are also persuasive. The five factors are 1) Maximum motivation for the learner, 2) Maximum representation of speech, 3) Maximum ease of learning, 4) Maximum transfer, 5) Maximum ease of reproduction.

Keywords: Writing system, Kazakh language, Cyrillic, Latin, Shallow orthographies, Deep orthographies

1. Introduction

Kazakhstan is located in the northern Central Asia. As of 2016, the country consists of 63.1% of Kazakh people, 23.7% of Russian and 13.2% of other ethnic groups among 18 million populations [1]. Since the independence from the Soviet Union in 1991, the national language has been Kazakh, and Russian was downgraded as the language of interethnic communication. The Kazakh people lived without a writing system, and adopted the Arabic alphabet in the 19th century, based on their Islamic religion. Later, the Soviet replaced the Arabic letters with Latin from 1929, preventing Islamization in Central Asia. Then the Latin alphabet was changed to Cyrillic in 1940. The adoption of the Cyrillic alphabet led to full-fledged Russified policies. In Kazakhstan, many Russians migrated to increase the number of Russian speakers, and gradually the Kazakh society became aware of the fact that it is necessary to learn Russian language to raise their social status. As a result, Kazakhstan was linguistically and culturally Russified. According to the census in 1989, just before the independence from the Soviet Union, the proportion of Kazakhs was 40%, not much different from 37.4% for Russians [2].

After the independence, Kazakh language was officially designated as a national language in 1995. It is stated in the Kazakh Language Law that the only official language is Kazakh, but Russian can be used equally as an inter-ethnic language. Many people still use Russian in cities such as Almaty, even though after two decades of the independence. The government of Kazakhstan announced 10-year plans for the language

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Corresponding Author: borakim0602@gmail.com

Tel: +82-55-772-1050, Fax: +82-55-772-1059

Author's affiliation: Gyeongsang National University, Center for Area studies

development. From 2000 to 2010, textbooks and dictionaries for Kazakh language education were published, and Kazakh educational institutions and research institutes were founded. From 2011 to 2020, the plan is that Kazakh and Russian, as well as English, will be included in the language education. The government predicted that the number of people who speak three languages would exceed 15% by 2020 [3]. In addition, President Nazarbayev announced in April, 2017 that the Cyrillic alphabet would be converted to Latin by 2025.

This article aims to discuss the transition from the current Cyrillic writing system to Latin in Kazakhstan. First, this study investigates the relationship between Kazakh Cyrillic alphabet and phonemic system, in order to evaluate the efficiency of the alphabet. Second, the process of determining the Kazakh Latin alphabet is discussed based on the Kazakh phonological system. Third, the factors that determined the Latin alphabet of Kazakh language are analyzed.

2. Kazakh Cyrillic alphabet and phonemic system

In this chapter, we are going to look into the linguistic features of Kazakh writing system. First of all, the current Cyrillic alphabet is listed in Table 1. The Russian Cyrillic alphabet is compared with Kazakh in order to show the differences of the number of the letters and pronunciations.

Table 1. Kazakh Cyrillic Alphabet

Russian Cyrillic	А		Б	В	Г		Д	Е	Ё	Ж	З	И	Й	К	
	[a]		[b]	[v]	[g]		[d]	[(j)e]	[(j)o]	[ʒ]	[z]	[i]	[j]	[k]	
Kazakh Cyrillic	А	Ә	Б	В	Г	Ғ	Д	Е	Ё	Ж	З	И	Й	К	Қ
	[a]	[æ]	[b]	[v]	[g]	[ɣ]	[d]	[je]	[jo]	[dʒ]	[z]	[ij]	[j]	[k]	[q]
Russian Cyrillic	Л	М	Н		О		П	Р	С	Т	У			Ф	
	[l]	[m]	[n]		[o]		[p]	[r]	[s]	[t]	[u]			[f]	
Kazakh Cyrillic	Л	М	Н	Ң	О	Ө	П	Р	С	Т	У	Ү	Ү	Ф	
	[l]	[m]	[n]	[ŋ]	[o]	[ø]	[p]	[r]	[s]	[t]	[uw/yw/w]	[u]	[ü]	[f]	
Russian Cyrillic	Х		Ц	Ч	Ш	Щ	Ъ	Ы		Ь	Э	Ю	Я		
	[x]		[ts]	[tʃ]	[ʃ]	[ʃʃ]		[ɨ]			[e]	[(j)u]	[(j)a]		
Kazakh Cyrillic	Х	Һ	Ц	Ч	Ш	Щ	Ъ	Ы	І	Ь	Э	Ю	Я		
	[x]	[h]	[ts]	[tʃ]	[ʃ]	[ʃʃ]		[ɨ]	[i]		[e]	[ju]	[ja]		

The number of Kazakh alphabet is 42, including 9 new letters as shown in Table 1. The supplemented new letters are 5 vowels (Ә, Ө, Ү, Ү, І) and 4 consonants (Ғ, Қ, Ң, Һ). None of the letters of the Russian Cyrillic are missed. On the other hand, Uzbekistan, a neighboring country, excluded Ш and Ъ from the Russian Cyrillic alphabet, and modified the Russian hard sign Ъ as a long vowel. Furthermore, among the Turkic languages of Uzbek, Kyrgyz and Kazakh, the Kazakh Cyrillic alphabet has the biggest number of the letters. Why does the Kazakh Cyrillic alphabet maintain the whole Russian alphabet? Does the alphabet reflect the Kazakh language, or Russian?

Rogers stated that the purpose of most spelling reforms is to maintain a one-to-one relationship between a phoneme and a letter. A phoneme should be represented by one symbol [4]. If so, is there a one-to-one relationship between letters and phonemes in the Kazakh Cyrillic alphabet? According to Ishan and Dautova, the Cyrillic alphabet contains so many letters that there is no need for Kazakh expression, and too many exceptional vowels against the Kazakh vowel harmony [5]. Regarding the vowel phonemes in Kazakh, Muhamedowa said that the total number of vowel phonemes is nine (/i/, /i/, /ü/, /u/, /e/, /æ/, /a/, /ö/, /o/) [6]. The vowel phonemes of Kazakh are mostly paired in terms of height (high, mid, low) roundedness (rounded, unrounded), and frontness (front, back). Also, there are neither diphthongs nor vowel length in the Kazakh

vowel phonemes. However, the sounds of *И, У, Ю, Я* represent not monophthongs, but diphthongs like *И* [ɪj], *У* [uw] *Ю* [ju] and *Я* [ja]. And the letters *Ё* and *Э* are only appear in the borrowed words from Russian. As a result, 15 vowels are counted in the Kazakh Cyrillic alphabet, exceeding the number of Kazakh vowel phonemes. Furthermore, vowel harmonization only occurs with the 9 monophthong phonemes, not with the vowels of *Э, Ю, and Я*. In other words, the currently used Kazakh Cyrillic alphabet does not properly reflect the Kazakh vowel system.

Regarding Kazakh consonant phonemes, there is no affricate sounds. Thus the Russian consonant phonemes such as / č / (ч), and / c / (ц), / šč / (щ) are not included in the Kazakh consonant phonemes. Also, *Ђ* and *Ь* are used only in the borrowing words from Russian. It is also true that there is a great deal of disagreement among scholars about Kazakh vowel and consonant phonemes. According to Sharipbaev and Beckmanova, Kazakh is composed of 9 vowel phonemes and 17 consonant phonemes [7]. However, some scholars claim that the vowels in Kazakh are only 5 in total. Others claim that Kazakh vowel phonemes vary from 5 to 12, while consonant phonemes from 17 to 26 [8]. In other words, it depends on whether to include the vocabulary borrowed from Russian, or whether to include only pure Kazakh vocabulary for the phoneme list. Both of the Kazakh vocabulary and writing system are seriously influenced by Russian language. As seen before, the Kazakh Cyrillic alphabet contains all of the Russian letters in order to write Russian words in Kazakh without any difficulty. This was an inevitable consequence caused by the fact that Russian people occupied almost the same percentage as Kazakh people in the population, right after the independence of the country. Also, most of Kazakh population in cities speaks Russian fluently as a mother tongue. I think that the government could not prevent people from using Russian words when they speak Kazakh, even though Kazakh is the only official language of the country. Thus, it is hard to define what the Kazakh vocabulary is. This caused changes of the phonemic list and different points of view among the scholars. Therefore, it is impossible to block language external influences in establishing a writing system, but some of Kazakh press still insists that the Kazakh alphabet should be a one-to-one correspondence to the Kazakh phonemes and should be easy to write.

Coulmas goes beyond the problem of the one-to-one correspondence between a letter and phoneme, but argues the writing of morphemes [9]. A writing system has shallow orthographies or deep orthographies depending on the depth of morphophonemic information. Shallow orthographies represent a phonetic surface structure, while deep orthographies follow morphological and lexical information. For example, in English, as in each of the pairs of *south-southern*, *child-children*, and *sign-signal*, the examples, in which the same morpheme is pronounced differently, are written identically. It is because English follows deep orthographies. Also, spelling of homophonic morphemes such as *by-bye-buy* increases the degree of morpheme indications, because of the deep orthographies. How does the Kazakh Cyrillic alphabet show the depth of orthographies?

Kazakh typologically belongs to an agglutinative language, and a stem usually precedes an affix. In Kazakh, some of consonant assimilations occurring between the stem and suffix is realized by spelling. That is, the change of sound leads to the change of spelling. If the Kazakh is an example of deep orthographies, the same morpheme would have to use the same spelling, regardless of the change in pronunciation.

Table 2. Examples of the shallow orthographies in Kazakh

-К, Қ, П _____ → -Ғ, Ғ, Б _____ (before a vowel, sonorant, Д, Ж or З)	білезік + ім → білезігім (my ankle) қасық + ы → қасығы (his spoon) мектеп + ім → мектебім (my school)
_____ П + ЫП, ІП → _____ УЫП, _____ УІП	тап + ып → тауып (to crash) кеп + іп → кеуіп (to be similar)

There are some examples of the shallow orthographies in Kazakh as seen in Table 2, but most of the spellings follow the deep orthographies. Then which of the shallow notation or the deep notation is an efficient writing system? A writing system meets a myriad of demands, each of which is different and sometimes contradictory. First of all, we can think about two representative needs, one of which is the demand of the group that learns to read first, and the other is the demand of the fluent readers. In other words, the question is which writing system is easy to learn, and how fast and efficiently the fluent readers can read the text. Shallow orthographies

with phonetic notation are effective for those who are not skilled in that the spelling can be determined exactly as pronounced. On the other hand, deep orthographies that preserve morphemes are efficient for skilled readers. However, deep orthographies are obscure or ambiguous when writing, making it difficult for learners to understand and for teachers to teach [10]. Thus, there is no basis to support the idea that the shallow orthographies are more efficient than the others. Each writing system has advantages and disadvantages. To summarize, it is not possible to evaluate which of the orthographies is more efficient. However, it is possible to discuss what kind of a writing system is friendlier to first-time learners, or to experienced readers. In Kazakh, the phonemic system is subject to controversy among linguists, but it can be said that the phonological system basically follows the one-to-one correspondence to the Russian and Kazakh phonemes. I think that the writing system is easier for Russian speakers who learn Kazakh. As for the depth of orthographies, Kazakh Cyrillic writing system is not based on the shallow orthographies, so it incorporates morphophonemic information to make skilled readers understand easier.

3. Three times of amendments to the Kazakh Latin alphabet from 2017 to 2018

In September 2017, Kazakh President Nazarbayev declared that he would complete the transition from the current Cyrillic alphabet to the Latin alphabet system by 2025. Table 3 is the first Latin alphabet of the three amendments. I will analyze this Latin alphabet comparing with the linguistic characteristics of the Kazakh Cyrillic.

Table 3. 1st Latin alphabet (2017.9)

Проект единого стандарта алфавита государственного языка НА латинской графике					
№	Написание	Звук	№	Написание	Звук
1	A a	[a]	18	R r	[p]
2	B b	[б]	19	S s	[c]
3	C c	[ц]	20	T t	[t]
4	D d	[д]	21	U u	[ʏ]
5	E e	[e]	22	V v	[v]
6	F f	[ф]	23	W w	Согласный губной звук [y]
7	G g	[r]	24	Y y	[ь]
8	H h	[x], [h]	25	Z z	[z]
9	I i	[i], [и]	1	Ae ae	[ə]
10	J j	[й]	2	Oe oe	[ə]
11	K k	[к]	3	Ue ue	[ʏ]
12	L l	[л]	4	Ch ch	[tʃ]
13	M m	[м]	5	Gh gh	[f]
14	N n	[н]	6	Sh sh	[ʃ]
15	O o	[o]	7	Zh zh	[ʒ]
16	P p	[п]	8	Ng ng	[ŋ], [ng]
17	Q q	[к]			

The first thing that stands out is the fact that the total letters are reduced from 42 to 33 letters. The reduced letters are those of the Cyrillic alphabet, which are *Ё, Щ, Ъ, Ь, Э, Ю, Я*. And *h* and *X*, which are represented by different letters in the Cyrillic alphabet, are combined into the letter *H*, and *I* and *И* were integrated into the letter *I*, reducing the total number of letters to 33. The deleted letters which were heterogeneous in the phonemic system of Kazakh can be regarded as an intention to establish an independent wiring system from Russian influence. However, the inclusion of *C* (for the Cyrillic alphabet *Ц*) and *CH* (for the Cyrillic *Ч*), which

do not exist in the Kazakh phonology, still undermines the basic intent of the amendment. In addition, the sound [ij] (Cyrillic *И*) with the phonetic value of the semi-consonant is integrated with the short vowel /i/ (Cyrillic *И*). It results in a combination of two alien pronunciations in one letter, against the one-to-one correspondence.

The fact that 8 diagraphs added into the 25 basic letters also goes against the one-to-one correspondence between sounds and letters. The Kazak criticized this writing system on the SNS as soon as it was announced by the government. For example, it is pointed out that *асхана* 'ashana' and *намазхана* 'namazhana' can be misunderstood as respectively *ашана* and *намажана* [11]. Because the diagraph disturbed the one-to-one correspondence of sounds and letters, and the Russian phonemes still remained, the first Latin alphabet system received many criticisms from the general public as well as linguists. I think that this version is rejected because the system is not friendly for Russian speakers. Russian speakers are not accustomed to diagraphs, and if they are not skilled reader of Kazakh, they do not understand how to interpret diagraphs in Kazakh words. Thus, the amendment should be designed for the first time learners of Kazakh.

Table 4. 2nd Latin Alphabet (2017.10)

 КАЗАХСКИЙ АЛФАВИТ НА ЛАТИНИЦЕ					
№	Написание	Звук	№	Написание	Звук
1	A a	[a]	17	N' n'	[n], [nr]
2	A' a'	[ə]	18	O o	[o]
3	B b	[b]	19	O' o'	[ə]
4	D d	[d]	20	P p	[p]
5	E e	[e]	21	Q q	[k]
6	F f	[f]	22	R r	[r]
7	G g	[r]	23	S s	[c]
8	G' g'	[r]	24	S' s'	[m]
9	H h	[x], [h]	25	C' c'	[ч]
10	I i	[i]	26	T t	[t]
11	I' i'	[n], [nr]	27	U u	[y]
12	J j	[ж]	28	U' u'	[y]
13	K k	[k]	29	V v	[v]
14	L l	[l]	30	Y y	[ы]
15	M m	[m]	31	Y' y'	[y]
16	N n	[n]	32	Z z	[z]

The first Latin alphabet announced in September was revised soon with some amendments. The diagraphs, which had been criticized extensively, disappeared, but instead, apostrophes appeared. In terms of the layout of the alphabet, the revision looks more like the English layout than the previous version. Regarding the correspondence of phonemes and letters, except the letters *H* and *I'*, one-to-one correspondence was done better than the first one. Also, the letter *C*, which existed in the first version, is finally deleted. The sound [ij] (*И* in Cyrillic), which contains the phonetic value of the semi-consonant, is integrated with short vowel /i/ (Cyrillic letter *И*). This second version accepts the criticism that the first version is against the one-to-one correspondence of phonemes and letters. As a result, the short vowel *I* corresponds to the phoneme /i/, and the diphthong [ij] and the semi-consonant phoneme /j/ are integrated together. Compared with the first version, the second Latin alphabet clearly reflects the Kazakh phonemic system as well as the opinions of the linguistic

community. In addition, the diagraph that was the main subject of criticism disappeared. However, the apostrophe has also been criticized by the Kazakh people. On the SNS, a logo that says “I agree with Latin letters but I do not agree with apostrophes” is registered as a banner on many online community bulletin boards. The media also criticized the use of an apostrophe because it separated a word. For example, when a person’s name Ilya Illyin is written in the second Latin version, it becomes I’li’a I’I’I’n with 5 apostrophes [12]. The apostrophe adds more confusion when combined with a single quotation mark that acts as a quotation. Therefore, the second Latin alphabet revision was rejected, and the final version was announced in February 2018.

Table 5. 3rd Latin Alphabet (2018.2)

АЛФАВИТ
казахского языка, основанный на латинской графике

№	Написание	Звук	№	Написание	Звук
1	A a	[a]	17	Ń ń	[ɲ]
2	Á á	[ə]	18	O o	[o]
3	B b	[b]	19	Ó ó	[ø]
4	D d	[d]	20	P p	[p]
5	E e	[e]	21	Q q	[k]
6	F f	[f]	22	R r	[r]
7	G g	[g]	23	S s	[s]
8	Ǵ ǵ	[ɣ]	24	T t	[t]
9	H h	[x], [h]	25	U u	[ʏ]
10	I i	[i]	26	Ú ú	[y]
11	I ı	[ɯ], [ɨ]	27	V v	[v]
12	J j	[ʒ]	28	Y y	[ɣ]
13	K k	[k]	29	Ý ý	[ɣ]
14	L l	[l]	30	Z z	[z]
15	M m	[m]	31	Sh sh	[ʃ]
16	N n	[n]	32	Ch ch	[tʃ]

In the last revised Latin alphabet, the apostrophes disappeared to prevent words from appearing segregated or poorly legible by diacritic marks like Á. However, the diagraphs *sh* and *ch* which were the letters in the first version, were reintroduced in the final version. They do not follow a one-to-one correspondence between phonemes and letters. From the linguistic point of view, the diagraph *ch* is not a Kazakh phoneme, so it can be interpreted as a diagraph located at the end of the list. However, *sh* is a Kazakh phoneme.

4. Conclusion

The Kazakh Latin alphabet, confirmed in February 2018, is still in the process of getting rid of Russian influences, but there still remain some Russian phonemes. There are also letters which do not follow the one-to-one correspondence. What factors did operate on determining a writing system? Fischer said that a language evolves naturally but a writing system is intentionally borrowed, altered, and discarded according to political, social, and psychological advantages that are almost independent of speech or punctuation [10]. In writing systems exists either an autonomous model, based on the phonological characteristics of the language, or an ideological model, based on political and social aspects. The political and social aspects are considered as a cause of the alphabet change. The non-linguistic factors work as a major factor for the change of the writing

system Although there are studies suggesting the conversion of the writing system is caused by the extrinsic factors rather than the intrinsic factors, the five criteria of Smalley, which compromise the intrinsic and extrinsic factors, are also persuasive [13]. The five factors are 1) Maximum motivation for the learner, 2) Maximum representation of speech, 3) Maximum ease of learning, 4) Maximum transfer, 5) Maximum ease of reproduction.

First, the new writing system should maximize the learner's motivation. This implies that there is a consensus among the learners about the conversion of the writing system, so that they are motivated to learn new letters willingly. In fact, the Kazakh people know that the new Latin alphabet system is politically intended to avoid the influence of Russia, and to become a part of the international community as a new independent country. In addition, other Turkic countries are using Latin characters, so they cannot ignore the intention to move from the existing Russian influence to new Turkic communities. At the time of the revision of the second Latin alphabet, many Kazakh netizens said, "I am in favor of Latin letters". Through the actions like posting banners on the bulletin boards and actively introducing their opinions during the revision of the writing system, the revised Latin letter of Kazakhstan meets the criteria of maximizing the motivation of the learners. However, it should not be overlooked that the Kazakh government is taking a cautious attitude toward Russia. President Nazarbayev repeatedly says that the revised Latin alphabet is not intended to completely remove Russian from Kazakh. As many of the former Soviet countries still use Russian language in their surroundings, and Russian plays a big role in international relations, Kazakhstan still maintains political and economic cooperation with Russia. Thus, the Kazakh government planned a gradual change over several years rather than a sudden change in the writing system. However, when the transition to Latin is completed in 2025, de-russification will take place gradually and naturally.

The second criterion, the maximum representation of speech, emphasizes the internal aspects of language. Letters should be as close as possible to a spoken language. The Kazakh Latin system contains all of the unique phonemes of Kazakh and is also designed to express Russian vocabulary in Kazakh. Some Russian phonemes were excluded from the Latin alphabet, which seems to be intended to use Kazakh vocabulary instead of Russian in the future.

In order to maximize the ease of learning, the learners who are first to write should be able to make a shallow orthographies that has a one-to-one correspondence between phonemes and letters. The Kazakh Latin alphabet has undergone three revisions, and the number of diagraphs has decreased, and it has been pursued to maximize the ease of learning by using the diacritics instead of the apostrophes which reduce the readability.

The fourth criterion is the maximization of transfer. This means that people who are not native speakers of Kazakh language should be able to read and pronounce Kazakh easily without feeling any sense of heterogeneity. To do this, the layout of the writing system should not differ greatly from other languages that use the same Latin alphabet. Indeed, President Nazarbayev stressed that the transition to Latin is a pragmatic decision and an essential plan for modernization. The Latinization of Kazakh language is to improve accessibility to international information technology, the Internet and electronic materials. Especially, in line with the modernization and globalization, they try to improve the utilization of language in the field of communication technology.

Making the typing easy on the computer is the last criterion, maximization of reproducibility. If you use Latin characters that require 30 characters rather than the existing 42 Cyrillic characters, the arrangement of the computer keyboard becomes simpler. As a result, the conversion of Kazakh into the Latin alphabet is proceeding in a favorable direction in terms of Smalley's five standards. However, by the year 2025, the Kazakh government will need about \$ 664 million to complete the conversion, but the budget was set for only the public sector, and the cost of replacing signage and promotional materials of individual operators is not included. Thus the total cost due to the change of the writing system is expected to be much more than this.

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