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Reading Literacy vs. Ownership Type and Zoning of Schools

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Introduction

Kazakhstan is one of the countries participating in the international monitoring of the quality of national education in respect to reading literacy as conducted by PISA (Thomson, Hillman, & Bortoli, 2013). The upgrading of Kazakhstan's education system is taking place in the context of positive global trends related to changing strategic goals, which prioritize creating conditions for the younger generation to successfully adapt to the changing conditions of social and economic life. The objectives and the purpose of improving functional literacy are reflected in the laws of the Republic of Kazakhstan, including a new education reform (Government of Kazakhstan, 2017), the *State Program of Development of Education of the Republic of Kazakhstan for 2011-2020* (Government of Kazakhstan, 2010), and the *National Action Plan for the Development of Functional Literacy of Students for 2012-2016* (Government of Kazakhstan, 2012); as well as UNESCO's recommendations on continuing education.

However, despite the existence of a legal framework and a variety of programs that changed the strategic objectives by targeting students' successful adaptation to changing social and economic conditions, there has not been adequate attention paid to problems related to reading literacy. There is a need for thorough monitoring and analysis of cultural and linguistic diversity in education.

This article discusses the results of a sociolinguistic research study. The purpose of the article is to identify the presence or lack of correlation of reading literacy (in Kazakh, Russian, and English) in regards to the types and locations of schools. Respondents were ninth grade students from public and private schools in Almaty, Kazakhstan.

Materials and Methods

A detailed questionnaire was developed and distributed among graduating students of the secondary schools under study. The questionnaire was based on the work of others who had previously examined

language policy in Kazakhstan and the Soviet Union (Rivers, 2003; Robinson, Andreyenkov, & Patrushev, 1988; Suleimenova, Shaimerdenova, & Smagulova, 2005), as well as studies investigating reading literacy (Sabatini & Bruce, 2011; Kovaleva, Krasnovskyi, Krasnokutskaya, & Krasnyanskaya, 2003).

The questionnaire was modified and supplemented in order to obtain accurate data on the level of reading literacy of respondents in Kazakh, Russian, and English, ando also on the socio-economic status of the respondents' families.

The questionnaire consists of two parts. The first part contains 45 questions, 10 being open-ended questions, 17 were multiple-choice items, and 18 were semi-closed items. The second part assesses reading literacy based on texts written in Kazakh, Russian, and English.

The first part of the questionnaire was designed to determine the socio-economic status of the respondents and the functioning of languages of this sample.

The survey was anonymous and was carried out after obtaining verbal permission from the school administrators (principals or head teachers), and it was done in the presence of either homeroom teachers or subject teachers. The presence of a school employee during the administration of questionnaires was a deliberate action, as the authoritarian character of the employee was thought to have a positive influence on the response rate of the survey. The survey took 45 minutes and was administered after instructions were given on how to fill out the questionnaire. Three responses were deemed unsuitable for technical reasons and thus were exclueded. There were 297 total questionnaires collected in this study, and the results were analyzed with SPSS.

The response distribution was as follows: 100 (33.7%) questionnaires were from pupils of state schools in the city center, 123 (41.4%) questionnaires were from pupils of state schools situated in the lower suburbs of Almaty, and 74 (25%) questionnaires were from pupils of private schools.

The representativeness of this sample is justified as follows:

a) Almaty is the financial, cultural, and information center of the country, an urbanized model of social stratification and socio-economic zoning. The principle of selection of the city comes from the theory of socio-economic zoning in urbanized cities, which assumes that the area of large industrial cities is heterogeneous in terms of socio-economic status (Gorkin, 2013). In sociology, often not only social but also geographical areas of cities are stratified (e.g., 'prestigious', 'not prestigious', and 'problem' areas) (Giddens, 1989). The prestigiousness of an area stands out with its features, for example, the protection of residential areas, gardens with flowerbeds, and buildings with playgrounds. From this point of view, the former capital, the former regional center, and the largest metropolis of the country, Almaty, which is the *de facto* financial, cultural, and information center of the country, represents a good example of social zoning. The central and the 'top' (i.e., foothill) districts of Almaty are considered to be prestigious, while the 'lower' parts are less prestigious (Azhenov & Beisenbayev, 1997).

b) The respondents are 15-year-old ninth grade students of state and private schools in the city of Almaty. By this age, self-identity, professional orientation, training in the basic sciences, and the formation interpersonal and interethnic communication shoule have been completed (The Law of the Republic of Kazakhstan, "On Education," dated 05.05.2017). At this stage of education, it is important to determine the status of the knowledge and skills that can be useful to students in the future, as well as to evaluate the students' ability to independently acquire knowledge necessary for successful adaptation to the contemporary world.

c) For the survey, seven secondary public and private schools in the city of Almaty were selected: two were state schools located in the center, two were state schools located on the bottom edge of the city, and three were private schools. All schools offer educational services in several languages. It is worth noting that Kazakhstan has created a system of state support of languages for ethnic groups living in Kazakhstan, which allows obtaining the basic secondary education, by choice, in either Kazakh, the state language, Russian, or in the languages of ethnic groups. Along with schools with instruction in Uzbek (58 schools), Uighur (14 schools), and Tajik (2 schools), there are schools of a mixed variety, which have classes with different languages of instruction, for example, Kazakh/Russian, Kazakh/ethnic, or Russian/ethnic. In addition, private schools offer optional education for all or some of the school subjects in English, so

there were schools with Kazakh/English and Russian/English as the languages of instruction. As such, 2097 secondary schools out of 7516 in Kazakhstan have mixed-language instruction. But, regardless of the language of instruction, all students in Kazakh schools learn Kazakh and Russian languages from the first grade, and English is taught from the fifth grade. In September, 2013, English started to be taught in Kazakhstani secondary schools as well (Government of Kazakhstan, 2012).

d) The next criterion for selecting schools for the study is ownership. The state secondary schools are financed from the national budget, but the private schools are financed from parents. Both kinds must comply with the basic constitutional and educational standards of the Republic of Kazakhstan, for example, providing 11 years of education from primary to secondary schools. However, the state/private disctinction is of key importance for the research because a greater coverage of the respondents belonging to different social strata and with different language and reading habits were achieved by including private and state sector students.

The sampling included 4 of 195 public schools, boarding schools, vocational schools and high schools, as well as the 3 of 43 private schools in the city. To ensure representativeness on the grounds of social zoning, two central-city public schools, two public schools situated in the lower suburb of the city, and three private schools, located in the center or on the upper edge of the city, were selected.

The dependent variables were the levels of reading literacy in Kazakh, Russian, and English as defined by the Common European Framework of References for Languages (CEFR) (CEFR, 1971). The following independent variables were examined as predictors of the dependent variables: the socio-economic status of the respondents; the location and types (private or state) of schools; the education level, income, and economic activity of the students' parents; and the indicators of cultural capital (i.e., reading habits, the number of books in home libraries, and the frequency of travelling to other countries). A total of 75 correlations were analyzed.

To investigate the relationships between variables, four parameters were used: 1) Pearson's linear correlation coefficient (chi-square), 2) p-values, 3) comparing the expected with the obtained results, and 4) the median values.

Results

The results of the study demonstrate that the Chi-square level of reading literacy in the Kazakh language and the location and the types (private and state) of school was $\chi2 = 92.451$ (Table 1). The Chi-square level of reading literacy in Russian and the location and the types (private and state) of school was $\chi2 = 205.232$ (Table 2). The chi-square level of reading literacy in English and the types (private and state) of school is $\chi2 = 263.075$ (Table 3). Sufficiently large and positive numbers of the chi-squared in the given correlations indicate a high degree of positive linear correlation between the variables.

TABLE 1
Correlation: Location and Type of Schools / Reading Literacy in the Kazakh Language

		Reading literacy in the Kazakh language							Total
		Missed	A1	A2	B1	B2	C1	C2	
State schools situated in the lower suburb of the city	Obtained	3	33	25	34	16	12	0	123
	Expected	1.2	15.3	14.9	33.1	29.8	21.5	7.0	123.0
State schools situated in the center of the city	Obtained	0	3	7	28	30	18	14	100
	Expected	1.0	12.5	12.1	26.9	24.2	17.5	5.7	100.0
Private schools	Obtained	0	1	4	18	26	22	3	74
	Expected	.7	9.2	9.0	19.9	17.9	13.0	4.2	74.0
Total	Obtained	3	37	36	80	72	52	17	297
	Expected	3.0	37.0	36.0	80.0	72.0	52.0	17.0	297.0

Chi-Squared: $\chi2 = 92.451$; df = 12; α (2-tailed) < .001

TABLE 2
Correlation: Location and Type of Schools / Reading Literacy in the Russian Language

		Reading literacy in the Russian language							Total
		Missed	A1	A2	B1	B2	C1	C2	
State schools situated in the lower suburb of the city	Obtained	13	49	28	19	12	1	1	123
	Expected	5.4	22.4	14.5	25.3	29.4	19.5	6.6	123.0
State schools situated in the center of the city	Obtained	0	5	7	31	40	16	1	100
	Expected	4.4	18.2	11.8	20.5	23.9	15.8	5.4	100.0
Private schools	Obtained	0	0	0	11	19	30	14	74
	Expected	3.2	13.5	8.7	15.2	17.7	11.7	4.0	74.0
Total	Obtained	13	54	35	61	71	47	16	297
	Expected	13.0	54.0	35.0	61.0	71.0	47.0	16.0	297.0

Chi-Squared: $\chi 2 = 205.232$; $df = 12$; α (2-tailed) $< .001$

TABLE 3
Correlation: Location and Type of Schools / Reading Literacy in the English Language

		Reading literacy in the English language							Total
		Missed	A1	A2	B1	B2	C1	C2	
State schools situated in the lower suburb of the city	Obtained	63	50	10	0	0	0	0	123
	Expected	26.9	30.6	13.7	31.9	10.8	7.5	1.7	123.0
State schools situated in the center of the city	Obtained	2	24	19	45	9	1	0	100
	Expected	21.9	24.9	11.1	25.9	8.8	6.1	1.3	100.0
Private schools	Obtained	0	0	4	32	17	17	4	74
	Expected	16.2	18.4	8.2	19.2	6.5	4.5	1.0	74.0
Total	Obtained	65	74	33	77	26	18	4	297
	Expected	65.0	74.0	33.0	77.0	26.0	18.0	4.0	297.0

Chi-Squared: $\chi 2 = 263.075$; $df = 12$; α (2-tailed) $< .001$

Since p-values of ≤ 0.5 are often used as a criterion for establishing statistical significance of two variables (Brown, Amos, Mink, 1975; Wasserman, 2004), in this case, it can be argued the p-values of $\alpha < 0.001$, as indicated in Tables 1, 2, and 3, indicates strong positive correlational differences between the reading literacy in all three languages and the location and the types (private and state) of school. This influence is also evident in the fact that the expected and the obtained results were not the same; the higher the difference between them is, the more influence the variables have on each other. These data show the plausibility and validity of the statistical analysis.

In the analysis, an obtained value means the number of respondents to an item, which is indicated by the top value in the tables above. For example, in Table 2, the results of 19 public school students situated at the lower edge of the city correspond to the B1 level on reading literacy in Russian. The expected value refers to the number of respondents that would be expected if the results were evenly distributed. For example, in the case of an even distribution of the results, we would expect 25.3 of the respondents to have a B1 level in reading literacy in Russian. The total category at the bottom tabulates the sum of the respondents in each column. For example, the total number of respondents in all schools with C1-level reading literacy in Russian is 47.

A comparison of median levels of reading literacy in the three languages by schools gives a more complete picture of the state of reading literacy among respondents. Table 4 below illustrates that the highest result of reading literacy in the Kazakh language belongs to the students of central-city state schools (4.7) and the students of private schools (4.7). Students in the state schools in the lower suburb had slightly lower (4.07) Kazakh literacy scores. For reading literacy in Russian, the students of private schools demonstrated the highest results (5.6), with the lowest belonging to students of state schools in the lower suburb (1.9). For reading literacy in English, the highest scores belong to the students of private

schools (4.3). Studetns of state school students in the lower suburb had a meadian score of 0.

Thus, private school students showed good results in the Russian and English languages. The scores of students of central-city state schools showed the highest reading literacy in Kazakh. Students of schools situated in the lower suburb of the city were behind in reading literacy in all three languages studied.

TABLE 4
Distribution of median of reading literacy by schools

	Median reading literacy in Kazakh	Median reading literacy in Russian	Median reading literacy in English
Avarage median (all schools)	4.4	4.9	4.6
State schools (lower suburb)	4.07	1.9	0.0
State schools (city center)	4.7	4.5	3.7
Private schools	4.7	5.6	4.3

Discussion

As a result of the analysis, we can say with confidence that the correlation between reading literacy and the types (private and state) and locations of the school is linear and positive. The private schools and the state schools located in prestigious areas showed higher levels of reading literacy among their students.

The likeliest reason for this is that families living in or sending their children to the more prestigious schools were more highly educated and had more financial resources to support their children than families from the lower suburb. Financial opportunities of parents generally determine the location and place of residence and thus the location and type of school. Factors such as the safer areas of the schools, fewer students in classes, additional services (meals, after-school clubs, self-study hours, etc.), and a sense of belonging to the elite society likely also influence the differences found. The children of more disadvantaged families go to the nearest school to their home and usually have far fewer opportunities for extra-curricular activities or tutelage. Accordingly, the children of this group, in most cases, are more likely to fall behind in academic performance.

Secondly, not all parents have enough time for useful and informative pastimes with their children due to heavy workloads or simply a lack of initiative. Parents who work long hours, often in difficult working conditions with lower wages have, fewer opportunities to spend time with their children. Parents who have financial and material resources (e.g., for caretakers at home, private lessons at home, etc.) are able to compensate for any lack of parental attention.

Thirdly, the uneven distribution of technology and resources in the respective areas creates different educational and recreational environments. Despite the fact that all public schools receive the same funding for computerization and equipping school libraries, not all school libraries and other information resources can meet the growing demand of the information-age generation. The current era is closely connected with and dependent on technology. The more well-off families in the wealthier areas are also able to provide their children with more technological devices and opportunities to use them than the families in lower socioeconomic areas.

Conclusion

The study revealed a complex yet consistent picture of the relationship between socio-economic inequality and the level of reading literacy. Social and economic inequality has both current and

prolonged effects on the whole educational process. Differences in the social and economic situation form unequal starting opportunities for education, such as was shown in the current study with the development of reading skills in Kazakh, Russian, and English.

However, a limitation of this study is that the sample is small, including only a few schools in Almaty. Therefore, this study is considered as a preliminary attempt to develop a methodology to examine the question of socioeconomics and its influence on literacy. Having been shown to be effective, this method could be expanded to a larger national and more representative sample in Kazakhstan.

This study demonstrated that the relationship of reading literacy and socioeconomic stratification of the population is a multifaceted social and historical phenomenon, requiring careful examination from the standpoint of sociolinguistics.

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