

Workshop report: What are the affordances and limitations of the Philosophy for Children (P4C) pedagogy for teaching and learning mathematics?

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The increased emphasis on pupils' reasoning capabilities in primary mathematics foregrounds conceptual understanding and associated skills and dispositions (such as critical thinking, conjecturing, evaluating and evidencing). In the absence of pedagogical approaches to support this curriculum change, P4C offers an approach that can enable teachers to support pupils' reasoning and conceptual understanding. In this workshop, we reflected on the use of the P4C pedagogy in the Project for Citizenship and Mathematics (*PiCaM*), a European Erasmus project in global citizenship and mathematics education. In particular, we explored the affordances and limitations of the P4C pedagogy in addressing global learning and mathematics education that also reflects ongoing debates within the P4C community and raised questions about the extent to which it may support either a neo-liberal interpretation of citizenship and global competence and / or a critical citizenship linked to affirmative politics. We considered the implications of this approach for social justice.

Keywords: philosophy; thinking skills; critical citizenship

What is Philosophy for Children (P4C)

We began this workshop by introducing key characteristics of P4C. P4C is an enquiry-based dialogic pedagogy that is underpinned by the 4 Cs: creative, caring, collaborative and critical thinking (Lipman, 2003). Participants are usually seated in a circle, and after reviewing the ground rules for the discussion, the facilitator introduces a stimulus. Following this, participants are invited to generate 'discussible' questions, before they vote for the question that will inform the discussion. Throughout, the facilitator/teacher's role is to create and maintain a caring and collaborative ethos, and to model and encourage participants to employ critical and creative thinking moves as they deliberate on the question. The teacher/facilitator draws attention to the philosophical concepts/'big ideas' in the chosen question and use Socratic questioning to support the participants' search for 'truth'.

In the workshop, after an initial introduction to key P4C ideas, a short video (<https://www.youtube.com/watch?v=dh28kEL23q0>) about the use of P4C in Gallions Primary School was shown. As well as the methodology described above, attention was drawn to P4C's choice-based approach where children are asked to think, commit, justify and reflect. An example from a *PiCaM* activity illustrated this: [Global Crisis and Local Solidarity: Debt vs Money as a Common Good](#): *Should you borrow from a pawnbroker?* Participants were then given a taster of a P4C session using another short video as the stimulus (<http://www.complicite.org/emp/>).

Project for Citizenship and Mathematics (*PiCaM*)

We then introduced *PiCaM*, a curriculum development project co-funded through the ERASMUS+ Programme of the European Union involving teachers and curriculum developers from Germany, Romania, Greece, Portugal and the UK.. (See <http://www.citizenship-and-mathematics.eu/> Project number 2017-1-UK01-KA201-036675). We explained that, in the *PiCaM* proposal, we wrote:

Using the core curriculum as a vehicle, materials will be devised and tested that embed global learning content and participatory approaches in the teaching of mathematics. Attention will be paid to both mathematics and global learning curriculum content with the learning mediated through appropriate and inclusive pedagogies, supporting an innovative, participatory, integrated approach to developing social, civic and intercultural competences and critical thinking.

Thus we attempted to embed critical global learning in the teaching of mathematics in school for young people aged 10-12 years, using inclusive, participatory and innovative pedagogies including P4C, in order to develop social, civic and intercultural competences and critical thinking.

Also in our proposal, we attempted to invoke a notion of citizenship that extended beyond the individual and the nation state. We wrote:

... in recent patterns of cross-border migration into Europe, children have escaped poverty and war and now face the long struggle of adapting to life in a new country. Children in host countries also need adaptive skills to face the challenges and seize the opportunities that increased globalisation entails. Critical global learning supports the understanding of ourselves as citizens, both world-wide and, in particular, as citizens of Europe. There is a need to build social cohesion on the basis of shared values of inclusivity and equity for all.

But, at this stage, the concept of citizenship was insufficiently examined and explored. This became clearer as the partners began to work together and to devise methodological and conceptual guidelines for the project. We became aware that the extent to which it is possible to build on the idea of citizenship in Europe to serve social justice and progressive social change is unclear and potentially problematic.

The citizen in Europe

The concept of citizenship is both contested and slippery and there are many possible ways in which the concept is used and understood. In the workshop we offered (simplified) characterisations of two such understandings: the ideal neo-liberal citizen and the critical, socially engaged citizen.

The **ideal neo-liberal citizen** is:

- individual, conforming, law abiding and accepting of the *status quo*
- schooled in white European languages, history and culture, implying conformity to a single cultural form and an absence of difference and heterogeneity
- active and entrepreneurial, one who fashions their own identity, apparently performing self and citizenship without reference to the social-political context
- schooled in and governed by Western rationalist thinking.

In contrast, the idea of the **critical, socially engaged citizen**:

- requires the person-centredness, empathy and human values currently advocated by many of those engaged in anti-globalisation movements

- strives for a deep ecological democracy that stresses interconnectedness between people and the planet
- counter[s] nonperson treatment of people
- encompasses pluralism and diversity, working against notions of sameness and marginalisation of difference
- sees citizens as social and as politically located rather than understood simply as individuals.

We explained that, in *PiCaM*, we are seeking to operationalise something like the second of these two understandings in a prevailing climate which largely espouses and valorises the first.

The role of P4C within *PiCaM*: can it contribute to a transformative agenda?

It was clear to us at the proposal stage that P4C had much to offer *PiCaM* in terms of helping the project explore a less teacher-centric, more dialogical way of children and teachers engaging with mathematics in school; and, as work progressed, we became aware that it also had the potential to inform how *PiCaM*'s global learning and the mathematical competencies were connected through the P4C focus on the 4Cs in thinking: creative, critical, caring and collaborative. Equally, however, we came to realise that, thinking about thinking was, in itself, unlikely to be enough for *PiCaM* to address its transformative intentions (Kohan, 2014).

In the workshop, we drew on two key papers that we are currently using to help us understand better both the potential and the potential limitations of an uncritical use of P4C: the first by Gert Biesta (2017), *Touching the soul? Exploring an alternative outlook for philosophical work with children and young people*, and the second by Walter Omar Kohan (2018), *Paulo Freire and Philosophy for Children: A critical dialogue*. Both these authors support doing philosophy with children and both are sympathetic to the aims and practices of P4C. However both also recognise that

P4C is not as transformative, as revolutionary and as radical, *as it is desirable for it to be to make any difference* in these neo-capitalistic, global times— not, at least, in the usual form its educational theory and practice takes. (Kohan, 2014, p.46)

The next two paragraphs indicate how we summarised those concerns of the articles upon which we were drawing in the workshop.

We noted that Biesta believes that doing philosophy with children is particularly helpful in enabling them to ask questions - questions about the world and questions about their own role and position within it - and he values both the contribution this can make to their understanding of and learning about the world and also the way in which it feeds children's thinking. However, he is also aware of how the position of the participating child is framed by most of the philosophical work he has seen undertaken in schools and he argues that another positioning is possible:

The subject position that is made available in this way, is that of the I who asks questions, who makes sense, who seeks to understand ... What I have tried to suggest is that there is at least another subject position possible, not as the subject who asks questions but as the subject who is being put in question and through this is being called into the world ... in the world but not in the centre of the world. (Biesta, 2017, p.434)

He believes that most schooling in neo-liberal societies is no longer providing education but rather has been reduced to offering 'learnification' which he describes as intelligent adaptation to one's existing environment where children 'learn' in a way not

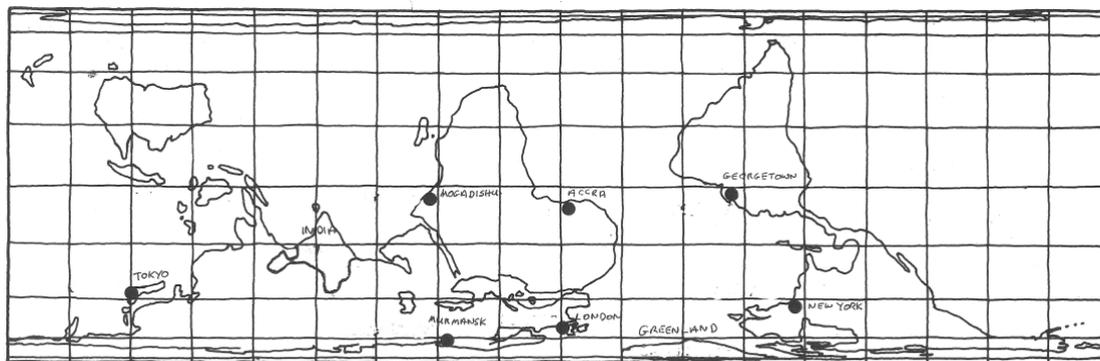
dissimilar from robotic vacuum cleaners. He demands but says he rarely sees philosophical work which reaches children's hearts or touches their souls (p. 418).

Turning to Kohan, we noted that, in a complex and interesting article, he makes a number of critiques of the way P4C is usually practised. In the workshop we concentrated on four of them. First, he notes that P4C does not take up ideological issues about the nature of societies. He believes it does contribute to an education for citizenship. Drawing on writings by P4C founders, he describes the P4C approach as providing tools that all participants in democracy need, guiding children in order to make them tolerant, responsible, pluralistic citizens - but also as employing enquiry in a neutral and an impartial fashion without considering that the democratic contexts children and citizens encounter might be unfair and unjust. Second, he notes that P4C gives importance to a given method and writes that "where there are predetermined forms, ideas or models, philosophical thought will not find its place" (p. 619). Third, like Biesta, he is concerned about P4C's emphasis on rationality which he sees as a way of formatting people to become more capable of an intelligent adaptation to the labour market. He contrasts this with thinking as framed within critical approaches to teaching and learning: "while P4C considers critical thinking as a set of reasoning skills, critical pedagogy goes beyond this, meaning that critical thinking puts into question the unfairness of the status quo" (p. 620). Fourth, he calls into question the way that P4C distinguishes between, for example, teachers, teacher trainers and specialists. He says that "the division of labour between the philosopher who thinks and conceives the programme and the teacher who applies it is a symptom of an oppressive conception" (p. 620).

Looking at some *PiCaM* resources

As noted above, an early stage of the project focused on the development of conceptual and methodological guidelines to inform the curriculum materials. Here we drew on the 'habits of mind' or mathematical competences necessary for successful, engaged and critical learning of mathematics (Povey, 2017), such as conjecturing and checking things out and visualising, imagining and using intuition. Other influences include P4C, particularly the focus on engaging children in meaningful discussion. This approach resonated with our aim to build learning communities where 'the attainment of the group is valorised rather than the attainment of the individual' and where the classroom was seen as 'a dialogic space in which all learners develop their own epistemological authority' (*PiCaM*, 2018, p.2). From these principles we developed a matrix, mapping the key mathematical competences of the five partner countries, working with the OECD 'Global Competences' (OECD, 2018). Added to this, we drew out salient features of the Earth CARE framework (Earth CARE (i) Community, 2017)), with its deep, transformational learning processes.

Draft curriculum materials have been trialled by schools in each partner country. In the workshop, we used three of these. [Mapping our world with mathematics](#) aims to help learners understand that the taken-for-granted way we see



the world is shaped by historical forces - relationships of domination and dominium and the experience of colonialism. Concerned with the mathematics of map making it



questions north/south, Eurocentrism and the construction of the nation state. In [Global Crisis and Local Solidarity: Debt vs Money as a Common Good](#) contemporary hegemonic ways of understanding money and debt are interrogated and critiqued. The role of mathematics in promoting neo-liberal values is considered as are the ways in which unproblematised uses of

mathematics have contributed to the global crisis. The notion of *commons* as shared resources in which each stakeholder has an equal interest is explored and the TEM

local currency in Volos, Greece is studied in order to attempt to understand how these reframe goods, services and relations. [Mathematical Bodies](#) is rather different from the others in that the material does not have any content linked specifically with global education. Its function is solely related to pedagogical considerations. Here mathematics is explored as embodied and playful and experienced together. The activity is designed to build a learning group where everybody matters and everyone has an equal role to play.



Discussion

We shared these curriculum materials and invited reflections on how, if at all, the materials produced:

- offer a critical, socially engaged citizenship and a challenge to current injustices and inequalities?
- encompass pluralism and diversity and work against notions of sameness and marginalisation of difference?

- address the hiddenness of mathematical models and their supposed neutrality in the social field?
- promote person-centredness, empathy and human values and stress interconnectedness?

In the discussion that followed, participants were in general supportive of the draft materials on offer. In particular, the way that [Mapping our world with mathematics](#) challenged taken-for-granted assumptions about how we view our world and the embodied and inclusive approach of [Mathematical Bodies](#) were seen as working effectively towards the project aims. Two recommendations were made for providing greater guidance in the latter. It was suggested that more explicit advice be included about how to enable all children to access the activities, for example, wheelchair users or those who find group activities challenging. And, whilst there is guidance about how to make the embodied experience one where everyone matters and all have an equal role to play, no guidance is currently given about how to make this also the case for the explicit mathematical questioning too. Little was said about [Global Crisis and Local Solidarity: Debt vs Money as a Common Good](#). We believe that there was not sufficient time for participants properly to engage with this perhaps more complex activity suggesting that its purpose needs to be made clearer. Questions were also raised about the extent to which some religious cultures might be unhappy about considering "magic" squares or usury.

As workshop facilitators we found the feedback both encouraging and useful and are very grateful to the participants for their willingness to engage with our project and its associated moral and political dilemmas.

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