Critical pedagogy and open data for educating towards social cohesion

Pedagogia critica e dati aperti come mezzi per educare alla coesione sociale

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1. INTRODUCTION

With the large migratory flows now being witnessed globally, providing social and educational services "for all" is becoming a pressing concern in all regions of the world (Barlett, 2015). Despite numerous efforts, children with a migrant and refugee background are increasingly facing a low prospect of accessing adequate education (World Bank, 2014). The provision of quality education for migrant children not only depends upon institutional factors such as school quality or support, but also (more importantly) on attention to culturally responsive pedagogies and openness to diversity (Barlett, 2015). An additional factor of importance is educators' inability to provide quality teaching when dealing with students from a different socio-economic and demographic background (Barlett, 2015).

Within this picture, educational stakeholders are increasingly having to deal with "post-traumatic" cultural issues rooted in conditions of "historical trauma" such as wars and conflicts (Worsham, 2006). These are extremely complex situations which not only permeate the social, historical and cultural contexts in which they are embedded, but also affect the global society as a whole. More specifically, they impact directly on pedagogical dynamics within the educational contexts where migrant learners are being accommodated.

2. WHAT IS OPEN DATA?

Advances in data technology have made it possible to collect volumes of structured and unstructured data from various fields. The large datasets produced represent a wide - and only partially explored - range of opportunities in many fields, including science, medicine, engineering, social services and education, to mention just a few.

Open Data (OD) can be understood as data that is universally available for anyone, without boundaries or

restrictions. According to the Open Data Definition (Open Knowledge International 2014), OD is «*data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike*» (Dietrich et al., 2009). As general realisation grows about the multiple affordances of OD, so do the ways in which these are being explored and harnessed. OD represent vital information that can lead to knowledge for society as a whole; this is the basis for empowerment and for tackling challenges such as inequality and poverty (Open Knowledge International, 2014).

Given the many affordances that emerging technologies offer to education in general, it is certainly worth exploring how these could support teaching and learning processes for migrant learners and the communities hosting them. However, we believe that there is a critical aspect related to these technologies that needs to be explored in parallel, an often-neglected cornerstone for implementing technology-enhanced interventions in education, namely the underlying pedagogy.

The question then becomes: what pedagogical approaches could be adopted in technology-enhanced interventions dealing with teaching and learning for migrant learners, their teachers and the school community, and what roles could OD play in the related teaching and learning process? We envisage that a critical pedagogy approach, such as that described by Zembylas (2013), could be used for developing educational activities based on the use of OD from real world scenarios, both to nurture social cohesion and to educate towards complexity and uncertainty (Morin, 2002).

3. CRITICAL PEDAGOGY IN POST-TRAUMATIC CONTEXTS

Critical pedagogies, heavily influenced by the renowned theory advocated by the educator Paulo Freire, refer to educational experiences which promote transformation and empowerment, and that expose the power dynamics perpetuating social injustice (Zembylas, 2013). The critical pedagogy movement is guided by the intent of nurturing students' ability to recognise and challenge these dynamics, enabling them to become engaged citizens while «*expanding and deepening their participation in the promise of a substantive democracy*» (Giroux, 2010).

Zembylas introduced a new critical pedagogy approach that draws on Jansen's (2009) concept of "troubled knowledge", i.e. knowledge coming from the «*profound feeling of loss, shame, resentment, or defeat that one carries from his or her participation in a traumatised society*» (Zembylas, 2013, p.177). This helps learners to engage in critical and dialectical analysis of the intersections amongst socio-cultural and power dynamics; while acknowledging the emotional dimensions of troubled knowledge, it can provide the basis for enriched learning.

We claim that these dynamics, which influence society by creating or perpetuating its hegemonic structures, can be uncovered, accessed and analysed through the information provided by OD. The idea is that analysis of OD would provide the means for socio-cultural and power dynamics to emerge, becoming "visible" information. A critical pedagogy approach would nurture "critical consciousness" (Freire, 1970) of the elements constituting these dynamics, thus facilitating a practice of deconstruction and of inquiry into the ways the dynamics unfold, and how they are both influenced by and concurrently shape the social reality we inhabit.

4. OPEN DATA AND CRITICAL PEDAGOGY FOR SOCIAL COHESION

The wave of openness that is expanding and touching all sectors in society is also influencing formal and informal education at all levels. Open Education represents an aim and a challenge for society as a whole, as witnessed by the increasing interest in Open Educational Resources (OERs). The term was coined in 2002

by UNESCO on the occasion of the First Global OER Forum, a discussion around education in developing countries. It refers to *«teaching, learning or research materials that are in the public domain or released with an intellectual property license that allows for free use, adaptation, and distribution»* (UNESCO, 2016).

It follows that in educational contexts Open Data (OD) can be understood as OERs, which can be employed to engage learners in collaborative activities aimed at critically analysing contemporary real-world problems (Atenas, Havemann, & Priego, 2015). The idea is that students can collaboratively construct knowledge by working with - and connecting - various sources and formats of information, including data. This is not just a hypothesis: it is currently being implemented in various Italian secondary schools through an initiative called "A Scuola di OpenCoesione" (ASOC)[1].

The main objectives of ASOC are to engage participating schools in active use of OD to develop civic awareness and engagement with local communities by monitoring the effectiveness of public investment (Ciociola & Reggi, 2015). However, and perhaps most importantly, by enabling new forms of analysis and storytelling based on OD from real situations, this project has the potential to improve learners' capacity to form effective social bonds and horizontal ties among different stakeholders (Ciociola & Reggi, 2015).

Additionally, the ability to interpret raw data can be seen as a key to the development of transversal skills, which UNESCO defines as encompassing five learning domains:

«critical and innovative thinking, interpersonal skills, intrapersonal skills, global citizenship, and media and information literacy, which together with foundation and specialised skills all need to be considered for a holistic development of the individual» (UNESCO, 2015).

Within a technology-supported educational intervention that identifies and analyses OD, a critical pedagogy approach would underpin the data interrogation process and the collaborative construction of narratives. This pedagogical underpinning would equip students with the critical skills needed to uncover, observe and recognise how socio-cultural, power and emotion-related dynamics influence society. By questioning the way certain narratives, e.g. those from the media, can perpetuate hegemonic values, learners could effectively discover and reflect on how these dynamics can also influence knowledge construction, that is, the way we assign meaning to the world.

By extracting narratives from OD, we do not just connect students directly with what is happening in their historical and social context so that they can better face the real challenges of the twenty-first century (Robinson & Aronica, 2015). We are also nurturing an "empathic bond" with the actors in those narratives. Drawing on the work of philosopher Emmanuel Levinas, the medical sociologist Arthur Frank explained how narratives of illness could represent an element allowing a relationship to form: as we witness these narratives, we are "caring" for the "other" (Frank, 2000). We believe that the same happens with any narrative we witness and acknowledge, including those intertwined with the migration phenomenon.

A potential exploratory scenario for a possible educational intervention could, for instance, be the use of data from the Italian initiative of Open Migration[2] to help learners, educators and the wider community gain awareness and understanding of the real facts and figures about migration, as their resources can be brought to schools and universities and used as educational materials.

Equipped with a critical attitude, learners can become agents of change who recognise and challenge stereotypes and transform social structures (Zembylas, 2013). It then becomes clear that such a critical pedagogy

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[1] The ASOC project (http://www.ascuoladiopencoesione.it), launched in 2013 within the open government strategy on cohesion policy carried out by the National Government, is run in partnership with the Ministry of Education and the Representation Office of the European Commission in Italy.

[2] http://openmigration.org/

approach should not be aimed at supporting a technology-enhanced intervention for migrant learners only. The ideal educational context would be one where migrant children are constituent parts of the learner group, in other words a multicultural and intercultural context in which social inclusion and cohesion are nurtured by collaborative discovery, mutual negotiation of meaning and knowledge creation.

5. CONCLUSIONS

By opening a window on contemporary world issues, OD, when used as OERs, represent a free, open access possibility to educate future generations to what sociologist Edgar Morin defined as "complex lessons in education for the future" (2002). These "lessons" include: the ability to appreciate the common human condition, the way knowledge is (co)constructed and what the possible errors in this process are, the importance of understanding each other and, most importantly, the aptitude to confront and accept the uncertainties and complexities of the socio-cultural reality we inhabit.

In conclusion, we argue that OD used as OERs, when supported by a critical pedagogy scaffolding, would represent a powerful resource for learners in the context of post-traumatic societies. The enormous potential of OD in education resides in the fact that their use can trigger critical reflections for empathic care: indeed, the act of discovering, researching, getting to know about a reality through OD is a modality of care that refers to pedagogic action.

6. REFERENCES

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