

WASTE PICKER RIGHTS AND SOCIAL INCLUSION: THE CREATION OF A UNIVERSITY WITH KNOWLEDGE DEMOCRACY

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ABSTRACT

UNICATA is a university for and with waste pickers based on Paulo Freire's popular education pedagogy, knowledge democracy and the practice of peer learning. The aim is to create a learning space of excellence where one can dream, dare, innovate, and be inspired by transformative ideas and achievements. This university will increase access to knowledge and expand the possibilities for reflection, for a population that suffers from social exclusion and high vulnerability. Worldwide waste pickers are major protagonists in collecting, separating, and redirecting recyclable materials into the circular economy. Research demonstrates that waste pickers are central figures in educating households on waste separation practices, adding value to recovered materials, building community by integrating socially excluded individuals into their collective workspaces, indirectly also mitigating environmental and climate impacts. While these positive effects of inclusive recycling are increasingly recognized in the academic literature, unfair remuneration, stigmatization, and risk-prone or unhealthy working conditions are still the prevailing realities. This paper discusses reflections on recent experiences of implementing UNICATA in the metropolitan region of São Paulo, Brazil, in 2023, with a pilot project developing and delivering the introductory module which was successfully completed by 22 students. The research takes a social constructivist lens to uncover the colonial social and political injustices through experiential and student-centered education. Our results reveal some noticeable assets and barriers in creating inclusive education for a large population that is widely neglected, in many different geographic contexts, thus also filling a gap towards achieving the Sustainable Development Goals (SDGs).

1. INTRODUCTION

Waste pickers are independent or organized workers who reclaim and divert recyclable materials for a circular economy (Gutberlet and Careno, 2020; Careno, 2020; Dias, 2016). Worldwide waste pickers comprise about 2 percent of the urban population (Gutberlet, Careno, Kain and Mantovani Martiniano de Azevedo, 2017). While they fulfill a needed service and play an important role in the recovery of materials that are considered waste, they persistently are stigmatized and marginalized (Bulla, Rendon and Trenc, 2021; Rutkowski and Rutkowski, 2015). Moreover, there exists a large diversity in working conditions among waste picker organizations (WPOs). High member turnover rates coupled with lacking skills and technical capacity and many other bottlenecks and difficulties often create unproductive workspaces. Additionally, the majority of the WPO members lack knowledge around solid waste legislation and public policy; consequently, they are excluded from

municipal debates and policy discussions regarding solid waste management.

To overcome the predicament of social and economic exclusion, to improve environmental quality and to progress the Sustainable Development Goals (SDGs), appropriate education for this disadvantaged population is strategic and essential (Kopnina, 2020).

Despite the prevailing precarious working conditions referred to above, many WPOs have been successful in managing their operations, creating a better work environment and in establishing contracts with governments and the industry. While being central figures in educating households on waste separation practices, they also add value to recovered materials, build community by integrating socially excluded individuals into their collective workspaces, and indirectly they also mitigate environmental and climate impacts. Such achievements and knowledge will be harnessed, mobilised, shared and expanded with the university for and with waste pickers (UNICATA).

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The proposed creation of UNICATA aims at expanding the access to knowledge and generating possibilities for engagement, goals that have the potential to make significant transformative impacts in society. Lavagnolo and Grossule (2018), underline the benefit of actively involving waste pickers for outreach to increase awareness among the population and public administrators to promote the implementation of a sustainable waste management system.

UNICATA, as a collaborative project, represents a partnership between academics and practitioners, which constitute autonomous waste pickers, waste picker collectives and the national waste pickers movement in Brazil. These key partners will collaboratively implement a customised educational program catered to serve waste pickers and their needs. For transformative change to take place, UNICATA applies a bottom-up approach grounded in theories as articulated by Paulo Freire (2018), Michel Thiollent (2011), Orlando Fals-Borda (1987), among others. From the student perspective, the concept of UNICATA invests in building critical self-consciousness and social awareness that can lead to actions against discrimination and oppression, building a more just and sustainable society. As, both educators and students, waste pickers will become the agents of change. Experienced waste pickers are a fundamental element in the teaching and effective dissemination of knowledge.

UNICATA is focused on co-generating knowledge using participatory and human centred approaches and design, based on collective ways in defining the key gaps in education and training, ideating, and creating courses that respond to challenges, receiving input and feedback on course offerings, refining materials, and the delivery to better respond to the needs. The human centred design approach allows for the learner-experience to influence the development of each teaching module, and addresses change by thinking holistically about the social, economic, and environmental aspects regarding the work and workspaces of waste pickers and their livelihoods.

The course content for the pilot project includes the themes: historical and political approach to recycling and waste picking, role, and impact of key actors in the solid waste sector, waste management policy, Circular Economy and Reverse Logistics; effective communication and conflict resolution among other topics.

Waste pickers are the educators, coupled with academics or other experts and they help convey and create knowledge, using appropriate language and context.

The theory of change for this project is centred around the notion that tailored education will lead to higher incomes and better quality of life for waste pickers; improved interpersonal relations among the workers as well as greater gender equity; improved recovery of materials and better waste management; and more inclusive cities through greater collaboration between municipal authorities and WPOs. The development of an educational space for waste pickers (organized or autonomous) with thematic content based on local realities and necessities is critical to transforming the lives of waste pickers and their opportunities. These teaching methods are strongly focused on

local contexts where students work and live, considering place specific aspects, to also stimulate interests on more general and interrelated subjects and to allow for knowledge sharing on these specific situations. This might help students to learn from different contexts, increasing the comprehension of more abstract or theoretical concepts and frameworks. Finally, this approach includes attention to issues of class, race, and gender diversity throughout the knowledge co-production process, particularly given that in countries such as Brazil the conditions of these social inequalities are widespread and deeply rooted in the colonial past throughout the territory.

The next section 2 describes our theoretical framework based on popular education and knowledge democracy. We discuss how UNICATA takes a decolonial approach to education (Zavala, 2016), using a social constructivist lens (Gerberry, 2023), which when applied to the context of waste management acknowledges the role of all actors in the waste value chain. In this approach the researcher takes an active role in constructing knowledge and investigating diverse points of view. This implies the active involvement of all participants; and learning takes place through interaction and the cognitive co-construction and co-production of knowledge (MacLeod, Burm & Mann, 2022). In section 3 we present the research and community outreach methodology which led to the creation of UNICATA. In section 4, first results of the pilot project are discussed, specifically hearing the voices of the participants. Finally, section 5 draws some first conclusions based on the interpretation of the results through the conceptual framework presented earlier.

2. MATERIALS: THEORETICAL FRAMEWORK

2.1 Popular education theory

Education is a multifaceted field, made up of different currents and conceptions that have moulded diverse educational practices. When considering waste pickers as a group of marginalised workers in situations of socio-environmental vulnerability, it is important to think about education strategies that are aligned with the context of these people's lives. For Piaget (1973), knowledge is understood as an activity that is constructive incessantly, learning takes place through the individual's interaction with their environment, as they organise their experiences. On the other hand, Vygotsky (1978) emphasises the importance of social interaction in learning, arguing that cognitive development is mediated by cultural tools and practices. These perspectives have influenced education, promoting student-centred and experience-based approaches that make sense in waste pickers' education.

Constructivism is an epistemology theory that underlines that learning is the process of constructing new knowledge on the foundations of existing knowledge and that knowledge construction is facilitated through interaction with the environment, with reality. Kolb (1984) for example describes learning and knowledge construction as a learning cycle which has four phases: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Kolb's experiential learning cycle

allows apprehension, comprehension, intention, and extension (Yardley, Teunissen and Dornan, 2012).

Learning tied into experience builds critical thinking skills, by applying theory and academic content to real-world experiences, and local and traditional or indigenous knowledge within the classroom, the community, or the workplace. This could entail applied research projects, case studies, field visits, community/industry research projects, practica or placements, among other options widely described at many university websites (see for ex.: Carlton University, TLS Teaching Resources).

By applying an epistemology of inclusion, a constructivist lens strives to uncover historical realities. The legacy of modernity, capitalism, and colonialism, which created our current systems of dominance, exclusion and even erasure have shaped everyday lives. Historical realities marked by disparity, inequality, racism, and stigmatization are questioned and critiqued by an epistemology of inclusion, and action-oriented and participatory research and community engagement approaches are applied to understand the connections to contemporary capitalism (Pascale, 2018). Constructivism is not a method, but a conception of knowledge. From this perspective, it can be understood that there are some similar principles between constructivism and popular education, for example, the dialectical perspectives and the understanding that people are producers of culture and subjects who produce knowledge.

Popular Education is a pedagogical and political movement and a theory with Latin American roots that understands knowledge based on reality and that uses participatory methodologies to stimulate people's empowerment on a political basis for social transformation. The perspective of popular education seeks to contribute to a fairer society in defence of human rights, identities, and the environment. Popular education is a pedagogical approach that stands out for its emphasis on the active participation of the community in the educational process (Feitosa, 1999). This approach has been used widely, from adult literacy programmes to political training (Feitosa, 1999). The principles of popular education are: (a) horizontality, which emphasises equality between educators and learners, promoting the exchange of experiences and knowledge; (b) active participation, which involves the active engagement of participants in defining the themes and methods of learning; (c) contextualisation, which considers the importance of relating the content to the local reality and the issues faced by the community and; (d) dialogicity, which encourages critical dialogue and collective reflection as means of constructing knowledge (Feitosa, 1999).

Paulo Freire (2018) was one of the main authors to contribute to popular education. His work "Pedagogy of the Oppressed" outlines an educational approach centred on critical awareness and the emancipation of marginalised sections of society. Popular education is characterised by participatory pedagogical approaches, based on promoting reflective dialogues and valuing the lived experiences of learners. It also seeks to use teaching materials and practical activities that are related to local contexts. Furthermore, it provides democratic learning spaces in which participants are encouraged to question power structures

and develop a critical awareness of their social reality (Freire, 2018).

On the other hand, the work "Pedagogy of Autonomy", also by Freire (2022), complements this perspective by emphasising the importance of students' autonomy and responsibility for their own learning. It promotes the idea that students should be active subjects in the construction of knowledge, encouraging creativity and active participation in the transformation of reality. Popular education therefore plays a fundamental role in promoting citizenship. The importance of Popular Education, influenced by Freire's principles, lies in its ability to empower individuals and communities to become agents of change. Freire's (2018) proposal breaks with the idea of compensatory and "banking" education generally offered by mainstream and conventional education. Freire (2018) believes in a critical education that should not represent a transmission of content, but a political act aimed at overcoming the contradictions and inequalities that determine society.

2.2 A decolonial approach to knowledge democracy

In the vein of grassroots learning, various discussions about education and power have emerged. One of these discussions concerns knowledge democracy, a concept that refers to the equitable distribution of access, production, and use of knowledge in a society (Nowotny et al., 2001). It assumes that knowledge should not be monopolised by academic or institutional elites but shared and shaped collaboratively by various social actors (Jasanoff, 2003). It argues that broad and inclusive participation in the production and dissemination of knowledge is essential for sustainable development and social justice (Nowotny et al., 2001). Knowledge democracy requires education, science and communication systems that empower ordinary citizens to participate effectively in the decision-making process, contributing to the construction of a more informed and democratic society (Stirling, 2008). In this context, the democratisation of knowledge emerges as a critical tool for tackling global challenges, promoting a more equitable distribution of intellectual resources, and fostering the inclusion of diverse perspectives in the creation and application of knowledge.

Another perspective applied to education and knowledge creation is decolonisation. Quijano (2000), in his influential theory of the "coloniality of power", has played a key role in critically examining the power structures and colonial legacy that persist in contemporary Latin American societies. Quijano (2000) argues that European colonisation has not only shaped political and economic relations in Latin America but has also resulted in profoundly structured forms of knowledge, identity and subjectivity. His analysis identifies coloniality as a matrix of global domination that encompasses not only direct colonial rule, but also the social and epistemic structures that emerged from it. Quijano's (2000) proposal is that decolonisation cannot be achieved through political or economic changes alone but requires a profound transformation in the forms of dominant knowledge and subjectivity that sustain colonial hierarchies. This approach requires a commitment to valuing and revitalising local and subaltern knowledge and entails

a profound critique of the categories of knowledge that underpin hegemonic Western thought (Mignolo, 2011).

The decolonisation of knowledge and power transcends the borders of former colonies and extends to global academic and institutional spaces. This involves a profound critique of hegemonic knowledge structures and the power relations that shape research, teaching and the dissemination of knowledge (Mignolo, 2009). Decolonisation is not just a symbolic issue, but requires concrete actions, such as restructuring academic curricula to include subaltern perspectives, supporting indigenous research and reconfiguring academic hierarchies (Tuihawai Smith, 2012). The decolonisation of knowledge and power represents a movement of intellectual resistance that seeks to challenge the entrenched colonial structures that continue to shape the contemporary world. The decolonisation of knowledge and power demands a critical reflection on global institutions, such as international aid systems, and seeks to create spaces for the equitable participation of voices from the Global South in global decision-making (Grosfoguel, 2007).

It can be said that popular education is a critical pedagogy that contributes to both the democracy of knowledge and decolonisation. Through emancipatory practices, popular education contributes to knowledge democracy by challenging the traditional hierarchies of power in education. In addition, popular education broadens access to knowledge and promotes the inclusion of historically marginalised groups through participatory approaches. This adds to the diversification of knowledge and strengthens the capacity of communities to influence the decisions that affect their lives. Popular education therefore plays a vital role in promoting knowledge democracy, as it makes knowledge more accessible, participatory, and relevant to a wide range of social actors (who often have been excluded in conventional education programs). Similarly, popular education contributes through empowering marginalised communities to understand and resist the forms of epistemic and structural domination inherent in the coloniality of knowledge and power, by questioning and discussing these relationships in the everyday lives of the community of learners. Grassroots education creates a space in which people can challenge dominant narratives and forge alternatives that are rooted in their own experiences and knowledge (Hooks, 2013). Popular education thus becomes an important tool in the decolonisation of educational thought and practice.

Considering that UNICATA aims to be a learning and training centre for waste pickers, both as students and as educators, popular education is in line with the principles of social transformation. For this reason, Paulo Freire's popular education underpins the institution's educational practices. However, UNICATA also intends to carry out research with waste pickers and train them to become researchers themselves. In this sense, participatory action research is another perspective that complements popular education in UNICATA's theoretical framework.

2.3 Participatory action-oriented research

Participatory Action Research (PAR) is a social research method that is widely recognised for understanding

that research should not be a purely observational exercise, but rather an intervention tool that enables participants to understand and transform their own realities (Thiollent, 2011). PAR is based on a series of fundamental principles, including the collaborative and participatory nature of the process, in which researchers and community members work closely together to define problems, collect data, analyse results, and implement actions (Thiollent, 2011). In addition, PAR emphasises critical reflection as a central element, promoting the constant analysis of practices and the search for more effective and fair alternatives (Thiollent, 2011). It also calls attention to social transformation, where the results of research are not limited to the generation of knowledge but aim to bring about real change in social conditions and relations (Thiollent, 2011). These collaborative, reflexive and action-oriented principles make PAR a powerful approach for tackling complex issues and promoting the improvement of practices and conditions in diverse contexts.

PAR, developed by Orlando Fals-Borda, a Latin American pioneer in action research, proposed research that was sensitive to the local and cultural context, recognising people's knowledge and experiences as valuable resources for understanding and solving social problems (Fals-Borda, 2001). In addition, Fals-Borda emphasised the political dimension of action research, considering it a tool for challenging unjust power structures (Fals-Borda, 2001). Another central principle for the author is close collaboration between researchers and community members, promoting the co-creation of knowledge (Fals-Borda, 2001). These principles of collaboration, cultural contextualisation and political engagement are essential to Fals-Borda's PAR and contribute to its ability to promote meaningful and emancipatory change in communities. These notions also become the guiding principles in the proposed research activities integrated in UNICATA's curriculum and into the classroom.

In this way, the relationship between popular education and participatory action research is intrinsically linked to the search for active participation, awareness, and social transformation. Both approaches recognise the importance of valuing local knowledge and experiences. This synergy between popular education and action research creates for UNICATA a space where learning and research are seen as tools for social change and the promotion of justice, uniting theory, and practice in favour of the emancipation of waste pickers.

3. RESEARCH AND COMMUNITY OUTREACH METHODOLOGY

3.1 Background to UNICATA

UNICATA is a collaborative project, a partnership between researchers, academics, and professionals, including autonomous and organized waste pickers, the national waste pickers movement, non-governmental organizations, research centers and more. It is the result of long-term participatory research partnerships between waste picker cooperatives in São Paulo and researchers from the University of Victoria in Canada (UVic), from the

Federal University of ABC (UFABC) and from the University of São Paulo (USP). Since 2005, most of these partners have been involved in several initiatives, notably the Participatory Sustainable Waste Management project (also known as the Brazil-Canada project), the Waste Governance Mapping project and the Recycling Network project. These initiatives have allowed for long term co-creation of knowledge and expertise related to inclusive waste management. Some of these key actors are today the main drivers for UNICATA.

The governing bodies of UNICATA are the (1) Executive Council (EC), (2) the Management Council (MC) and the (3) Advisory Council (AC) (Figure 1). The activities of UNICATA are carried out under the direction of the Executive Council. The Management Council meets on a regular basis with the goal of establishing guidelines, policies and discussing significant projects and developments to advance UNICATA. The Advisory Council, which meets once a year, provides feedback and suggestions as well as offers improvements to UNICATA. Another classroom has been set up in Brasília, in August 2023 and additional classrooms will be established in other regions in Brazil. In the future, training could be made available also to waste pickers in other parts of the world.

3.2 Research and community outreach

The concrete initial steps to create UNICATA began with a rapid needs assessment followed by a participatory evaluation of the research results. From January to March 2022, we applied a detailed survey to 12 waste picker cooperatives in the metropolitan region of São Paulo, Brazil, representing 699 members. Our questions focused on four sections: (1) socio-demographic aspects of the participants, (2) educational experiences, (3) imaginary allowing to build a common language and vision for this university, and (4) practical and logistical aspects. In addition, we directed questions related to the overall situation of their organizations to cooperative leaders. The in-depth conversations with interviewees provided further evidence about the aspirations, ideas and challenges related to building

an educational space directed towards the specific livelihood and work contexts of waste pickers. The data was analysed thematically and presented during a one-day long workshop, in April 2022, with waste picker leaders, to interpret the results collectively.

Social media and popular communication, using voice clips disseminated through WhatsApp, data visualisations and in-person meetings translating the academic results into accessible language, have played an important role in knowledge dissemination. The research has allowed us to develop a first draft curriculum consisting of 6 modules for the planned course, with 56 hours of classes per module and regular field visits. The modules of the first course are:

1. Introduction to the course
2. History, political education, and the waste picker as a social subject
3. Administration and cooperative management
4. Regulatory and legislative aspects
5. Sustainability and health at work
6. Research praxis focused on waste management contexts

While there are research-related activities in each of the first five modules, students will conduct in-depth research guided by the support of their mentors, during the sixth module. Community-based, participatory research methodology will be used as a major research paradigm. Cooperatives, governance, public policy, specifically Brazil's national solid waste legislation, circular economy and reverse logistics, solid waste and climate change, financial administration and accounting, environmental management, occupational health, human relations, and conflict resolution are some of the study areas that are covered in this course. These contents of the modules have been defined collaboratively with representatives of the waste pickers, based on key themes identified during the research. The introductory module (Figure 2) is a summary of the content that will be covered throughout the course. Therefore, the classes are organized into themes that represent the course modules and all classes are connected to each other.

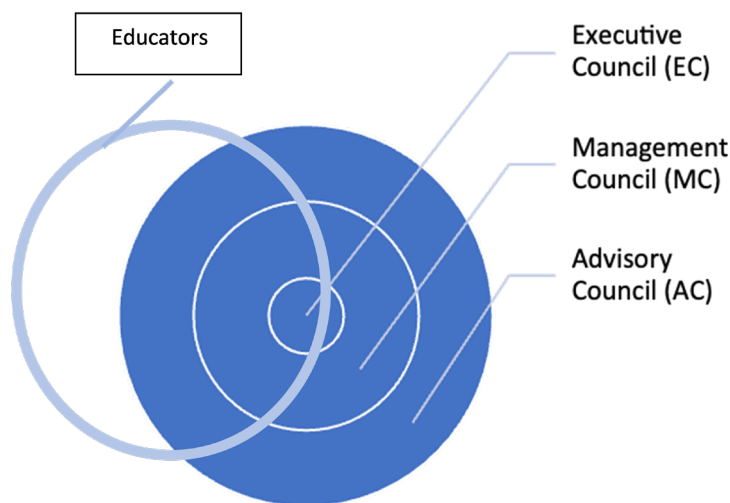


FIGURE 1: Proposed project governance structure.



FIGURE 2: Thematic content of the classes in module 1, representing the other 4 thematic modules.

3.3 Educational and pedagogic premisses

Before starting the first module, we invited all teachers (academics and waste pickers) to participate in a two-day workshop with the aim of sharing the pedagogical approach, the teaching methodology and philosophy, to collectively build a common basis of these important pedagogical dimensions. We emphasize the need for contextualization based on the concrete living conditions of the students and the adaptation to the specific situations encountered in each classroom. Between April and August 2023, the first module was delivered as a pilot project, with 22 waste pickers successfully finalizing module 1. This teaching modules can be adapted to different regional contexts and necessities.

An essential part of this proposal is that the project prepared by the teacher must also be a student project. To do this, right from the start, the teacher must look for what type of action would be interesting for that group of participants, and then develop their teaching plan, so that it becomes everyone's project. Therefore, when planning a series of classes to work on a topic, what we will look for, first of all, is the mobilization factor, which will give the opportunity to link the learning of that topic to activities that allow the participant to: (a) replicate activities learned in the classroom and apply to their own life and work, (b) understand whether they have learned something or not, (c) verify the need to know more about a certain subject. The mobilization factor of a didactic project therefore must be accessible and easy to understand. To be truly motivating learning must be practical, useful, concrete, tangible; or prompting, challenging, or even artistically stimulating. In a didactic project, the objective of the educator is to teach the contents, but the objective of the students is to achieve something that is meaningful to them.

This practice will allow certain skills to be developed by the students, which include communication, listening,

organization and systematization of ideas, expression of thoughts in a synthetic way, active search for information and analysis of content and critical analysis.

4. RESULTS AND DISCUSSION

This completion of the pilot project for UNICATA provided first insight into the hurdles and requirements for setting up an educational space for vulnerable and socially excluded individuals, based on the premises of popular education and knowledge democracy. The implementation of this project presupposes a deep knowledge by the educators involved about the pedagogic, didactic, and methodological theoretical and practical foundations that foster the desired teaching practise and learning goals. We experienced the fact that it is not enough to understand the theory and concepts that support the desired educational approach, without bringing the praxis in experiential adult education and student-centered learning.

It proved to be a necessary step to engage all educators in a workshop prior to teaching, to secure a democratic, inclusive, and participatory approach in teaching. The workshop also helped to transmit and discuss templates and examples that can help in the planning of activities and expected learning outcomes for each class. Meeting all educators before beginning the teaching of the module further had the benefit of building a common ground, connecting the teachers, and developing online means of communication to exchange experiences and transfer information.

The largest constraint in this process was the fact that there was not enough time to deepen the conversations, teasing out the real crucial issues, relevant to the teaching-learning process. Consequently, other preparatory workshops, the approach and thematic focus and planned activities for the workshop will be refined as the learning spiral will build on previous experiences.

Teaching in pairs and peer learning was a crucial step in the course delivery. For each class at least one academic and one waste picker were responsible for the preparation of teaching materials, based on the course content requirements defined collectively during previous workshops involving waste pickers and academics.

Teaching in pairs fosters reciprocity between those that bring practical work and life experience build over time and those that have accumulated theoretical knowledge. It means that everyone involved acts as both teacher and learner. This process permits greater cultural understanding and ethical development. It also builds deeper partnerships and more impactful learning outcomes. The students in the classroom will further benefit from greater diversity and, given that a waste pickers have been part in defining the course materials, there is greater likelihood that the content will be more relevant to their own experiences.

Over the 14 classes the students were exposed to the four phases of the learning cycle, as described by Kolb (1984), where students are exposed to “concrete experience, reflective observation, abstract conceptualization, and active experimentation”, by engaging in a group research project elaborated throughout the module, taking part in a field trip visiting a successful waste governance project and by being exposed to new concepts and theory in classroom presentations and discussions.

At the end of the course a general evaluation form was applied to students to help ensure the success of the next module as a learning and community building experience. Sixteen waste pickers answered the evaluation form with multiple choice and descriptive questions. The results highlight that all participants rated the course positively, giving it scores of 4 and 5 on a scale of 0 to 5. All sixteen respondents would recommend the course to other people; believe that the course has had an impact on their lives; believe that the course has met their expectations; believe that the course has helped them in their daily lives; believe that it has improved their ability to find and analyse information; and that the course has helped them learn more about public policy, governance, and environmental issues. Only one person did not think that their understanding of waste picking and recycling had changed and only one person did not think the course had helped them learn more about occupational health.

In the open-ended answers, the waste pickers elaborated further about their learning perspectives. Monica mentions:

“What I thought of today’s lesson, what had an impact on me, was the research that Luzia (another waste picker) brought to us about waste, where it all starts, what happens to it until it reaches us. I think that was very important for us because we don’t know, at least I didn’t know, right? And the other thing was when Dudu (National Waste Pickers movement (MNCR) leader) brought up the history [of the MNCR] and I had kind of gotten the history wrong in my head”.

Pedro an autonomous waste picker shares his experience with the following words:

“I really enjoyed being part of this pilot project, ... we go ahead, to leave a legacy for other people in situations that

I found myself in and to have this study, to learn more, because we learnt things by force and now it is working out. The university of waste pickers is a reality that will last forever”.

Luzia Honorato, a long-term leader among waste pickers comments on the 7th class which was on public policies:

“The importance of public policies in our field, the national movement of waste pickers, we all look forward to the construction of infrastructure and training. Public policy gives us a different kind of relationship with the government because a lens towards social inclusion is an approach that generates work and income, and it is immediate, it is necessary. So, today’s lecture was brilliant because it brought us a huge range of knowledge on how to build this multi-handed project”.

Dona Olinda had some specific comments about class 10 on governance:

“I thought this class evidenced the mission of UNICATA, to unite waste pickers and show that it is moving with waste pickers, the learning and teaching of waste pickers as well”.

Maria Aparecida also commented on class 10 on governance:

“I’m also very grateful, firstly for being here. That one day I could be here speaking at the university for waste pickers, who until then had no value. I’m very grateful, and every day I learn and discover things that I didn’t know yet and I take them [the learnings] into my daily life to empower myself”.

UNICATA has the potential for creating social inclusion, increased socially just work relations with government and industry, preparing waste pickers for negotiations with government or industry, defending their rights and confronting injustices and unfair conditions or policies. The encounters in the classroom and during field visits empowers the waste pickers and creates opportunities to potentially amplify the voices of waste pickers as essential environmental and public service providers.

UNICATA has generated moments of critical self-reflection about stigma and marginalization. According to the autonomous waste picker Nanci Darcolete: “waste picking is the last decent job a person seeks before going into crime to survive. So, waste picking needs to be strengthened and supported by the government, because waste pickers are looking for opportunities and UNICATA can be this opportunity”.

Some testimony speaks to the self-valuation because of the reflections during the classes. Mônica for example posits: “My degree came from the street and my doctorate from waste picking” and Pedro recognizes: “My father told me to go and study or I’d go and collect cans and today at the waste pickers’ university I study to collect cans”. These last two testimonies speak to a level of self-awareness and empowerment that can be achieved by waste pickers who have obviously also experienced deep stigma and exclusion from society, recognizing their value and contribution to society at the same time as a critique to the social and economic prevailing norms.

5. CONCLUSIONS

The experience of implementing the first module of the course titled “Solid waste, management, and governance with the inclusion of waste pickers for a sustainable and fair society” under UNICATA provides insights on a radically different model of grassroots education, delivered by waste pickers and academics working in pairs, linking popular ways of knowing with academic knowledge.

For the implementation of a decolonial course content and delivery it is a pre-requisite to recognize the existence of deep socio-economic gaps and disparities within society, colonial power structures that transect race, gender, and ethnicity, diminishing the value of a great part of the society in the global south context.

For transformative change to take place, UNICATA must apply a bottom-up approach grounded in pedagogical theories as articulated by Paulo Freire, Michel Thiollent, Fals Borda, among others. From the student perspective, problematizing concrete lived experiences of waste pickers in the classroom and during field visits are an essential teaching strategy, enabling critical understanding that can lead to critical action (Freire, 1974). We have witnessed many moments uncovering increased self-consciousness and social awareness, helping to understand society’s oppressive forces. Experienced waste pickers represent a fundamental element in the teaching and effective dissemination of knowledge. As both educators and participants, waste pickers are agents of change in transforming their lives and societies.

UNICATA students have also been involved in the development of a research project, based on the topics discussed in class and their interests. These student projects have followed a participatory research approach, where the students have worked as researchers (citizen scientists), accompanied by academics. This approach has revealed research findings on cutting edge topics, which will also help push the edges of what we know about how to conduct better practice-driven and policy-oriented research.

UNICATA is a prime example of a grassroots initiated experience in popular education demanding and offering knowledge democracy. It suggests a solution to the problem of social exclusion and limited opportunities available to waste pickers, while waste management related work is becoming a pressing necessity, given the environmental and climate crisis increasingly penetrating our life. Investing in waste pickers’ education not only prepares them better for the multiple work opportunities related to waste management but also establishes them as citizens and furthers their human development.

With the twofold purpose of UNICATA of teaching waste pickers and learning from them we hope to contribute to the design of a roadmap for the integration of waste pickers into the waste management sector. Finally, creating such an inclusive organization of knowledge cocreation and knowledge transfer brings waste pickers to the core of change, offering opportunities for mutual teaching and learning open for everybody.

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