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DEVELOPMENT AND CHALLENGES OF STANDARDIZED TESTING IN KAZAKHSTAN: TRANSITION FROM NATIONAL TO INTERNATIONAL STANDARDS

This article attempts to study the recent changes in standardized testing in Kazakhstan in recent years. This research aimed to analyze the national assessment policy, focusing on the building and challenges of the Unified National Test (UNT), the large-scale high-stakes examination from 2004 to the present. The study of the UNT data with geographical (urban and rural schools) and lingual (Kazakh and Russian schools) variables used statistical and comparative approaches in 2014, 2017, and 2020. An analysis of UNT results showed that changes to standardized testing in 2017 affected results in 2020, mainly in Kazakh-language schools in urban areas. The study's results demonstrated that language significantly differed more significantly in rural than urban areas. In other words, rural areas affect Kazakh schools more than Russian ones in the considered years. These inconsistent findings can probably be explained by changes in the education policy regarding the UNT's concept and its implementation started in 2017 when the UNT was transformed according to international standards of examination as the Program of International Student Assessment (PISA) and Scholastic Assessment Test (SAT).

Keywords: school-based assessment, large-scale assessment, student evaluation, national assessment policy, quantitative analysis.

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Қазақстандағы стандартталған тестілеудің қиындықтары мен дамуы: ұлттықтан халықаралық стандартқа өту

Бұл мақалада соңғы жылдары Қазақстандағы стандартталған тестілеудегі өзгерістер мен дамуындағы зерттеу нәтижелері ұсынылады. Орын алған зерттеудің мақсаты – Ұлттық бірыңғай тестілеудің (ҰБТ) кешендік даму негізін бағалау саласындағы ұлттық саясатты зерттеу, яғни бұл емтихан жоғары деңгейде 2004 жылдан бастап осы уақытқа дейін кең ауқымда жүргізіліп келді. ҰБТ зерттеуде статистикалық және компаративтік тәсілдер пайдаланыла отырып, 2014, 2017 және 2020 жылдар аралығындағы географиялық (қала және ауыл мектептері) және тілге байланысты (қазақ және орыс мектептері) мәліметтердің негізінде зерделенді. ҰБТ нәтижелерін талдау 2017 жылы стандартталған тестілеуге енгізілген өзгерістер негізінен қаладағы қазақ тілді мектептерде 2020 жылғы нәтижелерге әсер еткенін көрсетті. Зерттеудің нәтижесі көрсеткендей, қаламен салыстырғанда ауылдық жерлерде тіл айтарлықтай маңызға ие болды, басқаша айтқанда, ауылдық жерлердегі қазақ мектептері орыс мектептеріне қарағанда осы жылдарда басымдылық танытты. Осындай қарама-қарсы нәтижелер салыстырмалы түрде 2017 жылдан бастап жүзеге асқан ҰБТ ның білім беру жүйесіндегі өзгерістермен түсіндіріледі, яғни ҰБТ батыстың жоғары сыныптарды бағалау бағдарламасы негізінде орын алған PISA және SAT тәрізді халықаралық тестілеу стандартына өтуге байланысты айтарлықтай өзгеріске ие болуы мүмкін.

Түйін сөздер: мектепті бағалау, кең ауқымда бағалау, мектеп түлектерін бағалау, бағалаудағы ұлттық саясат, сандық талдау.

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Развитие и вызовы стандартизированного тестирования в Казахстане: переход от национальных стандартов к международным

Статья представляет собой попытку изучить развитие и изменения стандартизированного тестирования в Казахстане за последние годы. Целью данного исследования является изучение

национальной политики в области оценивания на основе комплексного развития Единого национального тестирования (ЕНТ), который является крупномасштабным экзаменом с высокими ставками с 2004 года по настоящее время. ЕНТ изучалось на основе географических (городских и сельских школ) и языковых (казахских и русских школ) данных с использованием статистических и компаративных подходов в 2014, 2017 и 2020 годах. Результаты исследования показали, что в сельской местности язык имел более существенное значение, чем в городской, или, другими словами, можно сказать, что сельская местность в данные годы больше влияла на казахские школы по сравнению с русскими. Возможно, такие противоречивые выводы объясняются изменениями в образовательной политике относительно ЕНТ и началом ее реализации в 2017 году, когда ЕНТ претерпело существенные изменения в связи с переходом на международные стандарты тестирования на основе западных программ оценивания знаний старшеклассников, таких как PISA и SAT.

Ключевые слова: школьное оценивание, крупномасштабное оценивание, оценивание выпускников школ, национальная политика оценивания, количественный анализ.

Introduction

After the Soviet collapse, Kazakhstan encountered to build its educational policy with a nationally standardized test system. More than a decade from 1991, Kazakhstan followed the Soviet standards of assessment for school and university graduation when students took examinations, mostly in various oral memorizing forms. The new standards of school testing were designed for students in the mid-2000s. Unified National Testing (UNT) was introduced in 2004 to assess and certify the complex knowledge of school graduates for further acceptance to higher education institutions in Kazakhstan. From 2004 to the present time, the UNT format was changed between 120-140 scores within the number of subjects which was increased from four to five, including three compulsory subjects, History, Mathematics, and Reading, and two specific ones depending on student's choice of educational programs at universities.

Since 2017 the UNT has included items of functional PISA tests (Program of International Student Assessment) such as reading and mathematical literacy. According to the Ministry, such changes reduced corruption and replaced memorizing items with functional literacy among students. It should also be noted that from 2018 the English language was included in the UNT to the Kazakh and Russian test languages. In 2020 Ministry of Education and Science decided to continue integrating the UNT with international assessment policies such as PISA and SAT (Scholastic Assessment Test) (Vlast, 2020) [1].

The National Testing Center (NTC), which has organized and managed the UNT procedures in Kazakhstan, provides information on its official website on admission examinations with limited data on graduates' average scores in urban and rural areas,

and subjects of examination in 2014-2020. In comparison, PISA includes such information as gender, social class, parental education and involvement, and teacher support that also affect educational assessment among students worldwide. Overall, the UNT data from 2014 to 2020 available on the NTC website differs from year to year, and it is not structurally unified, making its analysis complicated to compare with PISA standardized data.

In 2004-2016 more than two million pupils graduated from schools in Kazakhstan, but 23.2% did not take the UNT, and around every fifth student did not pass the entry scores (45-50). The number of graduates from Russian schools was reduced significantly by almost 70% for those 13 years. Urban school pupils got, on average, eight points higher than their peers from rural schools. Students from Almaty (the former capital of Kazakhstan) and Nur-Sultan (the present capital of the country) had higher scores in comparison with graduates from the peripheries, particularly from some Southern and Western oblasts (Kazakhstanskaya Pravda, 2017) [2].

The growth of the Kazakh population and migration processes followed by changing positions of Kazakh and Russian languages from the 2000s in Kazakhstan. Kazakh schools have been increasing throughout the country, particularly in rural areas, while most Russian schools were urban for the two decades of the 21st century. By 2020, three-quarters of graduates took the UNT in Kazakh, and more than 23% of students took the final examination in Russian.

Generally, the UNT data from 2004 to 2016 demonstrated considerable biases and evident educational regional inequality when examinations were primarily focused on control over students and preparation for testing last years at schools. Such a stressful situation reduced pupils' motivation when

significant parts did not go to the UNT and did not pass entry requirements. According to the Ministry of Education and Science of Kazakhstan, the average number of UNT participants was 76.0% from 2004 to 2016 (Irsaliyev, 2017: 160) [3]. In other words, nearly a quarter of students did not take a final examination for 13 years, and almost every third did not participate in the UNT in 2013-2016.

Despite limited and unstructured UNT data, this study aims to analyze the students' performance from Kazakh and Russian schools of urban and rural areas in 2014, 2017, and 2020 respectively. Differences between urban and rural education imply educational inequality, where most rural students had lower outcomes than their peers in cities. Developing and developed countries impacted issues of rural educational disadvantage characterized by inequalities in educational outcomes and inequalities related to educational opportunities and experiences at schools (Sullivan, 2018: 1-2) [4]. Additionally, differences between urban and rural education demonstrate inequality in students' socioeconomic status (SES), parental involvement, and parental education (Ramos, 2016: 380-381) [5].

Around half of the developed countries that participated in PISA had no differences in urban and rural education that can be explained economically and equal educational infrastructures in both areas. However, some countries of the Organization for Economic Cooperation and Development (OECD) demonstrated educational inequality in urban and rural schools measured about 0.5 years. For instance, Australia represented considerable urban-rural achievement gaps, according to PISA 2013, where rural students seldom completed secondary education and entered universities to compare with their urban peers (Sullivan, 2018: 2) [4].

Sometimes, urban and rural differentiation does not affect all students similarly. For another instance, the data from PISA 2003 showed that rural female students in Iceland had higher scores in Mathematics and intended to go to college more than males (Steinthorsdottir, 2008: 596-598) [6]. Generally, the PISA approach helps compare, evaluate, and reconsider national educational policies to identify and build more effective strategies to resolve and improve educational systems in developing and developed countries worldwide (Baird, 2011: 3-5) [7]. Alongside, the participation of Kazakhstan in PISA from 2009 resulted in reforming the UNT format to the present time, including PISA's core subjects as

Reading and Mathematical literacy and the English language to Kazakh and Russian as the languages of testing. This paper intends to analyze differences in urban and rural schools with Kazakh and Russian languages of instruction using the UNT data in 2014, 2017, and 2020 to consider the main issues for recent years.

If the rural population of OECD-developed countries decreased twice from 45% in the 1950s to 22% in 2018, the rural population in Kazakhstan in 2000-2018 was 42-45% compared with 65% in the 1950s (Echazarra, 2019: 11) [8]. So, studying differences in educational achievement in the urban and rural areas and the languages of instruction (Kazakh and Russian) is significant in comparing students' performance in the UNT from 2014 to 2020. This study analyzes the UNT transformation from the Soviet educational tradition of factual knowledge to the current international standards based on building higher-order competencies required for contemporary economies and societies. From a quantitative approach, this research on the UNT attempts to analyze the changes in the national assessment through the available area and language data in 2014, 2017, and 2020.

Data and method

The present research is aimed to compare the UNT data in 2014, 2017, and 2020 in Kazakh and Russian schools of urban and rural areas in Kazakhstan. According to the OECD's standards, the urban area has more than 100 000 residents, and the rural one has less than 3000 inhabitants. In Kazakhstan, the urban area is related to a territory with more than 10 000 residents, and the rural area also has a population of under 3000 people. The moderate population can explain the difference in urban areas of the OECD countries. Kazakhstan reached 19 million in 2021 Kazakhstan, and a relatively high proportion of the rural population compared with the OECD countries (42-45% in 2000-2018 in Kazakhstan and 22% in OECD countries in 2018).

Though the UNT has been changing content from year to year, complicating its reliable comparisons over time (OECD 2020), this study attempts to eliminate the gap in UNT analysis. The UNT data was retrieved from the National Testing Center (NTC) website (testcenter.kz), where UNT data are available from 2014 to 2020. Data from the selected years represent the following items:

Table 1 – UNT data on years

	2014	2017	2020
Area	urban/rural	urban/rural	urban/rural
Language	Kazakh/Russian	Kazakh/Russian	Kazakh/Russian/English-Kazakh/ English-Russian
Score	125	140	140
Subject	16	-	17

Data collection techniques of this study include comparative analysis of statistical data on UNT in

2014, 2017, and 2020 covering graduates from Kazakh and Russian schools in urban and rural areas:

Table 2 – UNT data on areas and languages

	Urban	Rural	Kazakh	Russian	English-Kazakh	English-Russian	Total
2014	43 675 (49.9%)	43 889 (50.1%)	61 654 (70.4%)	25 910 (29.6%)	-	-	87 564 (100%)
2017	46 913 (53.0%)	41 670 (47.0%)	67 616 (76.3%)	20 967 (23.7%)	-	-	88 583 (100%)
2020	56 875 (53.85%)	48 750 (46.15%)	80 086 (75.8%)	25 365 (24.0%)	108 (0.10%)	66 (0.06%)	105 625 (100%)

Considering how the UNT data differed in 2014, 2017, and 2020, the area and language items were selected for the quantitative analysis. The English language was introduced to UNT in 2018 and excluded from this study. Generally, the available UNT data changed structurally for seven years, complicating its more extensive analysis and interpretations.

Literature review

Evaluation and assessment are institutional policy levels of educational improvement. To consider the development of the UNT in Kazakhstan, it is assumed that the national assessment impacted numerous challenges when almost every fourth school graduate did not take the final exam, and around every fifth one did not pass basic requirements on testing in 2004-2016. In addition, the UNT design changed from year to year, complicating reliable comparative studies over time (OECD, 2020: 13-15) [9].

There are two theoretical approaches to studying national assessment policy development in Kazakhstan: the first perspective considers educational assessment in international studies and how it is applied to Kazakhstan's case; the second perspective focuses on standardized testing on global and local levels.

Educational assessment is a well-recognized field of research, and practical implementation requires various skills to test designs and analyze statistical data of scores. Governments use assessment

standards to evaluate educational outcomes to build policies for educational institutions. Policymakers consider assessment outcomes to measure national educational achievement to guarantee the population's competitiveness from a global perspective. In the knowledge economy, it is essential to realize that an educated population is key for successful economic development, and governments should improve their educational system's quality and outcomes. Designing educational policy's objectives covers rates of students, teachers, localities, regions, and nations (Isaacs, 2013: 18-20) [10].

Unified National Testing (UNT) is a high-stakes and complex assessment of graduate students who apply for educational grants to study at universities in Kazakhstan. This test consists of five subjects and is counted off 140 scores to 2021. Educational assessment consists of various processes during studies. Usually, it means a final assessment, as formal examinations are limited in time (Inglis, 2008: 17) [11].

There are limited data and studies on standardized testing, such as the UNT in Kazakhstan. However, national assessment tests are essential for studying student advantages and disadvantages, student achievement, teaching issues, and learning to improve educational policy. As a rule, UNT issues are audited administratively when the examination results are considered to control educational performance and as part of the school's and teacher's reassessment (OECD, 2020: 18) [9].

Standardized testing is considered an objective and large-scale evaluation method controlled by social and political organizations (Phelps, 2008: 1-3) [12]. The testing goals include measuring student skills and progress, improving instruction, and achieving higher standards by students. In the USA, the new era of testing began with the No Child Left Behind Act (NCLB) in 2002 (Wright, 2008: 23) [13], which introduced standard-based accountability, standards for basic subjects (reading, mathematics, and science), performance levels (primary, proficient, and advanced), and adequate yearly progress in identifying educational problems (Zucker, 2003: 2-4) [14]. Practical standardized tests are reliable, valid, and unbiased.

According to the OECD report, the UNT reliability is high, but its validity requires long-standing concerns, including a new competency-based curriculum and new item types such as critical thinking and problem-solving questions. Additionally, to improve the validity of the national examination, it is required to include open-ended items, but it should be developed and introduced gradually (OECD, 2020: 14-15) [9].

From 2004-2016 around a quarter of school students did not take the UNT, while nearly 20 percent of graduates could not receive 45-50 scores to pass the basic requirements test (Kazakhstanskaya Pravda, 2017) [2]. American scholars studied the opt-out movement in the USA in 2016 when parents refused their graduated children to take the final school examination. The research was conducted online through social media and studied the movement's activists' structure, reasons, and motivations. If a typical American opt-out activist was depicted in detail (class, income, education, race, family, and political status), parents and graduates who refused to take UNT in Kazakhstan were unknown. Kazakh media described them as low-performance students (Botaiuly, 2015) [15] or graduates who intended to study abroad (Kai-pova, 2016) [16]. In other words, according to officials and media, opt-out graduates in Kazakhstan represent the two opposite types of students who are low and highly motivated to get higher education. These characteristics of refused students and parents are probably lacking and imbalanced, requiring more focused inquiries in the future.

Studies on standardized tests focused, for instance, on scores' improvement of subjects and tutoring. In Indonesia, the standardized test policy for English subjects concerns students' perception, and it is also vital in improving schoolteachers, principals, parents, and policymakers (Mukminin, 2017: 205-

206) [17]. Other research in the USA revealed that effective tutoring programs significantly improved eighth-grade students' performance in language and mathematics. Relationships among students, teachers, school administration, community, and caring educators improved scores and students' success in standardized testing (Rothman, 2011: 7-9) [18]. In Kazakhstan, low-performance students are ignored in UNT results (OECD, 2020: 13) [9], and appropriate studies should reduce this gap to reveal features and issues of these students to improve their performance.

The national system of education quality evaluation in Kazakhstan includes the internal standardized test such as Unified National Testing (UNT), External Assessment of Educational Achievement (EAEA), licensing and attestation from 2004, and the international tests – Trends in International Mathematics and Science Study (TIMSS), Program of International Student Assessment (PISA), Progress in International Reading Literacy Study (PIRLS), and International Computer and Information Literacy Study (ICILS) – from 2007. Such a bilateral approach allows us to compare the results of the local and global assessment and to have considerably objective information to improve the educational system in Kazakhstan.

Despite thirty years after the Soviet collapse, educational assessment in Kazakhstan remains centralized and follows out-of-dated administrative procedures based on performance monitoring of the education system. School communities are responsible for student performance in the UNT results, while students' environments, such as family, gender, and socioeconomic status, are ignored to evaluate their advantages or disadvantages in the final examination.

In general, educational data in Kazakhstan must meet international standards with quality and proper accessibility and a more robust understanding of evaluation and assessment instruments as tools for further improvement (OECD, 2018: 6-7) [19]. It is also required to develop teaching leadership and involve educational management in decision-making processes for national examinations and assessments (OECD, 2020: 30) [9].

Results and discussion

To statistically analyze the UNT data in 2014, 2017, and 2020, a two-way between-groups analysis of variance was applied to assess the individual and combined effects of two independent variables (area and language) on one dependent variable (UNT results). This approach

also allows to examine of the main effect for each independent variable and explores the possibility of the interaction effect (Pallant, 2020: 288) [20] between Kazakh and Russian schools in urban and rural areas:

Table 3 – Main effects of language and area on UNT results in three years 2014, 2017, and 2020

YEAR	Source	df1	df2	F	Sig.	partial η^2
2014	language	1	31	10.202	.003	.248
	area	1	31	6.418	.017	.172
	language * area	1	31	3.785	.061	.109
2017	language	1	31	1.206	.281	.037
	area	1	31	1.129	.296	.035
	language * area	1	31	1.064	.310	.033
2020	language	1	31	5.021	.032	.136
	area	1	32	8.175	.007	.203
	language * area	1	32	3.270	.080	.093

Table 4 – Post hoc Sidak tests for area differences in both languages on UNT

YEAR	language	(I) area	(J) area	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference ^b	
							Lower Bound	Upper Bound
2014	Kazakh	rural	urban	-12.869*	4.959	.014	-22.984	-2.754
	Russian	rural	urban	-6.568*	3.175	.047	-13.044	-.091
2017	Kazakh	rural	urban	-1.247	5.435	.820	-12.332	9.838
	Russian	rural	urban	-6.109*	2.349	.014	-10.901	-1.317
2020	Kazakh	rural	urban	-6.111*	1.596	.001	-9.361	-2.861
	Russian	rural	urban	-3.248	2.016	.117	-7.354	.858

Table 5 – Post hoc Sidak tests for language differences in both areas on UNT

YEAR	area	(I) language	(J) language	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
							Lower Bound	Upper Bound
2014	rural	Kazakh	Russian	-8.323*	2.392	.002	-13.202	-3.445
	urban	Kazakh	Russian	-2.022	2.184	.362	-6.475	2.432
2017	rural	Kazakh	Russian	5.019	3.480	.159	-2.080	12.117
	urban	Kazakh	Russian	.157	3.177	.961	-6.323	6.637
2020	rural	Kazakh	Russian	-3.205*	1.119	.007	-5.486	-.925
	urban	Kazakh	Russian	-.342	1.119	.762	-2.623	1.938

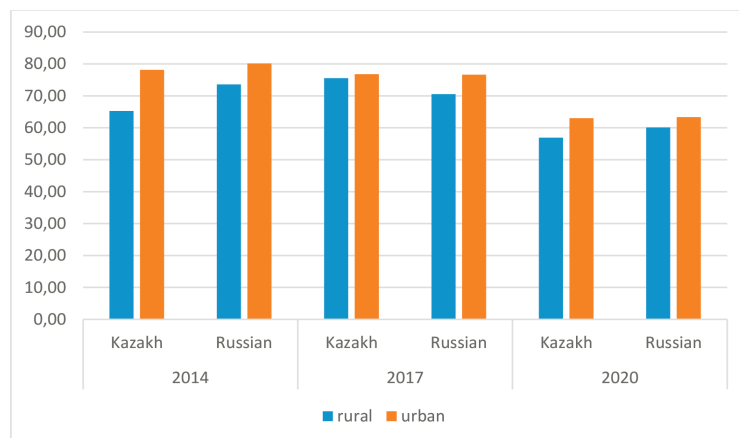


Figure 1 – Mean UNT results for both areas, languages, and all three years.

In 2014 urban schools demonstrated higher scores than rural schools in Kazakh and Russian languages, where the latter was better than the former but only in rural areas, while the two languages were similar in urban areas. In other words, Russian schools showed higher results than Kazakh schools in rural areas, while both languages were equal in urban schools. In 2017 urban schools had better results only in the Russian language than rural schools, while the Kazakh language was similar in urban and rural schools. At the same time, both languages were similar in urban and rural areas. The results changed significantly in 2020 when urban schools were better than rural ones only in Kazakh.

These results demonstrated that language made a more significant difference in rural than urban areas, and it seems that rural areas affected Kazakh schools more than in Russian. It is unclear what influenced these changes. Changes in the UNT's concept can probably explain these inconsistent findings. Its implementation started in 2017 when the UNT was divided into Final Attestation in Grade 11 and the examination to enter Kazakh universities. Furthermore, new item types, such as reading and mathematical literacy, were introduced in the UNT to improve functional literacy based on international standards such as PISA and SAT.

The other explanation concerns long-term social context when these changes – the relation between Kazakh and Russian language schools – require some time to become evident in the national assessment data to understand, analyze and interpret this kind of data. Whether or not these inconsistent and unsustainable trends should be explored in further studies. The UNT data from 2014 to 2020 demonstrated no differences between languages, except in Kazakh schools in 2020, but between urban-rural in the tables within-subject and between-subject effects. The pairwise comparison tables demonstrated that urban is better than rural in Russian and Kazakh schools.

This study revealed that more data is required to analyze the large-scale assessment in Kazakhstan. Data on areas and languages demonstrated how changes in education policy, particularly in 2017, affected the UNT results in 2020. According to the OECD report, to initiate assessment studies in Kazakhstan, it is required to publish a separate technical report with sampling design, scoring techniques, scaling, statistical analyses, and quality control on a dedicated website (OECD, 2020: 33-34) [9]. Furthermore, the UNT development from fact-based items to higher-order competencies such as inno-

vative thinking and problem-solving skills takes a long time and requires a gradual organizational period with the involvement of teaching communities, commissioning, and considering research based on international examples.

Urban students were also better performing than their rural peers considering international studies. For instance, the study of rural disadvantage using PISA 2009 explored lower outcomes in reading among rural students in Australia compared with Canada and New Zealand and less positive educational experiences. Another economic reason for public investments in rural education explained the differences between Australia and New Zealand in 2009 (Sullivan, 2018: 9) [4]. The qualitative research on female achievements in mathematics in rural Iceland after PISA 2003 revealed that parent involvement, peer pressure, the combination of study and sport, plans, and self-reflection resulted in better education among girls in rural areas (Steinthorsdottir, 2008: 599) [6].

The quantitative research on UNT in Kazakhstan in 2014, 2017, and 2020 explored those differences between urban and rural areas that are larger than between languages. Urban-rural gaps are explained by various PISA studies worldwide. Rural education is characterized by geographical distance, small population, low social-economic status, ethnic homogeneity, and socially cohesive communities. Only 30 percent of students from rural areas plan to go to universities compared with 50 percent of their urban peers. Various challenges interpret such gaps for rural students, such as lack of information, low socioeconomic profiles of schools, low educated parents and their support to children, and others. On the other hand, life satisfaction is higher among rural students than urban students (Echazarra, 2019: 16) [8].

PISA 2015 stated that reducing of urban-rural gap benefits higher academic performance and equity among the young generation while enhancing infrastructure has resulted in successful economic development worldwide (Echazarra, 2019: 9) [8]. The language effect is significant for countries with larger migrant flows and ethnic minorities where students have barriers to studying in another language environment. PISA 2009 showed that native-born students in Kazakhstan were around 80 percent, and the difference between actual and adjusted means in language equated to two, which implied low discrepancy (Soh, 2014: 10) [21].

Considering the UNT results on Kazakh-language and Russian-language schools in urban and

rural areas in 2014, 2017, and 2020, it seems that for thirty years after the Soviet collapse, relations between Kazakh and Russian schools changed significantly. Kazakhstan experienced the intensified russification process in the Soviet period when Russian dominated cities while Kazakh was primarily used in peripheries. Presently, the urban area with the growing infrastructure of Kazakh-language schools demonstrated better results in the UNT than rural schools. Nevertheless, PISA in Kazakhstan generally demonstrated higher results for Russian-language students than their peers from Kazakh-language schools. It is most probably required to study and evaluate the test languages in the UNT and PISA to understand these differences in the internal and external assessments.

Conclusion and further research

The comparison of the UNT data in 2014, 2017, and 2020 showed a contradictory trend when language significantly differed in rural than urban areas. The UNT data available since 2014 include limited variables for analysis, such as scores, urban-rural regions, Kazakh-Russian-English languages, and subjects. More detailed information on national assessment using international approaches (SES, gender, parental education and involvement, teacher support, and others) will be helpful in building a substantial policy to improve educational opportunities and experiences among students in urban and rural areas of Kazakhstan. Also, it will be beneficial to enhance the quality of education and student competitiveness and reduce educational inequality in cities and peripheries. As the international studies demonstrated, issues of rural areas were analyzed (Sullivan, 2018: 8-9) [4] and represented that some students were also successful in various subjects (Steinhorsdottir, 2008: 598) [6].

The UNT results revealed how changes in standardized testing in 2017 affected its results in 2020, mainly in Kazakh language schools in the urban area. These changes probably have a more prolonged effect that requires further studies on language issues in the large-scale examination. It is also vital to include socioeconomic status, gender, teacher, and parent involvement in further national assessment studies. Authorities should use international examinations for external evaluation of educational achievement and for initiating local research as in other countries that participated in PISA.

In 2021 the UNT continued modification of the standardized testing of Kazakhstan within PISA and SAT standards (Vlast, 2020) [1]. Students took the final examination electronically (Zakon, 2021) [22] for the first time after its introduction in 2004. The significant changes in the examination after the whole year of distance learning due to the COVID-19 pandemic impacted possible troubles with results, particularly for students from rural areas where digital infrastructure is undeveloped.

Presently, UNT experiences various challenges to meet international standards as designing and introducing new types of items on competency-based curriculum and criterion-based assessment. The UNT validity is lacking and requires developing critical thinking and problem-solving skills that take a long-standing concern. Reforming and transforming national assessment demand the involvement of stakeholders from government and local communities and increased studies.

The initiated study on the UNT in 2014, 2017, and 2020 demonstrated the effects of changes in assessment policy on the examinations' results in cities and peripheries of Kazakhstan. More accessible data (gender, SES, teacher support, parental education, and involvement) will enhance further studies on national assessment and improve building a sustainable educational policy to reduce education inequality in rural and urban areas and align the disbalance between Kazakh and Russian language schools.

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