Development of a training program for teachers to use Wikipedia as a resource for collaborative learning and the development of skills for digital citizenship.

Magdalena Claro, PhD
Universidad Católica de Chile

Patricio Cabello, PhD
Universidad de Chile

Rocío Aravena, PhD Student
University of Barcelona

Abstract

In the frame of the open call for Wikimedia Research Fund 2024, our proposal aims to design, implement, and evaluate a pilot training program model for Chilean School Teachers using Wikimedia as a learning environment to foster digital citizenship skills. The experience will be carried out by the Center of Politics and Practices in Education of the Catholic University of Chile, with the collaboration of Wikimedia Chile through their Education and Digital Literacy Program.

Surveys, focus groups, and 1:1 interviews will be developed to explore the teacher's perceptions and needs for designing the training model.

Three schools will be chosen to implement the training model, and a Study Case method will be carried out to evaluate the initiative according to specific criteria of analysis.

Introduction

The integration of digital technologies in education has had an important boost since the COVID-19 pandemic, posing new challenges in terms of educational policies, infrastructure, curriculum development, and teacher training.

In the context of accelerated technological changes, education stakeholders must know how to read the needs and challenges of educational communities, and jointly seek solutions for better development of education through digital technologies. Over its nearly 20 years of history, the Education and Wikimedia Community has had a notorious impact on the integration of Wikipedia in the classroom. Nevertheless, current research has shown that the intertwining between Wikimedia and Education needs new strategies to respond to the challenges of the 21st century and engage teachers and students with the Edu & Wiki projects (Hubs/Ongoing/Towards a Theory of Change for Wikimedia & Education project, 2023). To afford this goal, it is urgent to explore the perceptions and needs of the educators' community and work together to implement training activities that could respond to their needs and contexts.

The research questions for this proposal are the following: what are the training needs of teachers for the effective use of the Wikimedia projects as a learning environment; which characteristics should a training plan have for responding to the teacher's needs for accompaniment and support; what kind of challenges appears during the implementation phase of the pilot; what are the good practices

that can be adapted in other contexts; and, how to evaluate the implementation of this project.
Date: from June 1, 2024 to June 30, 2025.

Related work

The general findings of the studies that have explored the uses of Wikipedia in educational contexts show that: although Wikipedia is already unofficially integrated into universities, it is not yet assimilated into teaching practices; a mediated use of Wikipedia allows for improving skills for information search, critical analysis of information, the creation and editing within the Wikipedia platform; and, introduce Wikipedia in the classroom promote the commitment and engagement of students.

Methods

We will work with three different schools, each school will be a case study.
Two techniques will be used for the research.

- Semi-structured qualitative interviews Project-based Learning workshops for teachers.
- Classroom observation and projects. analysis
- Focus groups for students.

The data analysis will use the framework of the Grounded Theory.

Expected output

It is expected as a result of this project a training model for teachers to implement activities with their students for learning and developing skills for the use of Wikipedia as a learning resource, using a Project-based Based Learning methodology as a basis. This training model will include a series of didactic materials, tutorials, and a manual.
In the area of research, at least two scientific articles are expected to be produced. The first of these is aimed at documenting the learning that emerges in constructing the courses in an emergent manner, with the participation of the teachers. The second will be oriented to understanding specifically teachers' experiences in the pilot implementation.

Risks

The main risk for the development of our proposal is related to the factors that could affect the continuity of the project, in terms of desertion or progressive decline in the participation of the educational communities initially enrolled

Community impact plan

Through this research, we aim to generate a set of learning patterns that could contribute to a better comprehension of the educational communities and a more systematic implementation of the Education and Wikimedia initiatives.
Through the exploration of teachers' needs, we aim to design training models that respond to their contexts but that could be easily applied in other educational contexts and communities within and outside of the Wikimedia movement.
On the other hand, we expect to build resources and evidence based on the results of this experience that we could provide to decision-makers working on Digital Education.
Finally, we aim to disseminate the results of this research within the Edu Wiki community, publishing a case study based on this research, sharing the results of the research at international conferences such as the EduWIki Conference or the WECUDI 2024, sharing a catalog of good practices, and developing a pedagogical training model that can be adapted for other communities.

Evaluation

To measure the impact and success of this research we should consider a set of different criteria: evaluating the coherence between the training model and the pilot implementation; evaluating the sample validity; evaluating its sustainability, in terms of continuity of the implementation during the established time, and of participation of the educational communities; and number of dissemination actions and uses of the research outcomes. And, incorporate the school community assessment of the impact of the pilot.

Budget

ÁREA	USD
Coordination	18000
Fieldwork assistants	21000
Per diem and other expenses	6000
Materials	2550
Subtotal	47550
Overhead (5%)	2377,5
Total	50000

Prior contributions

Magdalena Claro. Ph.D. in Engineering Sciences (PUC), and director of the Center for the Study of Policies and Practices in Education (CEPPE) of the Catholic University of Chile.

Patricio Cabello. PhD in Social Psychology (UCM, Spain). Academic and researcher at CIAE and IE of the University of Chile.

Rocío Aravena. PhD student in Education and Society (University of Barcelona, Spain). She led the Wikimedia and Education Program from Wikimedia Chile from 2019 to 2022.

References

Azar, T. (2023). Wikipedia: One of the last, best internet spaces for teaching digital literacy, public writing, and research skills in first-year composition. *Computers and Composition*, *68*. https://doi.org/10.1016/j.compcom.2023.102774

Bellei, C. (2013). El estudio de la segregación socioeconómica y académica de la educación chilena. *Estudios Pedagógicos*, *39*(1), 325–345.

Bellei, C. (2015). El gran experimento. Mercado y privatización de la educación chilena. In *Propuesta Educativa: Vol. noviembre* (Issue 44). Santiago de Chile: LOM ediciones. http://www.redalyc.org/articulo.oa?id=403044816013%0ACómo

Bordel, B., & Mareca, P. (2019). New teaching and learning methodologies in the smart higher education era, a study case, Wikipedia. *International Journal of Technology and Human Interaction*, *15*(2),

70–83. https://doi.org/10.4018/IJTHI.2019040106

Choi, J., Lee, J.-H., & Kim, B. (2019). How does learner-centered education affect teacher self-efficacy? The case of project-based learning in Korea. *Teaching and Teacher Education*, *85*, 45–57.

Domènech-Casal, J., Lope, S., & Mora, L. (2019). Which projects design and which difficulties expressed on Project-Based Learning Secondary Education teachers. Analysis of 87 project proposals. *Revista Eureka*, *16*(2). https://doi.org/10.25267/Rev_Eureka_ensen_divulg_cienc.2019.v16.i2.2203

España Palop, E. (2022). Teaching writing and discursive genres in the digital age. Results of a Writing Project. *Human Review. International Humanities Review / Revista Internacional de Humanidades*, *11*. https://doi.org/10.37467/revhuman.v11.4081

Knight, C., & Pryke, S. (2012). Wikipedia and the University, a case study. *Teaching in Higher Education*, *17*(6), 649–659. https://doi.org/10.1080/13562517.2012.666734

Konieczny, P. (2009). Wikipedia: Community or Social Movement? *Interface: A Journal for and about Social Movements*, *1*(2), 2012–2232.

Konieczny, P. (2017). Joining the Global Village: Teaching Globalization with Wikipedia. *Teaching Sociology*, *45*(4), 368–378. https://doi.org/10.1177/0092055X17714030

Konieczny, P. (2023). Quick Fix: Making Writing Assignment Motivational with Wikipedia. *College Teaching*, 1–5.

McDowell, Z. J., & Vetter, M. A. (2022). Wikipedia as Open Educational Practice: Experiential Learning, Critical Information Literacy, and Social Justice. *Social Media and Society*, *8*(1). https://doi.org/10.1177/20563051221078224

Meseguer-Artola, A., Aibar, E., Lladós, J., Minguillón, J., & Lerga, M. (2016). Factors that influence the teaching use of Wikipedia in higher education. *Journal of the Association for Information Science and Technology*, *67*(5), 1224–1232. https://doi.org/10.1002/asi.23488

Mosa, A. A., Ibrahim, S. V., Naqid, I. A., Hawezy, D. J., Al-Jaf, S. M. A., & Hussein, N. R. (2023). The Impact of SARS-CoV-2 Pandemic on Medical Students: Knowledge, Attitudes, and Practices towards E-Learning: An Online Cross-Sectional Study in the Kurdistan Region, Iraq. *Galician Medical Journal*, *30*(1), E202314. https://doi.org/10.21802/gmj.2023.1.4

Murray, H., Walker, M., Dawson, J., Simper, N., & Maggio, L. A. (2020). Teaching Evidence-Based Medicine to Medical Students Using Wikipedia as a Platform. *Academic Medicine*, *95*(3), 382–386. https://doi.org/10.1097/ACM.0000000000003085

Muzana, S. R., Jumadi, Wilujeng, I., Yanto, B. E., & Mustamin, A. A. (2021). E-STEM project-based learning in teaching science to increase ICT literacy and problem solving. *International Journal of Evaluation and Research in Education*, *10*(4), 1386–1394. https://doi.org/10.11591/IJERE.V10I4.21942

Odell, M. R. L., Kennedy, T. J., & Stocks, E. (2019). The impact of PBL as a STEM school reform model. *Interdisciplinary Journal of Problem-Based Learning*, *13*(2). https://doi.org/10.7771/1541-5015.1846

Reagle, J. M. (2010). *Good faith collaboration: The culture of Wikipedia*. MIT Press.

Reinsalu, R., Vija, M., Org, A., Siiman, A., & Remmik, M. (2023). With or without Wikipedia? Integrating Wikipedia into the Teaching Process in Estonian General Education Schools. *Education Sciences*, *13*(6). https://doi.org/10.3390/educsci13060583

Rekalde, I., & Vílchez, J. (2015). El Aprendizaje Basado en Proyectos: un constante desafío. *Innovación Educativa*. https://doi.org/10.15304/ie.25.2304

Schubatzky, T., Burde, J. P., Große-Heilmann, R., Haagen-Schützenhöfer, C., Riese, J., & Weiler, D. (2023). Predicting the development of digital media PCK/TPACK: The role of PCK, motivation to use digital media, interest in and previous experience with digital media. *Computers and Education*, *206*. https://doi.org/10.1016/j.compedu.2023.104900

Shernoff, D. J., Sinha, S., Bressler, D. M., & Ginsburg, L. (2017). Assessing teacher education and professional development needs for the implementation of integrated approaches to STEM education. *International Journal of STEM Education*, *4*(1). https://doi.org/10.1186/s40594-017-0068-1

Squibb, S. D., Koehler, C., & Shiroma, J. (2023). Engaging neglected histories: First-year students, archives, and Wikipedia. *College & Research Libraries News*, *84*(3), 103.

Tan, L., Lai, S. M., Geres, N., Innes, N. P. T., Radford, J. R., Revie, G., Mossey, P. A., & Hector, M. (2022). Effectiveness of The Wikipedia Collaboration of Dental Schools' Training Programme: a new Paradigm for Teaching and Learning of Evidence-Based Dentistry. *Community Dental Health*, *39*(1), 22–26. https://doi.org/10.1922/CDH_00091Tan05

Vargas, J. D., Arregocés, I. C., Solano, A. D., & Peña, K. K. (2021). Aprendizaje basado en proyectos soportado en un diseño tecno-pedagógico para la enseñanza de la estadística descriptiva. *Formación Universitaria*, *14*, 77–86.

Wilson, C., Broughan, C., & Daly, G. (2022). Case Study: Decolonising the Curriculum – An Exemplification. *Social Policy and Society*, *21*(1), 142–150. https://doi.org/DOI: 10.1017/S1474746421000646