

Visual Pedagogy and Migration: Using Story Maps for Teaching Social Phenomena

Pascual Garcia-Macías, Kevin A. Amay-Burguan, Karla Mora Mendieta

Abstract—This article examines how migration, a complex phenomenon, can be addressed through innovative pedagogies that integrate digital technologies and qualitative methodologies such as virtual ethnography. By utilizing Story Maps and virtual interviews, it promotes a deep understanding of migratory patterns and migrant experiences, providing valuable skills in social research and spatial analysis. Paulo Freire's pedagogy adds a critical dimension to learning, while the accessibility of technology is highlighted as essential for the effectiveness of these educational methodologies.

Keywords—Digital Technologies; Migration; Story Maps; Visual Pedagogy; Virtual Ethnography

I. INTRODUCTION

Migration as a social process has intensified in recent months due to its impact on millions worldwide. The war in Ukraine, the conflict in Gaza, and instability in South American countries like Argentina and Venezuela are just a few of the catalysts prompting individuals to leave their home countries. The reasons are diverse and multifaceted, compelling migrants to adapt to new cultural, linguistic, economic, and social environments in their host countries. As a response, this research advocates for migration pedagogy that incorporates innovative study strategies to enhance the understanding of migratory processes. This involves using intersectional studies and Paulo Freire's theory of the Oppressed to provide a deeper, more holistic understanding of the challenges migrants face. This approach deepens the use of Story Maps to gather information on the social phenomenon of human mobility, offering a more precise insight into the experiences of Ecuadorians, the study's focus population.

The article proposes designing a pedagogical activity for Economics students, aiming for them to gain essential skills through collaborative work and the use of geotechnologies, particularly GIS Story Maps. This technological application improves engagement where migrants can share their experiences, providing a knowledge base for those studying such social issues firsthand.

Pascual Garcia-Macías, Kevin A. Amay-Burguan, Karla Mora Mendieta, Pascual Garcia Macias, UTPL (Universidad Tecnica Particular de Loja), Ecuador

The educational experience involves creating migratory destinations for various relatives or friends of the students, resulting in a collaborative map and a series of individually presented routes that are peer-reviewed by the students themselves. This activity has been positively received, as students report gaining valuable skills relevant to their professional development while feeling motivated. The conclusion emphasizes the necessity of incorporating such initiatives into university teaching and the transferability of this methodology to other disciplines and locations.

II. METHODOLOGY

The current study focuses on a descriptive and exploratory investigation of migratory phenomena using the methodology of virtual ethnography. Forty Ecuadorian-origin Economics students were selected to interact with relatives or friends who have migrated, through digital platforms such as WhatsApp and Zoom. The primary technique employed was the semi-structured and in-depth interview, designed to allow students not only to collect data but also to refine their skills in ethnographic methodologies adapted to a digital context.

Promoting Practical Learning of Virtual Ethnographic Techniques: The study aims to develop skills in conducting qualitative interviews in a digital environment, promoting comprehensive training for students as competent social researchers.

Enhancing Writing Skills: Through the transcription, analysis, and writing of the collected data, the study seeks to improve the students' writing skills, focusing on the clarity, coherence, and analytical depth of the produced texts.

Visualization of Migration Patterns and Promotion of Critical Reflection: Using the digital tool Story Maps, the geographical visualization of migration patterns is facilitated. This process allows students to reinterpret and rewrite the interviews, incorporating a spatial dimension that enriches the narrative and fosters critical reflection on migratory experiences.

This approach is inspired by the theories of Paulo Freire, specifically his critique of the "banking model" of education and his proposal of a dialogic teaching method that transforms the relationship between educator and students. This pedagogical approach seeks to promote learning that is not only collective and critical but also serves as a means of liberation through "conscientization," helping students develop a critical understanding of social, economic, and political oppression.

Virtual ethnography is chosen for its ability to study geographically dispersed communities, allowing deep cultural analysis through digital interactions. This methodology adapts traditional ethnographic techniques to contemporary technological and social realities, offering a unique and effective perspective for the study of migration

III. EMPIRICAL EVIDENCE

Reutzel (1985) conducted a study to evaluate the impact of story maps on comprehension, comparing them to a directed-reading-activity approach among 102 fifth graders. Initially, the students' prior knowledge was assessed using the free-associates method. They were then randomly assigned to one of the two treatment conditions. The findings indicated that story maps significantly enhanced the students' comprehension of both narrative and expository texts included in the basal lessons. This tool was shown to be effective not only in planning and guiding reading instruction but also in structuring pre- and post-reading activities, thereby facilitating a deeper understanding and retention of the material (Reutzel, 1985).

Furthermore, Beck and McKeown (1981) explored the development of comprehension-promoting questions through the use of story maps, reinforcing the concept that structured question framing in conjunction with story mapping can significantly improve reading comprehension.

Usman, Safitri, and Marhum (2020) extended this inquiry into the domain of writing skills among high school students. Their quasi-experimental study demonstrated that the application of story mapping techniques markedly improved the writing abilities of students in constructing English narrative texts, suggesting that story mapping could be a versatile educational tool applicable in various learning contexts.

Muñoz and Martínez (2013) explore the integration of information and communication technology (ICT) in the teaching of philosophy, with a particular focus on the use of story maps in educational settings. Their research, conducted at José Martí school, involves a qualitative analysis of the perceptions of 10th and 11th grade students, as well as the philosophy teacher, regarding the adoption of story maps as an adjunct to traditional philosophical text discussions. The findings indicate that story maps significantly enhance the dynamism of the teaching-learning process by visually organizing complex philosophical ideas and debates. Despite this, the full potential of story maps has not been completely realized due to the limited access to necessary technological resources among some students, preventing them from fully engaging with the digital tool. This underscores the need for more equitable access to technology to ensure the effectiveness of ICT tools like story maps in educational environments (Muñoz & Martínez, 2013).

IV. THEORICAL FRAMEWORK

Ethnography, traditionally considered a branch of anthropology focused on describing the cultural realities of societies, has undergone significant evolution with the advent of the internet and the emergence of virtual communities across various platforms (Domínguez, 2007; Ruiz & Aguirre, 2015).

This transformation has necessitated the development of virtual ethnography, adapting the principles of classical ethnography to cyberspace, thereby enabling the study of new forms of interaction and cultural production within these digital spaces.

The introduction of technology and social media has created new arenas for social and interpersonal relationships that, in turn, generate culture and identities (Mosquera, 2008). Within this context, story maps emerge as a valuable tool both for teaching and for virtual ethnography, facilitating the visualization and understanding of complex data and spatial relationships in an accessible and dynamic format.

In the educational realm, story maps offer an innovative way to complement the reading of philosophical texts, allowing students to explore philosophical conceptualizations and debates interactively and contextually. This tool can help link abstract theories with real-world situations and contexts, thereby enhancing understanding and learning in subjects traditionally viewed as challenging and esoteric.

Regarding virtual ethnography, story maps enable a visual representation of ethnographic information that can be crucial for understanding how identities and social relationships are configured in cyberspace. These maps allow ethnographers to present their findings in a way that highlights the connections between data and virtual space, thus facilitating a deeper understanding of the cultural dynamics at play.

The importance of story maps in virtual ethnography also lies in their ability to address the challenges of deterritorialization, as mentioned by Álvarez (2009), where the virtual does not occupy a specific place or time but permeates various contexts simultaneously. By utilizing story maps, ethnographers can trace interactions and networks that transcend physical barriers, offering a more holistic and contextual perspective of online cultures.

However, it is crucial to recognize that the effectiveness of story maps and virtual ethnography largely depends on access to technology. Limitations in access to technological devices and the internet can restrict the potential of these methods, underscoring the need to address digital inequalities to maximize their educational and ethnographic impact.

In summary, story maps are essential not only as educational tools in the teaching of complex disciplines such as philosophy but also as innovative methods in the practice of virtual ethnography, enabling a richer and more detailed understanding of the new cultural realities emerging in cyberspace. Domínguez (2007) contends that virtual ethnography should not be confined to the obvious elements such as virtual communities or cyberspace alone; rather, it should be understood as encompassing much more. Specifically, virtual ethnography should not be limited to cyberspace because the ties of socialization do not end within the network or digital realms but extend into physical reality. Limiting its scope to virtual spaces alone would neglect the broader aims of ethnography to understand culture and social relationships as they occur in reality, as social networks, messaging platforms, and other digital spaces represent only a portion of the complex web of socialization.

Building on the above, the idea arises that ethnography should not be confined to cyberspace. While cyberspace is a significant field of study, it remains interconnected with other

localized fields such as churches, neighborhoods, schools, etc. As Domínguez (2007) states, adding "on the internet" to each cited location can open numerous fields of work for virtual ethnography. This indicates that the topics of virtual communities should not be the sole focus, as physical and virtual realities complement each other and weave networks of interaction. Thus, virtual ethnography should not only understand relationships within a virtual space but also consider the technological mediation between online and offline interactions.

Finally, it is crucial to clarify that virtual ethnography should not replace classical ethnography but rather complement it. Both approaches can coexist and be mutually informative, as subjects interact within both virtual and physical environments, highlighting the interconnectedness of modern social life (Álvarez, 2016).

In the realm of geography education, Marta and Osso (2015) highlighted the integration of story maps with geographical content to enhance the teaching and learning processes. Their project demonstrated how Esri Story Maps can be employed to create engaging and informative story-driven maps, offering a dynamic way to present geographical information. Strachan and Mitchell (2014) provided insights into teachers' perceptions of Esri Story Maps, indicating their effectiveness as teaching tools in educational settings. This suggests that story maps hold substantial potential for enhancing educational outcomes across different subjects and age groups.

These studies collectively underline the utility of story maps in educational settings, demonstrating their effectiveness in enhancing comprehension and learning outcomes across diverse subjects.

V. DISCUSSION OF RESULTS

The findings of this study underscore the effectiveness of integrating innovative pedagogical methodologies and digital technologies in the field of migration education. These approaches significantly enhance the learning and understanding of complex social phenomena, as evidenced by the students' ability to grasp and analyze migratory patterns and experiences more deeply.

Moreover, the use of intersectional pedagogy allows for a nuanced exploration of how various factors such as race, class, gender, and legal status intersect to impact the experiences of migrants. This approach highlights the complexities and diversities within migrant communities, encouraging students to consider multiple perspectives and to recognize the differential impacts of migration on different groups.

Practical application of these theoretical concepts was facilitated through the use of Story Maps, a digital tool that enables the visual representation of data in an interactive format. Story Maps serve not only as a means of presenting information but also as a platform for storytelling, where students can integrate theoretical knowledge with personal narratives and empirical data. This method enhances the learning experience by making abstract concepts more tangible and relatable, thereby improving students' ability to retain and apply what they have learned.

The positive outcomes of this educational approach are

evident in the students' enhanced capabilities to both understand and convey the complexities of migration. Students reported not only a greater comprehension of migration as a multidimensional social issue but also increased skills in research, analysis, and digital literacy. These skills are essential for their future roles as scholars, policymakers, or practitioners in the field of migration studies.

The implementation of virtual ethnography as the main technique for studying the Ecuadorian diaspora through digital interactions proved to be particularly valuable. This method not only facilitated the collection of data on migratory patterns through personal narratives and spatial analysis but also allowed students to develop essential skills in qualitative research methods adapted to a digital context. The collaborative nature of the work, which involved the creation of collaborative maps and migratory routes, fostered interactive learning and deepened the understanding of both the personal and collective impacts of migration.

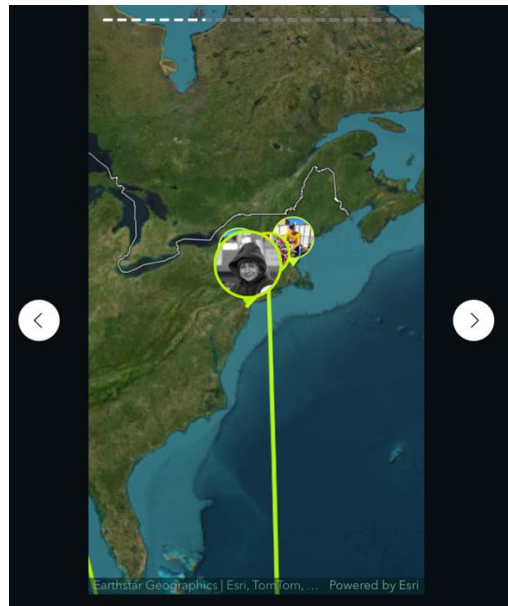


Fig. 1. Routes of migrations made by story maps.

However, one of the challenges highlighted by the study is the digital access gap. Despite the clear pedagogical benefits of tools such as Story Maps, limited technological access for some students can compromise the effectiveness of these educational methods. This finding underscores the urgent need to address digital inequalities to maximize educational benefits and ensure that all students have equal learning opportunities.

The results also suggest that the methodology employed is transferable to other fields and disciplines. This indicates significant potential for adapting these pedagogical techniques to different educational contexts, which could revolutionize the way complex and multidimensional topics are taught across various academic areas.

In conclusion, this study demonstrates how the combination of critical pedagogies and advanced technologies can enrich higher education and prepare students to confront and understand global challenges from an informed and empathetic perspective. However, for these approaches to be fully

effective and accessible, it is crucial that educational institutions and policymakers work together to improve access to technological resources, thereby ensuring that every student can fully benefit from these innovative teaching methodologies.

VI. CONCLUSION

The article provides a comprehensive examination of how migration, a complex and multidimensional social phenomenon, can be effectively studied through innovative pedagogical approaches that integrate digital technologies and qualitative methodologies such as virtual ethnography. Utilizing tools like Story Maps and virtual interview techniques, the research promotes a deeper understanding of migratory patterns and the personal experiences of migrants, providing Economics students with valuable skills in social research and spatial analysis.

The methodology of virtual ethnography proved to be particularly effective for studying geographically dispersed communities, allowing students to explore and analyze digital cultures and social relationships in virtual spaces. However, the research also underscores the importance of equitable access to technology, as limitations in this access can restrict learning opportunities and the effectiveness of pedagogical tools like Story Maps.

In summary, the study demonstrates that the integration of digital technologies and participatory pedagogical approaches in higher education can significantly enrich the teaching and learning about complex social phenomena like migration. Furthermore, this methodology is transferable to other disciplines and contexts, suggesting a model for educational innovation that could be adapted and applied in a variety of academic settings and themes.

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