

Promoting Digital Citizen Science for Humanities and Cultural Heritage: iesaisties.lv

Elīna GAILĪTE¹, Sanita REINSONE², Ilze ĻAKSA-TIMINSKA¹

¹Institute of Literature, Folklore and Art of the University of Latvia, Mūkusalas street 3, Rīga, Latvia

²University of Latvia, Faculty of Humanities, Raiņa blvd. 19, Rīga, Latvia

`elina.gailite@lulfmi.lv, sanita.reinsone@lu.lv,
ilze.laksa-timinska@lulfmi.lv`

ORCID 0000-0002-3448-992X, ORCID 0000-0003-1980-5450, ORCID 0000-0001-7213-4954

Abstract. This overview paper presents iesaisties.lv – a digital platform aimed at fostering public engagement in the humanities and arts through digital citizen science initiatives. Developed by the Institute of Literature, Folklore and Art of the University of Latvia, the platform serves as a nexus for collaborative research and community interaction, underpinned by the increasing global demand for open knowledge and information sharing in the digital humanities. This paper outlines the conceptual framework of iesaisties.lv, illustrating its potential impact on promoting participatory research methodologies and enhancing digital participation in the humanities and cultural heritage field.

Keywords: citizen science, digital participation, participatory methods, crowdsourcing, digital cultural heritage

1. Participatory research in digital humanities and cultural heritage

While citizen science has traditionally been more associated with the natural sciences, for the last decades, it is gaining traction within the humanities and cultural heritage studies. This trend is in line with the global science community's growing interest in open knowledge, as well as the accessibility and sharing of information and data. This shift towards participation in humanities is closely linked to advancements in digital humanities and the integration of technological innovations into the workflows of humanities and cultural heritage institutions (Hetland et al., 2020). Additionally, digital resources for humanities research and cultural heritage are increasingly incorporating features that promote participatory and community engagement thus evolving beyond serving mere for information retrieval and data collection. They hold significant potential to democratize the research process, augment user engagement, and establish users as active collaborators and partners in scholarly endeavors (Heinisch et al., 2021).

Over the past decade, there has been a substantial body of literature on participatory approach and crowdsourcing methodology within the fields of digital humanities and digital cultural heritage (see e.g., Dobрева, 2016; Oomen and Aroyo, 2011; Ridge, 2014; Terras, 2016; Hedges and Dunn, 2017; Navarrete, 2020).

A variety of topics has been explored, including the integration of participatory methods into the workflows of heritage institutions, (for example, Kaldeli et al., 2021) the diverse methodologies and techniques employed, the digital tools and technological capabilities available, and discussions on participant motivation and the agency and role of volunteers (for example, Ridge et al., 2021; Daugavietis, 2021; Alam and Campbell, 2017; Reinsone, 2020) in the creation and preservation of digital cultural heritage. These studies demonstrate that while digital citizen science initiatives, including crowdsourcing in the humanities and cultural heritage field do not always entail a largescale participant base – at times involving relatively small groups – they offer a plethora of advantages and opportunities. However, the successful implementation of digital citizen science and crowdsourcing initiatives in the cultural heritage field necessitates a substantial amount of preparatory work. This includes the establishment of effective communication channels, the development of strategies for participant engagement and coordination, and the provision of appropriate technological support. Despite already published insights, additional research and documentation are still necessary to better understand how to effectively establish long-term digital citizen science projects, ensure their continuity, strengthen researchers' ties with participants, and engage new target audiences.

2. Conceptual framework and design of *iesaisities.lv*

The *iesaisities.lv* (eng. *get engaged*) digital platform stands out as one of the most recognized citizen science projects in Latvia, in 2024 being awarded the European Union Prize for Citizen Science Honorary Mention, and it is a significant component of Latvia's citizen humanities and, more broadly, its citizen science landscape. Despite there have been several attempts aimed at bolstering the Latvian citizen science community, including the first interdisciplinary conference “Citizen Science in Latvia”¹ in 2024 and the launch of a Facebook page² under the same name, the field of citizen science in Latvia remains quite fragmented with only limited collaboration across disciplines. Furthermore, there is still an absence of a centralized informational website or a unified database that could house projects similar to *iesaisities.lv*.

Iesaisities.lv is a decentralized platform that consolidates various citizen science projects and initiatives under a single framework, serving as a nexus between researchers and the public within the domains of humanities and cultural heritage studies. Conceptually, there is a similarity with well-known global projects such as Zooniverse (Jackson et al., 2024) and CitSci (Lynn et al., 2019); however, *iesaisities.lv* mostly operates in Latvian language and is focused on disciplinary-specific needs. In the initial research phase preceding the development of this project, the feasibility of leveraging existing platforms to aggregate citizen science projects was critically evaluated.

¹ The conference held on March 14, 2024, was convened by the Library of the University of Latvia, in partnership with the Institute of Literature, Folklore and Art, and the Faculty of Geography of the University of Latvia, which is now part of the Faculty of Science and Technology.

² <https://www.facebook.com/SabiedriskaZinatne> (accessed on 15 September 2024).

However, analysis of existing projects and discussions with participants of running citizen science initiatives made it clear that engaging local audiences requires a tool that communicate in the language of its participants. Six years ago, when the development of *iesaieties.lv* began, most international platforms were monolingual, predominantly in English, hence joining these platforms was not considered a viable option.

Since 2019, *iesaieties.lv* platform has been developed by the Institute of Literature, Folklore, and Art at the University of Latvia (ILFA UL). However, the citizen science initiatives represented in the platform are implemented in collaboration with a range of state, non-governmental partners, and research institutions. *Iesaieties.lv* provides a spectrum of collaborative activities to interact with cultural heritage and humanities data, creating an interactive environment for engagement, research, and the enhancement of existing knowledge bases. This includes such well known crowdsourcing activities like manuscript transcription and data verification, as well as creative endeavors that enable the creation of new works inspired by cultural heritage.

Most part of these activities are based on long-accumulated information and extensively digitized cultural heritage materials available through *humma.lv* – ILFA UL developed digital infrastructure for humanities and arts (Laime and Reinsone, 2024), as well as the Archives of Latvian Folklore's digital archive *garamantas.lv* (Reinsone and Laime, 2022) and the Latvian literature portal *literatura.lv* (Eglāja-Kristsone, 2021). Additionally, projects like *balsutalka.lv* (speech collecting task force), implemented in collaboration by the Institute of Mathematics and Computer Science of the University of Latvia, ILFA UL, the Latvian Open Technology Association, and the UNESCO National Commission of Latvia, offer opportunities to donate voice samples for language preservation and technology development (Dargis et al., 2024).

The majority of the *iesaieties.lv* initiatives are open to all interested audiences. Since the project's inception, it has attracted several thousand participants, including adults with different professional backgrounds, youth, seniors, and families with children. Some initiatives, such as the manuscript transcription task force of *garamantas.lv* have successfully fostered enduring and stable communities of volunteer collaborators who actively participate in digital crowdsourcing activities for cultural heritage on a daily basis (Reinsone, 2020). Meanwhile, others engage intermittently, responding to specific calls from researchers for knowledge exchange, data collection, or other project-related tasks.

The platform's design, created in collaboration with artist Krišs Salmanis, was inspired by the periodic table of chemical elements. The core design principle focused on simplicity and clarity to encourage for engagement in citizen science initiatives, especially those participants who are less experienced. The landing page displays various colorful elements, each representing a different activity. Users can explore these by clicking or can select specific activities using a filter on the left side. This feature allows participants to choose activities based on discipline (e.g., literature, folklore, ethnomusicology), material type (e.g., manuscripts, musical scores, maps), and specific tasks (e.g., transcribing, recording, updating information).

When hovering over an element the filter on the left side switches to a concise description of the selected initiative, displaying the most essential information and explaining the tasks a participant is expected to perform. Upon selecting an initiative, a participant is immediately redirected either to specialized websites of a specific projects, like the <https://lfk100.garamantas.lv> and <https://balsutalka.lv>, or to designated sections of the ILFA UL digital resources, such as those hosting audio recordings or maps.

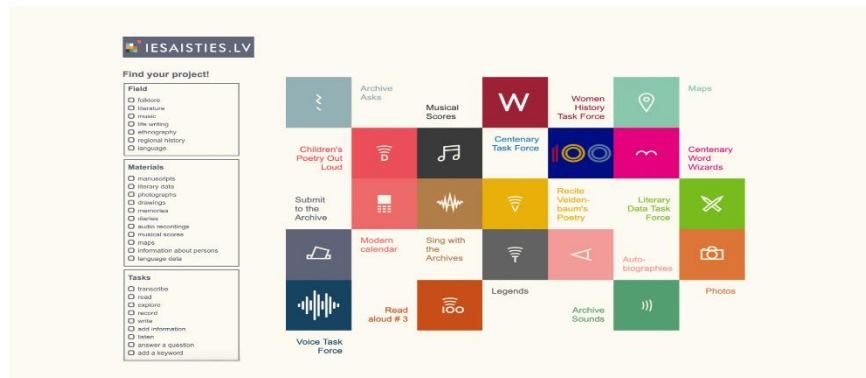


Figure 1. Interface of iesaisties.lv (2024)

3. Digital citizen science initiatives and results

Currently, iesaisties.lv comprises 19 digital citizen science sub-initiatives developed over the period from 2015 to 2024. While some of these initiatives have concluded their active phases and are no longer actively promoted, they remain accessible for participation. Others represent long-term endeavors that continue to be curated and actively disseminated. Broadly, these initiatives can be categorized into three main types of collaborative engagement:

(1) **The conversion of content from one format to another** constitutes a highly utilized and effective method of engagement on the iesaisties.lv platform, drawing a considerable number of collaborators. This category includes crowdsourcing initiatives that require activities such as the transcription of handwritten manuscripts, the decoding of audio recordings, the translation of texts, and the recording of given sentences. The manuscript transcription projects³ initiated by the Archives of Latvian Folklore (ALF) in 2015 have been instrumental in making ALF collections more accessible. Over the past decade, volunteers have successfully transcribed approximately 25% of all ALF manuscripts (refer to Figure 2). Furthermore, this initiative has fostered establishing a dedicated volunteer community. Over time, the volunteer collaborators have become experts in the ALF collections, and their expertise is now applied in broader archival projects beyond mere transcription (Reinsone, 2018; Reinsone, 2020, see also Pērle-Stīle et al., 2022).

³ The Archives of Latvian Folklore has developed three manuscript transcription platforms, which are synchronized with the digital archive garamantas.lv. The “Language Task Force” operated from 2015 to 2020 (it is now closed), “Centenary Wizards” (lv100.garamantas.lv) has been active from 2018 to the present, and the most recent platform, “Centenary Task Force” (lfk100.garamantas.lv), was launched in 2024 to replace the previous one.

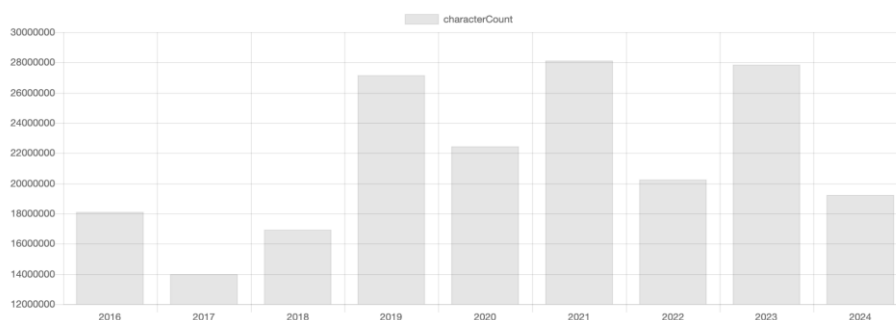


Figure 2. Results of the Archives of Latvian Folklore’s manuscript transcription crowdsourcing initiatives by the number of transcribed characters

The collaborative crowdsourcing initiative “Balsu Talka” (eng. *Speech Task Force*, balsutalka.lv)⁴ serves as another successful example in this category. Launched in May 2023, this initiative has substantially increased the open-access speech corpus in both Latvian and Latgalian on the Mozilla CommonVoice platform through a country-wide promotional campaign (see Figure 3).

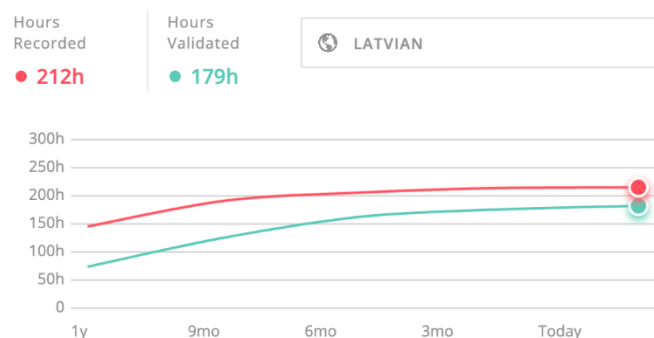


Figure 3. Mozilla CommonVoice chart showing the hours recorded and verified in Latvian as of September 17, 2024

(2) **Knowledge sharing** initiatives are an essential part of iesaisties.lv, facilitating researchers in creating new collections and gathering research material. Among the most used initiatives of this type is the “ALF Asks” (<https://jauta.garamantas.lv>) platform, which generates sets of questions on specific themes, for example, those concerning the celebration of specific holidays, personal experiences in the neighborhoods of Riga, and the significance of historical events in people’s lives. These themes are periodically updated and promoted, providing a continuous opportunity for individuals to contribute

⁴ Balsutalka.lv is designed as a localized crowdsourcing initiative based on Mozilla CommonVoice platform, featuring its own visual identity and a specialized promotional campaign. For more details and results, see Dargis et al., 2024.

by sharing diverse experiences, thereby enriching the ALF collections and supporting specific research endeavors (for example, Ūdre, 2019; Treija, 2019; Bula, 2021). A notable example in this category is the initiative “Diaries During the Time of Pandemic,”⁵ a rapid-response collecting campaign that engaged over 230 participants. This initiative resulted in an open-access collection and text corpus that documents the initial phase of the COVID-19 pandemic through personal experiences, providing a valuable resource for research and general inquiry (detailed further in the forthcoming publication by Reinsone et al., [2025]; Jaudzema, 2022). In addition to specially designed campaigns, this category also includes the open opportunity to contribute with new materials at any time. For example, this form of public engagement has led to the creation of the ALF’s Autobiography Collection, where donors have now submitted more than 200 collections (Reinsone et al., 2022).

(3) **Creative response initiatives** represent the most experimental digital citizen science form included in the *iesasties.lv* platform. This category leverages creative and playful interactions with cultural heritage, allowing participants to explore and reinterpret cultural elements in a manner that is both informative and engaging, meanwhile also contributing to scholarly research. A substantial portion of the activities on the platform pertains to the recitation of poetry, exemplified by initiatives such as “Skandē Veidenbaumu” (Recite Veidenbaums’ Poetry, <https://lasi.literatura.lv>), which made the complete poetry corpus of Eduards Veidenbaums (1867–1892) available for recording, (Eglaja-Kristone and Raudive, 2020) “Dzejas rats 1919” (Poetry Wheel 1919, <https://lasi.literatura.lv/lnb100>) that called for participants to orally read and record poems written in 1919, and “Lasīsim dzejiņas” (Let’s Read Little Poems, <https://berni.literatura.lv>), focused on the recitation of children’s poetry. The structural design of these campaigns centered around a “poetry wheel”, allowing participants to randomly select a poem for recording. After recording, these submissions underwent editorial review before being published on the platform. These initiatives experienced relatively high popularity during their active phases, particularly among educators and their students, e.g. in the campaign “Recite Veidenbaums’ Poetry”, 1600 poem records were submitted. Further promoting engagement, several campaigns included a mobile booth installed at the Latvian National Library, enhancing accessibility and interest. The simplicity and minimal effort involved – requiring participants to record only a single poem – played a crucial role in facilitating participation.

The “Dziedi ar arhīvu” (Sing with the Archive, <https://dziedi.garamantas.lv>) initiative follows a similar principle, inviting participants to engage with and learn from old archival sounds. Participants are encouraged to perform these sounds themselves, either by attempting to replicate the recordings or by creating their own interpretations. This method not only preserves contemporary voice samples and documents how participants interpret cultural heritage, but also has an educational aspect – participants explore previously unheard traditional songs and poetry, thereby possibly learning about various singing traditions and notable figures in literary history.

⁵ This initiative was organized by ILFA UL in collaboration with the cultural journal *Punctum* from March 2020 until the end of 2021. The collection is available at <https://garamantas.lv/en/collection/1415829/Diaries-in-the-time-of-Pandemic> (accessed September 17, 2024), while the text corpus derived from the collection, PanDi (Reinsone et al., 2021).

4. Future prospects

Iesaisties.lv is a platform that consolidates and provides access to digital citizen science initiatives related to the humanities and cultural heritage materials. These initiatives have been primarily developed by researchers from ILFA UL, often in collaboration with other institutions. The platform plays an important role in ensuring the continuity and availability of these initiatives for ongoing public interaction beyond the duration of their funding or active curatorial phases. Considering that alongside the ILFA UL's citizen science initiatives in the humanities, other Latvian institutions have developed several similar projects, one future task would be to involve more stakeholders in the development of this platform and to open it up to other initiatives. The future development of the iesaieties.lv platform could retain its disciplinary focus to strategically enhance digital humanities initiatives while simultaneously exploring its potential expansion into a general, cross-disciplinary platform for citizen science. This approach is particularly significant given the absence of a unified information resource for citizen science initiatives in Latvia.

A further strategic objective should involve the development of an integrated participant module and a unified system for tracking user contributions, with particular emphasis on enhancing user accessibility to their own contribution records. At present, user contributions are only accessible individually on each initiative's webpage, lacking an integrated view that complicates obtaining a holistic understanding of participation across the iesaieties.lv platform. Moreover, the tracking of participant activities is currently carried out using diverse methodologies, each tailored to the specific requirements of individual research projects. Standardization in this area is imperative as it would enable iesaieties.lv to derive empirically grounded insights into the effectiveness and reach of its engagement initiatives.

Acknowledgments

This paper was supported by the Latvian Council of Science project “Navigating the Latvian History of the 20th–21st Century: Social Morphogenesis, Legacy and Challenges” (VPP-IZM-Vesture-2023/1-0003) and “Towards Development of Open and FAIR Digital Humanities Ecosystem in Latvia” (VPP-IZM-DH-2022/1-0002).

References

- Alam, S. L., Campbell, J. (2017). Temporal Motivations of Volunteers to Participate in Cultural Crowdsourcing Work, *Information Systems Research* 28(4), 744–759. DOI: 10.1287/isre.2017.0719.
- Bula, D. (2021). Celebrating March 8: A Failed Attempt at De-Sovietization?, *Journal of Baltic Studies* 52(1), 43–59. DOI: 10.1080/01629778.2020.1851276.
- Dargīis, R., Znotiņš, A., Auziņa, I., Saulīte, B., Reinsone, S., Dejus, R., Kļavinska, A., Grūzītis, N. (2024). BalsuTalka.lv – Boosting the Common Voice Corpus for Low-Resource Languages, in Calzolari, N., Kan, M.-Y., Hoste, V., Lenci, A., Sakti, S., and Xue, N. (eds), *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*, pp. 2080–2085.

- Daugavietis, J. (2021). Motivation to Engage in Crowdsourcing: Towards the Synthetic Psychological–Sociological Model, *Digital Scholarship in the Humanities* 36(4), 858–870. DOI: 10.1093/lc/fqab024.
- Dobreva, M. (2016). Collective Knowledge and Creativity: The Future of Citizen Science in the Humanities, in Skulimowski, A. M. J., and Kacprzyk, J. (eds), *Knowledge, Information and Creativity Support Systems*, Springer International Publishing, New York City, pp. 565–573.
- Eglāja-Kristsons, E. (2021). Digital Resource Literatura.lv: An Introduction, *Colloquia* 47, 149–159. DOI: 10.51554/Coll.21.47.08.
- Eglāja-Kristsons, E., Raudive, S. (2020). The Public Engagement Campaign “Read Aloud”: Aesthetic and Educational Aspects of Poetry Recordings (in Latvian), *Letonica* 42, 66–83. DOI: 10.35539/LTNC.2021.0042.E.E.K.S.R.0005.
- Hedges, M., Dunn, S. (2017). *Academic Crowdsourcing in the Humanities*. Chandos Publishing, Oxford.
- Heinisch, B., Oswald, K., Weisspflug, M., Shuttleworth, S., Belknap, G. (2021). Citizen Humanities, in Vohland, K., Land-Zandstra, A., Ceccaroni, L., Lemmens, R., Perelló, J., Ponti, M., Samson, R., and Wagenknecht, K. (eds), *The Science of Citizen Science*, Springer, Cham, pp. 97–118.
- Hetland, P., Pierroux, P., Esborg, L. (eds) (2020). *A History of Participation in Museums and Archives: Traversing Citizen Science and Citizen Humanities*, Routledge, London.
- Jackson, C., Douthwaite, L., Jeong, E., Trouille, L., Fortson, L., Lintott, C.J., Simmons, B., Miller, G. (2024). Unleashing the Power of the Zooniverse: The 2021 Survey of Volunteers. *SSRN Electronic Journal*. DOI: 10.2139/ssrn.4830179
- Jaudzema, J. (2022). Creating a Pandemic Diaries Collection (2020–2021) (in Latvian), *Aktuālas problēmas literatūras un kultūras pētniecībā* 27, 320–329. DOI: 10.37384/APLKP.2022.27.320.
- Kaldeli, E., Menis-Mastromichalakis, O., Bekiaris, S., Ralli, M., Tzouvaras, V., and Stamou, G. (2021). CrowdHeritage: Crowdsourcing for Improving the Quality of Cultural Heritage Metadata, *Information* 12(2), 64. DOI: 10.3390/info12020064.
- Laime, S., Reinsone, S. (2024) HUMMA.LV: Towards a Collaborative Digital Platform for Humanities and Arts in Latvia, *Baltic Journal of Modern Computing*, 12(4), 487–492.
- Lynn, S. J., Kaplan, N., Newman, S., Scarpino, R., Newman, G. (2019) Designing a Platform for Ethical Citizen Science: A Case Study of CitSci.org, *Citizen Science: Theory and Practice* 4(1), 1–15. DOI: 10.5334/cstp.227.
- Navarrete, T. (2020). Crowdsourcing the Digital Transformation of Heritage, in Massi, M., Vecco, M., Lin, Y. (eds), *Digital Transformation in the Cultural and Creative Industries*, Routledge, London, pp. 99–116.
- Oomen, J., Aroyo, L. (2011). Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges, *Proceedings of the 5th International Conference on Communities and Technologies (C&T '11)*, Association for Computing Machinery, pp. 138–149. DOI: 10.1145/2103354.2103373.
- Pērle-Sīle, G., Reinsone, S. (2022). Manuscript Transcription as a Tool for Deep Reading and Teaching of Folklore, *DHNB 2022, CEUR-WS Proceedings Vol-3232*, pp. 390–400.
- Reinsone, S. (2018). Participatory Practices and Tradition Archives, in Harvilahti, L., Kjus, A., O’Carroll, C., Österlund-Poetzsch, S., Skott, F., and Treija, R. (eds), *Visions and Traditions: Knowledge Production and Tradition Archives*, Suomalainen tiedeakatemia, Helsinki, pp. 279–296.
- Reinsone, S. (2020). Searching for Deeper Meanings in Cultural Heritage Crowdsourcing, in Hetland, P., Pierroux, P., and Esborg, L. (eds), *A History of Participation in Museums and Archives*, Routledge, Abingdon, pp. 186–210.
- Reinsone, S., Laime, S. (2022). Digital Archive of the Archives of Latvian Folklore garamantas.lv: Background and Development (in Latvian), *Letonica* 47, 52–69. DOI: 10.35539/LTNC.2022.0047.S.R.S.L.52.69.

- Reinsone, S., Ļaksa-Timinska, I., Jaudzema, J. (2021). Corpus of Latvian Pandemic Diaries 2020–2021, *CLARIN-LV Digital Library at IMCS, University of Latvia*. Available at: <http://hdl.handle.net/20.500.12574/48>.
- Reinsone, S., Ļaksa-Timinska, I., Matulis, H., Žvarte, E. (2025, forthcoming). Archiving Uncertainty: Leveraging Crowdsourcing Methodology in Documenting the COVID-19 Personal Experiences, *European Journal of Life Writing*.
- Reinsone, S., Matulis, H., Ļaksa-Timinska, I. (2022). Metadata-driven Analysis of a Corpus of Diary Text (in Latvian), *Letonica* 47, 70–86. DOI: 10.35539/LTNC.2022.0047.S.R.H.M.I.L.T.70.87
- Ridge, M. (ed.) (2014). *Crowdsourcing our Cultural Heritage*. Ashgate, Farnham.
- Ridge, M., Blickhan, S., Ferriter, M., Mast, A., Brumfield, B., Wilkins, B., Cybulska, D., Burgher, D., Casey, J., Luther, K., Haley Goldman, M., White, N., Willcox, P., Carlstead Brumfield, S., Coleman, S. J., Berglund Prytz, Y. (2021). *The Collective Wisdom Handbook: Perspectives on Crowdsourcing in Cultural Heritage*. DOI: 10.21428/a5d7554f.1b80974b.
- Terras, M. (2016). Crowdsourcing in the Digital Humanities, in Schreibman, S., Siemens, R., Unsworth, J. (eds), *A New Companion to Digital Humanities*, Wiley-Blackwell, Hoboken, pp. 420–439.
- Treija, R. (2019). The Beginnings of the White Tablecloth Festival (in Latvian), *Letonica* 39, 109–135.
- Ūdre, D. (2019). The Symbol of the Morning Star During the Third Awakening in Latvia (1986–1991): From Cultural Opposition to Non-Violent Resistance, *Letonica* 39, 149–176.

Received November 19, 2024, accepted November 22, 2024