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The potential of using museum podcasts for educational purposes for intercultural exchange

Digital technologies take museums beyond the academic framework and expand their capabilities in the educational sphere. Web 2.0 tools allow museums to target the current generation of young people as well as transfer the basic values of humanity to develop an all-sided, harmonious personality capable of lifelong education. Museum podcasting for educational purposes seems to be authentic intercultural content that helps to establish efficient intercultural communication between students from Kazakhstan and other countries, aimed at popularizing cultural heritage and promoting social inclusion and civic engagement. Eleven EFL students agreed to take part in recording five museum podcasts for educational purposes to improve listening and speaking skills, work on interactive student problems, and create a dialogic space that affords student-teacher agency. Student involvement resulted in the development of a meaningful strategy for creating educational museum podcasting, where each episode deals with the art-historical findings of the researchers from the Museum of Archeology and Ethnography of Buketov Karaganda University. We think that by using this digital content during curatorial hours, university teachers will help spread awareness of Central Kazakhstan's historical and cultural heritage among students and young people both domestically and abroad.

Keywords: museum podcast, educational purposes, intercultural communication, digital content, Central Kazakhstan, authentic.

Introduction

The issue of introducing ICT in Education into intercultural learning has long been of interest to scientists from different countries. A literature review shows that various digital tools, such as online forums in 2017 [1-2], social media and simultaneous translation technology (SELT) in 2018 [3-4], unmanned aerial vehicles (UAVs) in 2019 [5], etc., were applied for establishing intercultural exchange and creating authentic intercultural content. However, the above-mentioned technologies did not make an authentic intercultural environment a practical reality due to circumstances such as a lack of technical knowledge, time, finances, and resources. In this regard, the choice of the optimal technology for creating cultural and educational content with the involvement of students became a research question in this study. We decided to start museum-based educational podcasts as an attempt to connect intercultural communication and learning with direct student involvement in ICT use. Our choice was due to the following factors: (1) the development of online educational products by modern museums in order to target a youth audience [6]; (2) the ease of posting podcasts on YouTube, social media, and museum websites [7]; (3) the ability of podcasts to replace virtually museum audio tours [8]; minimal financial costs for creating an authentic product that increases motivation and positive attitude of learners [9], fostering students' listening skills [10], shaping critical thinking [11], and assisting in intercultural dialogue [12].

Experimental

Among the five museums of Buketov Karaganda University, we chose the Museum of Archeology and Ethnography because the interdisciplinary research conducted earlier in order to find new pedagogical technologies for the formation, preservation, and reproduction of traditional cultural values in the socio-cultural space showed the interest of the international community in the ancient nature, history, and archaeology of Kazakhstan as well as revealed a low awareness level of the unique historical and cultural heritage of the country among the younger generation [13].

The choice of topics for podcasts was based on the results of an anonymous survey aimed at identifying the degree of students' awareness of the cultural, natural, historical, and archaeological monuments of Central Kazakhstan. The survey involved 633 respondents (439 students with the Russian language of instruction and 194 students with the Kazakh language).

The researchers involved in the study thoroughly analyzed the data gathered and discussed it to exclude any biased opinions that would impact the research results.

In cooperation with the specialists of the museum of archeology and ethnography of the Saryarka Archaeological Institute, we selected relevant scientific information from approximately 150 relevant papers for five podcasts with transcripts, written in Russian and, then, translated into Kazakh and English. The English version of the transcript was supposed to be used for podcast recording and was thus proofread by an American native speaker. To create the podcast transcript, we relied on the experience of Canadian scientists from the Ontario Tech University, who identified four key categories of a podcast: (1) developing a context with components such as background information and key points; (2) providing effective explanation by breaking each podcast into small segments; (3) minimizing cognitive load with components such as readability, key information, layout, and highlighting; and (4) the involvement of students to foster their socio-cultural and communication skills along with the skills of presentation and media literacy [14]. We used the Anchor Spotify program (<https://anchor.fm/>) to record the podcasts and upload them to international podcast platforms. Eleven first-year students of shorter full-time tertiary education in theory and practice of translation department foreign language faculty of Buketov Karaganda University (6 people with Kazakh language of instruction, 5 with Russian language of instruction) agreed to take part in developing and recording podcasts to improve their spoken English and listening skills for their future career as translators.

Results and Discussion

The distribution of students throughout twelve faculties of the University were the following (Fig. 1).

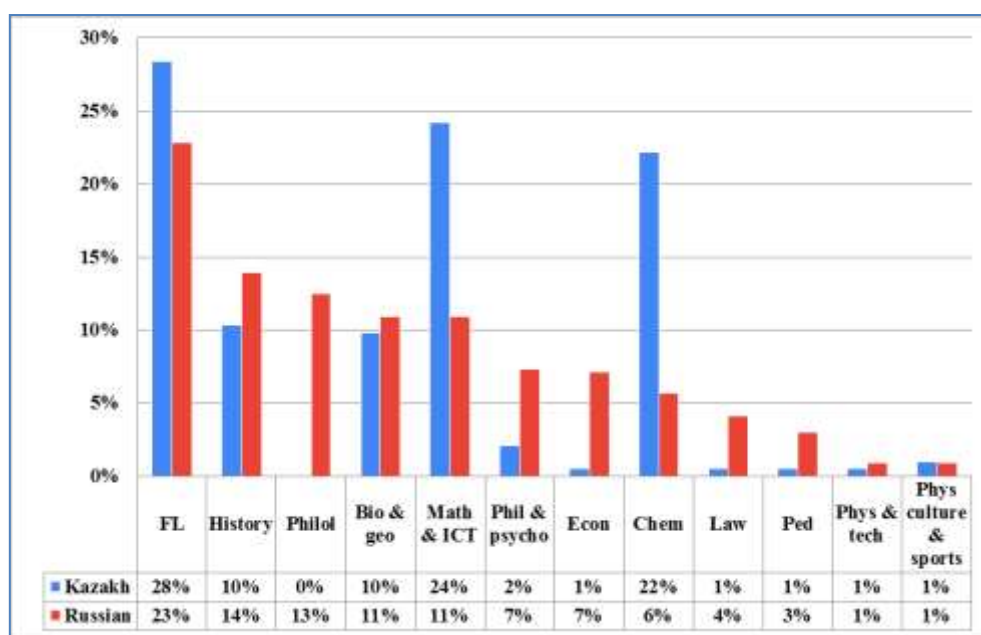


Figure 1. The distribution of students throughout twelve faculties of Buketov Karaganda University

The number of students who would prefer to find various historical and cultural information about their countries on podcast platforms was not quite high; two faculties (Physics & Technology and Physical Culture & Sports) were not represented at all (Fig. 2).

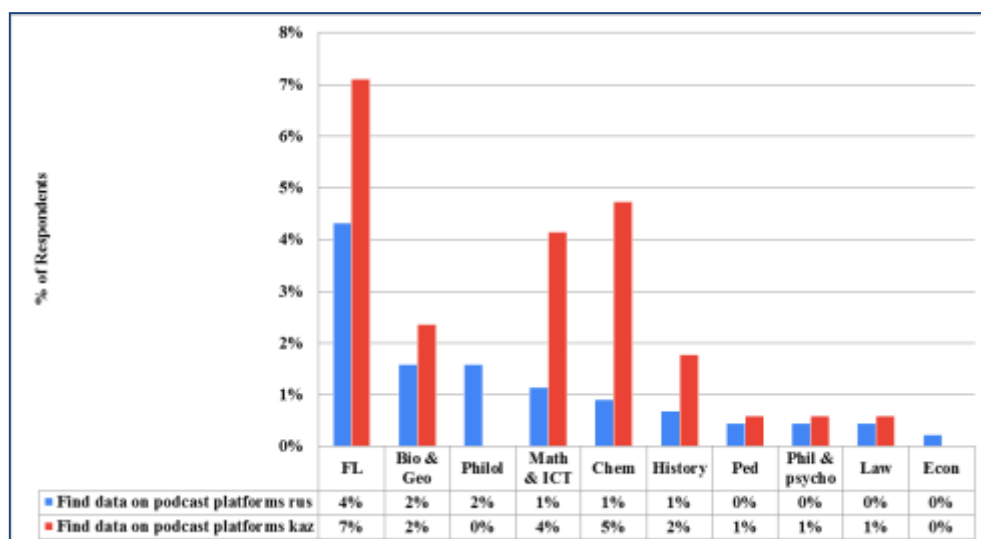


Figure 2. Students, who prefer to find information about their country on podcast platforms

Such results proved the findings of one of the latest reviews on ICT in intercultural learning, where podcasts were related to the least frequently used technologies among students [5]. In our case, only 29 % of students ($n = 185$) chose podcasts as a means to popularize their homeland (Fig. 3). Also, only 8 % of learners ($n = 55$) demonstrated a desire to record an educational podcast as a contribution to their home country's popularization (Fig. 4).

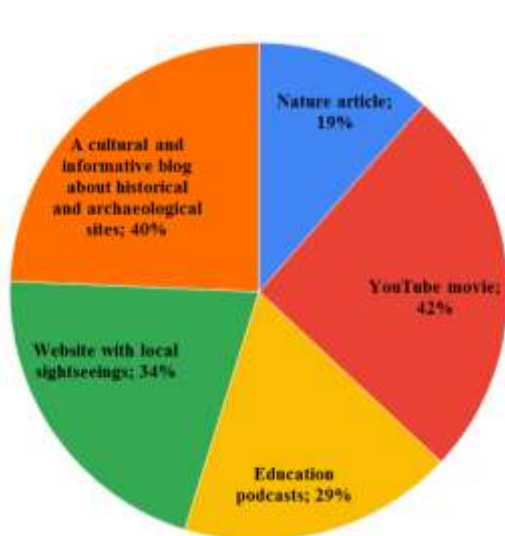


Figure 3. Students' preferences regarding the choice of the tool to popularize their homeland

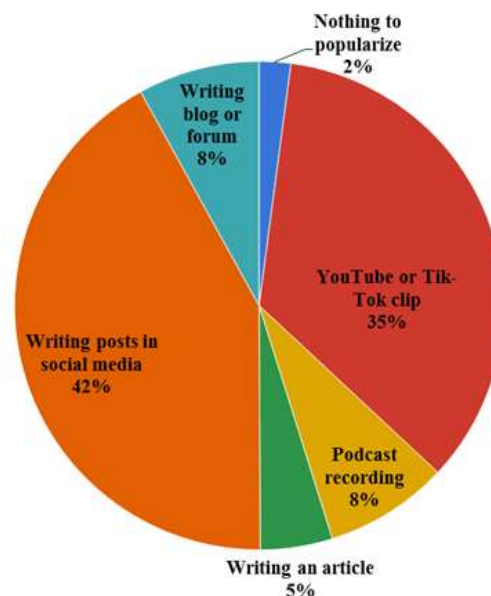


Figure 4. Students' possible contribution to their motherland popularization

However, when we asked our respondents what product, in their opinion, could be introduced to the educational process of the University to form a harmoniously developed personality combining high proficiency, active citizenship, and adherence to cultural values, 15 % ($n = 141$) named museum podcasts for education purposes, whereas 35 % ($n = 322$) named virtual tours and visits to museums (Fig. 5). As we already know, museum podcasts are able to replace virtually all museum audio tours [8] and therefore are worth trying to be used as authentic material for intercultural exchange among learners in Kazakhstan and abroad. Moreover, the vast majority of our respondents ($n = 606$, 96 %) found the idea of creating museum podcasts for educational purposes and using them during curatorial hours effective (Fig. 6).

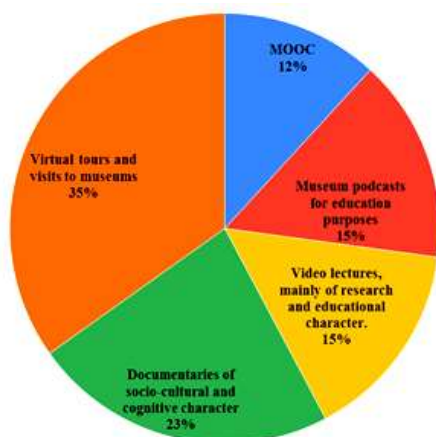


Figure 5. Students' suggestions on the product to introduce it to the educational process of the University to develop learners' active citizenship

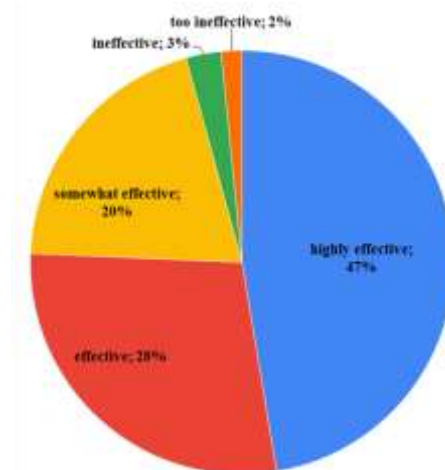


Figure 6. Students' opinions on the idea to create the museum podcasts for education purposes

The further processing of the results of the survey convinced us of the need to create authentic cultural and educational content to raise the awareness of student youth and their subsequent intercultural communication with representatives from other countries. The rationale for each of the five podcast topics can be seen in Table 1.

Table 1

Rationale for choosing the topics of the museum educational podcast

	Content area	Rationale
1	Karazhartas Pyramid: The Great Steppe History	Although information about the Karazhartas steppe pyramid is included in the book called "Astana: Architecture, Myth, and Destiny" by Frank Albo, Canadian professor, historian, and doctor of Cambridge University (https://e-history.kz/ru/news/show/5046/), 64 % of respondents (students and teachers of Buketov Karaganda University) know nothing about this archaeological discovery of 2016, under the guidance of Igor A. Kukushkin, candidate of historical sciences and leading researcher of the Saryarkaological Institute, who was directly involved in the excavations of the above-mentioned archaeological site.
2	Petroglyphs of Saryarka: The Mysteries of Bygone Civilizations	The petroglyphs of Tamgaly were included in the UNESCO World Heritage List in 2004. Similar monuments of rock art are located in the steppes of Saryarka, but only 1 % of respondents know about these petroglyphs.
3	Botai Culture of Kazakhstan: Taming Wild Horse	Popular information about taming a wild horse by the Eneolithic population of Northern Kazakhstan (5th–4 th millennium BC) circulates on the Internet (Kazakhstan sites). Scientific research refutes the fact of the primacy of Kazakhstan in taming a wild horse, which, however, does not detract from the impressive contribution of the Botai culture to world history, and we tried to tell you.
4	"Timur's Stone" at Altynshoky: Retracing the Great Warrior's Journey	64 % of the respondents had never heard of Timur's stone, located on the top of the Altynshoky hill, despite interdisciplinary studies of the ritual structure and the surrounding natural landscape initiated by Emma R. Usmanova, which have become a real scientific discovery, demonstrating the pages of the history of the Tamerlane era
5	Central Kazakhstan Folk Arts and Crafts: Bronze Age Ceramics	63 % of respondents were unaware of not only the process of making ancient ceramic vessels but also of the research of Valery G. Loman, head of the Saryarka Archaeological Institute and candidate in historical sciences, who revealed the secrets of the pottery technology of the tribes, lived in the 2 nd millennium BC, and whose scientific authority is confirmed by a large number of scientific publications in high-ranking journals.

The one-way analysis of variance (ANOVA) allowed to ensure that the factor of faculty influences on socio-cultural awareness of the students ($f = 139.55$; $p = 0.05$) (Table 2).

Table 2

Factor of faculty influences on students' socio-cultural knowledge

Factor Region	Count	Sum	Mean	Variance
Biology and geography	5	15.265	3.053	0.077133
Chemistry	5	12.234	2.4468	0.03765
Economic	5	4.915	0.983	0.004533
Foreign languages	5	12.4875	2.4975	0.003681
History	5	19.3	3.86	0.201438
Law	5	8.19	1.638	0.043908
Mathematics and information technology	5	10.655	2.131	0.056752
Pedagogical	5	18.27	3.654	0.00933
Philosophy and psychology	5	12.855	2.571	0.005918
Philology	5	5.805	1.161	0.011155
Physics and technology	5	4.625	0.925	0.0125
Physical culture and sports	5	4.625	0.925	0.004688
f=139.55; p=0.05				

This result did not surprise us because the faculties with the largest student population regarding learners' socio-cultural awareness involved either the described Project's researchers (Biology and Geography, Foreign Languages, and History) or scientists and teachers, who were used to working closely with the latter (Chemistry, Mathematics and Information Technology, and Philosophy and Psychology). Such findings ensured that building tight and productive multidisciplinary network connections is crucial, but discussing the results of scientific projects with students and researchers from other faculties is also necessary.

Student engagement in podcast recording did not facilitate the process but revealed the imperfection of all five transcripts in English. Three students found it difficult to understand podcast content, and one student determined some unnatural terms that were difficult to remember. All students insisted on improving the quality of the transcripts, simplifying the text's further comprehension, as well as correcting turn-taking behavior to shorten the inter-turn of speakers in the dialogues, thereby affirming that the mechanism of an "exchange of turns" is much more complex and needs to be addressed [15]. The students also drew our attention to the need for emotionality in the voice, a lack of monotony, and a smooth and well-paced speech, validating the conclusion that podcasts raise students' awareness of stress, chunking, slips, and false starts, but pre-intermediate learners might struggle with finding the right words or understanding what people are saying [16]. By ten votes to one, developing museum podcasts for educational purposes was found useful and informative for personal and professional growth, strengthening the findings of previous studies [9–12]. The student, who objected, explained that he was not interested in local attractions but would rather be attracted to listening or watching about world-class discoveries and sensations. Nevertheless, we became convinced of the need for engaging students in creating authentic cultural and educational material in order to make it understandable to the target audience.

Conclusions

We created five museum podcasts for educational purposes, where each episode deals with the art-historical findings of the researchers from the Museum of Archeology and Ethnography of Karaganda Buketov University, and located them on such international platforms as Google Podcasts, Stitcher, and Anchor by Spotify [17]. We also equipped all transcripts with vocabulary and key terms to simplify the process of listening to the episodes.

At the moment, we are in the process of developing exercises for the museum podcasts already recorded with the assistance of university students in order to use the prepared materials for intercultural exchange between the learners from Buketov Karaganda University in Kazakhstan and Nanjing Normal University in China for the new academic year. To be continued.

Acknowledgements

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Мәдени диалог жағдайында мұражайдың білім беру подкасттарын қолдану әлеуеті

Сандық технологиялар мұражайларды жаңа академиялық деңгейге шығарады, олардың білім беру мүмкіндіктерін кеңейтеді. Web 2.0 құралдары мұражайларға өскелең ұрпақты тартуға және сонымен бірге өмір бойы білім алуға қабілетті үйлесімді тұлғаны дамыту үшін гуманизмнің негізгі қағидаларын таратуға мүмкіндік береді. Мұражайдың білім беру подкасттары мәдени мұраны танымал ету және белсенді азаматтық ұстанымды қалыптастыру мақсатында қазақстандық студенттер мен олардың басқа елдердегі құрдастары арасындағы тиімді мәдениетаралық қарым-қатынасқа ықпал ететін шынайы мәдениетаралық мазмұнға айналуы мүмкін. Шетел тілдері факультетінің 11 студенті ағылшын тілінде тыңдау және сөйлеу дағдыларын жақсарту мақсатында және оқытушы мен студент арасындағы ынтымақтастық үшін диалог алаңын құру үшін мұражайдың бес білім беру подкасттарын жазуға ерікті болды. Студенттердің қатысуының нәтижесі мұражайдың бес білім беру подкасттарын құру стратегиясын әзірлеу болды, оның әрбір эпизодында академик Е.А. Бөкетов атындағы Қарағанды университетінің Археология және этнография мұражайының ғылыми қызметкерлерінің олжалары туралы айтылады. Кураторлық сағаттарда пайдалануға арналған біз жасаған цифрлық материал студенттердің Орталық Қазақстанның тарихи-мәдени мұрасы туралы хабардарлығын арттыруға және оны ел ішінде де, шетелде де танымал етуге елеулі үлес қосатынына сенімдіміз.

Кілт сөздер: мұражайлық подкаст, білім беру, мәдениетаралық коммуникация, сандық өнім, Орталық Қазақстан, түпнұсқа.

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Потенциал применения образовательных музейных подкастов в условиях диалога культур

Цифровые технологии выводят музеи на новый академический уровень, расширяя их возможности в образовательной сфере. Инструменты веб 2.0 позволяют музеям привлекать молодое поколение и одновременно транслировать базовые принципы гуманизма с целью развития гармоничной личности, способной к обучению в течение всей жизни. Образовательные музейные подкасты могут стать тем аутентичным межкультурным контентом, который способствует эффективному межкультурному общению между казахстанскими студентами и их сверстниками из других стран с целью популяризации культурного наследия и формирования активной гражданской позиции. Одиннадцать студентов факультета иностранных языков добровольно приняли участие в записи пяти образовательных музейных подкастов, чтобы улучшить навыки аудирования и говорения на английском языке и создать диалоговую площадку для сотрудничества между преподавателем и обучающимся. Результатом вовлечения студентов стала разработка стратегии для создания образовательных музейных подкастов, где в каждом эпизоде рассказывается о находках исследователей Музея археологии и этнографии Карагандинского университета имени академика Е.А. Букетова. Мы уверены, что созданный нами цифровой материал, предназначенный для использования на кураторских часах, внесет существенный вклад в повышение уровня осведомленности студентов об историко-культурном наследии Центрального Казахстана и в его популяризацию, как внутри страны, так и за ее пределами.

Ключевые слова: музейный подкаст, образовательный, межкультурная коммуникация, цифровой продукт, Центральный Казахстан, аутентичный.