frontiers | Frontiers in Education

TYPE Original Research
PUBLISHED 14 June 2024
DOI 10.3389/feduc.2024.1215522

OPEN ACCESS

EDITED BY
James Dyke,
University of Exeter, United Kingdom

REVIEWED BY
Marc Craps,
KU Leuven, Belgium
Ana Isabel Nunes,
Nottingham Trent University, United Kingdom

*CORRESPONDENCE
Katerina Zourou
✉ zourou.aikaterini@ac.eap.gr

RECEIVED 02 May 2023
ACCEPTED 13 May 2024
PUBLISHED 14 June 2024

CITATION
Zourou K, Potolia A and Oikonomou S (2024) Academic activism: learning and self-transformation through collective action taking. *Front. Educ.* 9:1215522. doi: 10.3389/feduc.2024.1215522

Academic activism: learning and self-transformation through collective action taking

Katerina Zourou[1]*, Anthippi Potolia[2] and Stefania Oikonomou[1]

[1]Web2Learn, Thessaloniki, Greece, [2]Department of Communication, Université Paris 8, Saint-Denis, France

Activism, as a manifestation of citizen engagement for social purposes, can be practiced by individuals and communities alike, such as communities of professionals and, in this case, professionals in academia. Academic activism is a novel form of socio-political engagement in scholarly communities. Recently, communities engaged in academic activism have multiplied, mostly due to the climate emergency and increased awareness on human-induced climate change. This paper focuses on the learning elements and self-transformative potential of becoming an academic activist. This is done by analyzing three key areas: (a) the perceptions of self, (b) the learning component, and (c) the educational component, namely teaching the very activities that activists carry out at their universities. To serve these objectives, we conducted eight semi-directive interviews during the summer of 2022 in which participants drew upon their personal experience and life trajectories in their journey to becoming academic activists. Using a Discourse Analytical framework, we scrutinized the semantic fields summoned and the discursive spaces mobilized by the interviewees. The findings of this study highlight the participants' determination for activism, depicting it as a conscious act, a duty. Moreover, three types of learning have been depicted, demonstrating the wealth of learning trajectories experienced. The potential impact of academic activism on teaching practices (societal role of education) has also been depicted.

KEYWORDS

academic activism, learning, technology-mediated communities, identities, climate change

1 Introduction

Alongside the democratization of science and its results, scientists play a key role in enabling access to knowledge (cf. open science) and engaging citizens in the shaping of science (citizen science). It can be claimed that scientists are able to catalyze the relationship between academia and society, either by directly involving citizens in scientific knowledge production (citizen science, community science, public participation in scientific research (PPSR; Haklay et al., 2021) or by getting involved themselves in various forms of science advocacy. This communication of science goes beyond simple reporting of scientific findings. Hence, science advocacy is a tasking pursuit that touches upon the value systems of scientists and their audiences (Schmidt and Donner, 2017; Pereira and Völker, 2020). For instance, it is often the case that contemporary societies show signs of mistrust in science due to political and socio-economic reasons (Druckman, 2022). Furthermore, politicians have attempted to disregard scholarly work in climate emergency discussions (IPCC, 2022). This in turn compels academics to embrace more direct, even radical, forms of activism to make their voices heard, especially when

addressing issues related to the climate emergency. Thus, we define academic activism as a means for science advocacy that can take various forms, from science communication, to non-violent civil disobedience (Ratamäki et al., 2019).

In this paper, academic activism is understood as a dynamic process that influences the identity spheres (individual, social, and academic) of the scholars engaged in it. To examine this phenomenon, we adopt a discourse analytical framework to study interviews that bring forward the personal accounts of academic activists who are engaged in climate justice movements, or communities that are active in the democratization of scientific research.

The paper is structured as follows: it begins with a literature review that contextualizes academic activism in the broader socio-digital landscape, drawing from the Learning sciences. Subsequently, the methodology is outlined, followed by an analysis of the interviews conducted, and conclusions drawn. Finally, potential areas for further academic exploration and research are discussed.

2 Literature review

2.1 Socio-digital engagement in climate emergency and the role of academics

Scientific evidence of the climate emergency, coupled with an increasing number of extreme climate phenomena, have facilitated the realization of human-induced climate change and the need to take immediate action to mitigate its effects (The Lancet Planetary Health, 2022). However, it seems that the impact of scholarly work in policymaking (e.g., for climate change and biodiversity) has been overlooked, forcing academics to engage in more active forms of citizen engagement (Thierry et al., 2023), including acts of non-violent civil disobedience. This boundary-crossing activity, from mainstream academic activity to science advocacy and non-violent civil disobedience (Kenny, 2021), will be the focal point of our contribution.

Technological mediation plays a key role in this process, with digital technologies affecting local and global networking, participation and outreach of academic activist communities (Koc-Michalska et al., 2016; Kaun and Uldam, 2018). In this context, we argue that these digitally-enhanced forms of action for social cause have made academic activism a source of self-transformation, affecting learning and teaching practices in academia. Despite the wide acceptance of citizen engagement as a democratic activity to be fostered by all citizens, it is often overlooked that academics embrace multiple social roles and identities, including that of "active citizens" (Gardner et al., 2021). Since their work is connected with the advancement and wellbeing of humanity and the environment, it should come as no surprise that academics and researchers are often engaged in climate action.

Therefore, in this paper, we claim that academic activism should be understood as a practice adopted by informed and responsible citizens, and no discrimination should be made against them on account of their professional position. On the contrary, it is because of their work in various scientific fields, that the academic's knowledge and actions should be seen as a contribution to bridging the gap between science, society and policy (Urai and Kelly, 2023). Finally we suggest that academic activism be seen as a journey of self-transformation for the academics themselves.

2.2 Academic activism

Activism refers to a series of actions designed to draw public attention to pressing social issues in order to generate social change. According to this notion, Parsons (2016) argues that "activism can play a vital role in society, raising awareness of important issues, such as environmental or conservation threats or civil rights issues." In academia, a growing number of academic staff engaged in socially motivated actions has led to the emergence of the term "academic activism" (Parsons, 2016; Kenny, 2021). The forms of action-taking can range from advocacy and public talks, to marches, boycotts, and occupations of public and private spaces. Non-violence is a principle that is common to all communities observed in this study. Chenoweth (2020) describes non-violent civil disobedience as "the act of non-cooperation with some system or regime by social, economic, and political means."

Aiming to reinforce academia's civic and social objectives, academic activists are often driven by their (moral) commitment to work toward a just future. As the dire consequences of climate change on human societies and the environment become more and more apparent (IPCC, 2022), academics and researchers have begun to question their role in tackling this socio-environmental calamity. In this context, a scientific paper and call for action, by Ripple et al. (2019), boldly states that "Scientists have a moral obligation to clearly warn humanity of any catastrophic threat and to 'tell it like it is'." The paper soon gathered more than 11,000 signatures from scientists worldwide signing up to its cause (Ripple et al., 2019). Similarly, climate emergency community action groups in which academic activists are involved, usually adopt the role of "science communicators," thus promoting public trust in climate science and the environment (Rödder, 2022).

Although research on academic activism is in its initial stages (Racimo et al., 2022), there are already studies that question the broader societal role of academics, thus raising awareness of the need for more socially-responsible academic attitudes. For instance, Berné et al. (2022) analyze the carbon footprint of the academic activity of different disciplines, as a means to demonstrate the harmfulness of some of these activities, such as frequent travels. Furthermore, tools to measure the impact of academic activity on the environment at national level are starting to emerge. Mariette et al. (2022) present a framework for collecting and analyzing large amounts of homogeneous carbon emission data in a network of research entities, on a national scale (France).

Regarding issues of outreach, being an academic activist often includes collaboration with community groups to which the "message of change" should be conveyed. To reach a wider public without succumbing to a top-down and sterile approach to learning, academic activists seek to encourage knowledge exchange with citizens, while often creating "discussion spaces" to deliberate on respective topics. As highlighted by Ratamäki et al. (2019), activism is about "the relationship between the messenger and the audience;" a statement that acts as a guiding

principle to academic activists too. In this context, it has been argued that academic activism can foster transformative learning processes in individuals through service-learning projects and active, collaborative learning (Ramasubramanian and Sousa, 2021). The following section presents an overview of communities best known for their academic activism.

2.3 Outline of academic activism communities

The three most widely known communities of academic activism are Scientist Rebellion, Sciences Citoyennes and Organization Scientists for Future. The list is not intended to be exhaustive but rather indicative of groups who are actively involved in connecting like-minded academics.

2.3.1 Scientist Rebellion

Scientist Rebellion (SR) was founded in 2020 and has since become one of the widest trans-disciplinary communities of academic activists, with a nexus of representations at country level (Denmark, Germany, Italy, Netherlands, Spain, Sweden, UK, Mexico, Australia) and at regional level (Nordic countries, US/Canada, and Latin America). Additionally, discipline-specific SR communities have also been initiated in 2022 (see #HistorianRebellion). SR emerged from the Extinction Rebellion environmental movement that was formed in 2018 with the aim of using non-violent civil disobedience to compel government action to avoid tipping points in the climate system, biodiversity loss, and the risk of social and ecological collapse. SR, whose motto is "We are scientists, calling for a climate revolution" (Scientist Rebellion, a), organized its first major public intervention during the COP26 in Glasgow, UK, in November 2021.

During this time, SR formulated its objectives: (1) to achieve decarbonization, (2) to make the wealthiest pay the costs of the transition period, and (3) to utilize the wealth of the 1% of the population to build a sustainable and just socio-economic system for everyone. Their actions include marches, strikes, boycotts, occupations, hunger strikes, and blockades (Scientist Rebellion, b).

2.3.2 Sciences Citoyennes

Sciences Citoyennes (SC; citizen science in English) is a French-speaking, trans-disciplinary community established in 2002. SC calls for the democratization of science and public participation and engages in different forms of face-to-face and digital activism. The group organized a 2-day event in August 2022 called "Summer Days of Engaged and Related Knowledge" (Journées d'été des Savoirs Engagés et Reliés, Sciences Citoyennes, 2022) during which citizens, researchers and civil society representatives were engaged in sharing insights into social and climate action while co-creating scientific knowledge that is open and accessible to the public.

2.3.3 Organization Scientists for Future

Organization Scientists for Future (OS4Future, a,b) is a movement founded in 2019 by organization and management scholars. It aims to raise awareness of climate change and promote urgent action to tackle its effects. The movement pursues its mission in four ways: research, teaching, practice and leading by example. OS4Future seeks to promote change at individual and collective level, as their educational approach is coupled with hands-on activities that can serve as a paradigm shift in society, influencing both its members and its structures. One of the more prominent actions of OS4Future is the pledge to drastically cut CO_2 emissions when traveling for academic purposes (conferences, meetings, etc.). The movement has since embraced traveling by public transport or no-emission traveling (e.g., cycling) as a symbolic act (Delmestri, 2019). Moreover, OS4Future is connected to the international movement of scholars "Scientists for Future" that came into being in 2019 (Delmestri et al., 2021).

2.4 Framing academic activism as an identity shaping and learning process

By studying the personal trajectories of some of these academics, it becomes apparent that academic activism is a complex and multifaceted phenomenon that influences the nature of individual identity as a scholar and as a citizen. The experience of academic activism is also notable from a learning perspective. More broadly, academic activism is manifested through various actions ranging from blockading bridges and streets, to protesting outside the offices of public or private institutions, to organizing peaceful but disruptive mobilizations on university campuses. These actions are fuelled by the academic activists' perceptions of what constitutes the identity of an "active citizen" and their role in society.

In this context, academic activists are viewed as citizens that embody multiple social roles, who want to positively impact their social environment, while acknowledging the influence and limitations that their social surroundings impose on them (Kenny, 2021). Constructing or shaping one's identity, or negotiating it, is a process of assigning meaning and is constructed diachronically (Baldauf et al., 2017). It is the "traces of experience" identified in the process of shaping one's identity that are central to this study. Baldauf et al. (2017) adopt Ricoeur's conceptual framework of identity construction, as "this philosophical perspective allows us to consider the dialectic between permanence and change over time in the construction of an individual's identity (n.p.)."

Indeed, Ricœur (1990) introduces a major distinction between identity *idem* (*mêmeté*), and identity *ipse* (*ipséité*). An individual's identity is a combination of the two. However, the identity *idem* never changes. It remains constant and doesn't ask "who am I?" but rather "what am I?" In the present study, this difference is of major importance: the individual scientists of the study are more than ordinary scientists, and this "elevated" identity has developed over time, given that their regular research activity was not sufficient for them to be heard. Therefore, it is the identity *ipse* that allows the identity *idem* to move on, question itself and not prevail as an imminent, absolute, closed and confining identity.

In *Temps et récit* (Ricœur, 1985), Ricoeur introduces the notion of "narrative identity" which allows the two poles of identity, *idem* and *ipse*, to interact with each other in a dynamic continuum. Narrativity is not to be understood "literally," as the individual narrating their own story, whether in writing or orally. Rather,

it is the result of reflecting on one's personal journey and their interaction with others. According to Bucholtz and Hall (2005, p. 598), the construction of identity through discourse "always acquires social meaning in relation to other available identity positions and other social actors." Thus, it is argued that if evolving narratives and transformative identities are made possible by the social standing of human beings they can only be revealed as such by those who have gone through this learning experience (see also Blondeau et al., 2020).

3 Method

Among the disciplines that study academic activism (e.g., sociology, management studies, political sciences, and life sciences), this paper is grounded in the Learning sciences, by focusing on the learning process and identity forming dimensions of the engaged academic activists. Ultimately, this is a study of academic activism as a boundary-breaking activity that originates from mainstream academic activity and extends to unconventional forms of action, including acts of non-violent civil disobedience.

The paper is anchored in the Learning sciences, and adopts the epistemological paradigm of lifelong and life-wide education (Colin and Le Grand, 2008). We thus consider that any experience constitutes a source of learning about oneself and others, or about Oneself as Another (Ricœur, 1990). Of particular interest is the extent to which academic and civic engagement becomes a source of existential (re)discovery and characterization of one's identity (Ricœur, 1990) through social interaction; its reflexive distancing and the narrativity reflected in the interviews.

The three research questions (RQs) of the paper are:

1. (RQ1) What are the perceptions of academic activism by those practicing it?
2. (RQ2) How does learning unfold between different academic activists?
3. (RQ3) How does academic activism affect academic activists' teaching practices?

From a methodological viewpoint, the nature of our research is qualitative and grounded on a sample of eight individual interviews. A ninth interview was incomplete and did not take place due to personal matters, and so, was not included. We adopt a thematic analysis and a discourse analytical framework (Lesourd, 2009; Pineau and Le Grand, 2013; Maingueneau, 2014, 2021), to highlight the individual conceptions, perceptions and opinions of the interviewees. To do so, we relied on the study of the mobilized semantic fields, the objects of discourse evaluated positively or negatively and the intensity of this evaluation, the certainties, beliefs, doubts and hesitations expressed and the positioning of the interviewees in relation to these. With regards to academic activism the interviews were analyzed in relation to the academics' own ethos, knowledge, know-how, interpersonal skills and gradual evolution over time. Finally, we examine the turning point in the interviewees' lives that led to move from research to action.

The interviews were designed to allow time for building trust between the interviewee and the interviewer, as well as to allow for the interviewer's understanding and the interviewee's reflexivity to develop. Indeed, as the table below shows, the majority of the interviews lasted ~45 min. The interviews were conducted one-to-one in June–July 2022. They were done remotely (by videoconference) and in English.

Due to the geographic dispersion of interviewees, located in different countries spanning from Europe to Australia, interviewing in physical presence was impossible and thus online meetings were mandatory. At the same time it is considered an advantage of technology that made these interviews a reality. Interviews were both audio and video recorded, with the consent of participants. Even though English was not the mother tongue of all the researchers, English is widely used by them as a lingua franca; a language of teaching, research and activism. Indeed, the use of this language during the interviews did not interfere with the interviewees' (as well as the interviewer's) ability to express the subtleties of their reasoning, as they are all highly fluent in English.

All participants were invited to the interview after being informed of the scope of the research, the interview protocol and the interviewee questions. Prior consent was obtained from all participants, with regards to how the interview material would be exploited. Participants had the right to withdraw if they felt that the use of the interview was inappropriate. The reason for communicating the questions beforehand was to give participants sufficient time to prepare for the interview and to allow for more in-depth reflections.

Our interview guide was composed of four questions which matched the three research questions (RQs):

RQ1: What are the perceptions of academic activism by those practicing it?

- *What is academic activism for you?*

RQ2: How does learning unfold between different academic activists?

- *What is the learning value (in terms of knowledge, know-how, interpersonal skills) that you retain from your experience as a digital activist?*
- *What is the role of social networks in your activist trajectory?*

RQ3: How does academic activism affect academic activists' education practices?

- *What is the impact of this experience on educating future generations?*

During the interviews, the questions were presented in a different order, more appropriate for an initial first contact and oral exchange. A semi-directive interview modality was chosen, with questions serving more as a reference than as a strict guide. Regarding transcription and analysis, interviews were transcribed by an automated transcriber, transforming verbatim the audio into text. This automatic transcription was then reviewed and corrected manually. Pauses and hesitations have not been considered significant in this particular context. Once the interviews had been adequately and entirely transcribed, with the help of a color code, the authors carried out several readings to identify and classify, by means of a thematic analysis, the responses in line with our RQs.

4 Participants

The study relies on a non-exhaustive yet purposive sample of activists belonging to SR (6), SC (1), and OS4F (1), with six male and two female participants, all of them defining themselves as academic activists for several years. The proportion of interviewees per community (more numerous for SR) is justified by their track record (SR being the oldest and most numerous community of the three). The specific academic activists were chosen based on (a) their direct and ongoing engagement in activism for climate emergency, (b) their role within their activist communities (cf. organizers; founders; facilitators), and (c) being part of thriving academic activist communities in the Global North and South.

The interviewees originate from different disciplinary backgrounds and countries as shown in Table 1. For ethical reasons, the identities of our interviewees has been preserved.

TABLE 1 Disciplines and country of origin of the interviewees.

Interviewee	Country	Specialty
Int. 1	Denmark	Social and Economic Sciences
Int. 2	Germany	Economics and Human Cooperation
Int. 3	Denmark	Evolutionary Genetics
Int. 4	Mexico/Germany	Environmental Sciences and Health
Int. 5	UK	Public Health and Diseases
Int. 6	France	Biochemistry
Int. 7	Australia	Biology
Int. 8	Austria	Human Resources Management

5 Analysis

The analysis is organized and divided into three sub-sections, according to the three RQs outlined in the Methodology. Although the interviews were looked over by us in their entirety, we have identified and analyzed only those passages that are relevant to the paper's RQs.

5.1 How do academic activists perceive academic activism and their role?

Initially, we focused on understanding how academic activists may perceive and frame their role(s). In this context, our first observations refer to the level of certainty and assertiveness displayed in their answers. Whether defining academic activism or their role as academic activists, the viewpoints expressed are characterized by powerful and categorical statements. Even when expressions like "I believe," "I think," and "for me" are used, they seem to emphasize their personal point of view and not to question or doubt the necessity of their action.

> **Int. 1:** And if you're an academic, what you say, write and do matters in ways that you might not be aware of. And so academic activism comes in [...] You write stuff that ends up somewhere. That someone might read. And **someone thinks**, actually, yeah, that makes me think. And then **they do** something.

> **Int. 4:** *So, **for me**, academic activism is, **if you know the truth, then tell the truth**. You have the responsibility to tell the truth.*

> **Int. 3:** ***I do think** that if we as activists, if we as academics engage in activism, **we show how important** it is to organize and how little scientific advice is being followed by politicians around the world.*

> **Int. 7:** ***Scientists seek the truth**. That's what the 10-year-old in me, and that's what I wanted to do.*

> **Int. 2:** *[...] breaking the law, that is of course out of the ordinary. [...] **it is necessary** precisely to sound the alarm bell.*

> **Int. 5:** *Academia currently is my life. And so, if I couldn't fit activism into academia, I don't see how I would be able to do it. So, I don't see that joining XR (Extinction Rebellion) as a separate thing would fit the way that I think I should be doing activism. **But also, my work as a biologist it's so intimately intertwined with the climate emergency that I don't think it would make sense to do activism separate from that. I think it has to be part of it. So academic activism for me is really being a little bit pushy and going further than that**. A lot of our scientific problems we look it under a literal microscope sometime, and our problems are kind of all, "Let's try and let's deal with this tiny problem here." But, as I said, I've never been able to not see the bigger picture. So my academic activism these days begins with me, saying, "No, we have to look at the bigger picture."*

Even though not all of the interviewees provided a clear definition of academic activism, they explicitly expressed their perception of it and their involvement in it, as they semantically moved from the action to portraying themselves as actors. For these scholars, academic activism is perceived as a necessity, a matter of fact, a duty, or a part of the general mission of science, since the latter seeks the truth, condemns falsehoods, and alerts society to dangers. By looking deeper into academic activists' perspectives, we notice how academic activism encompasses a multitude of forms in which the social dimension of academia is brought forward (Ratamäki et al., 2019).

In addition to characterizing their activism as an "ethical duty" or a "child's dream," we also noted that other semantic expressions were used by our interviewees: words such as "crisis" and "disaster" were used to describe the "looming

danger," whilst "awareness" was used in relation to informing citizens and awakening other scientists not yet involved in these actions.

> **Int. 3:** *We are in a **crisis of giant proportions**, and politicians are doing virtually nothing about it. The public remains **uninformed** or **unconcerned** about it.*

> **Int. 5:** *And then academic activism in another sense, I think, means bringing some of the skills that I have learned in academia to the activism that people like SR (Scientist Rebellion) do. Bringing those things in both directions, I think. **Being outspoken in academia and trying to drag my colleagues into acting**. I think that's part of it.*

> **Int. 6:** *I think there are 2 dimensions of it. One is inside the scientific community. You have to **raise the awareness** of your colleagues and your scientist fellows. The other dimension is **outside the scientific community**.*

> **Int. 2:** *I believe the situation is **so dangerous** now that we need one step forward, **in order to inform the public**, we also needed to take action, so that would be out of the ordinary. [. . .] it is necessary precisely **to sound the alarm bell**.*

It was further noted that the term "the others" was vividly articulated in the discourse of the interviewees who did not wish to illustrate their differentiation but preferred to bring the inactivity or passivity of "the others" forward: the politicians who do not act, the public who are not informed and who cannot consequently act through words or actions, and finally of the other scientists who take comfort in an academic career and whose only objective is to nourish their symbolic capital. In relation to the latter, it is interesting to consider how two poles exist within the scientific community itself: "us," who defy obstacles in the name of a scientific ideal, and "them," who focus exclusively on fostering their own academic career. This distinction among scholars brings forward and testifies the issue of "pluralistic ignorance" and "business-as-usual" attitudes propagated within academia and identified in the latest literature (Thierry et al., 2023).

> **Int. 7:** *I became a scientist and interacted with scientists; I realized that generally scientists want to get **their** grant renewed. That's what **their** major orientation is. To get published, to do some research. Get **as much publications as possible out of that research, so that they can get their grant renewed**.*

In terms of this initial analysis, it emerges that our interviewees see academic activism as a conscious, voluntary and justified act through which they seek to raise public awareness. Their goal is, therefore, achieved by advocating conscientious science. That is, generating knowledge with increased awareness and sensitivity to its role in society.

5.2 Academic activism and (self-) learning

Science communication and advocacy that are mainly beneficial to external audiences, are also considered beneficial to scientists themselves. Hence, the elements that the interviewees shared on the value of self-learning and the societal value of their engagement justifies the observations made by Schmidt and Donner (2017) and Pereira and Völker (2020), that practicing science advocacy is inextricably connected to the value systems of the engaged scientists and their audience.

The interviewees claimed that the way in which their activism unfolded, as well as its collective, digitally-enhanced nature, qualifies as a lifelong learning process. This dimension has been less studied by researchers of academic activism. Any action carried out, even if it is limited to disseminating knowledge, has a major impact on the actor in terms of (self-) learning. In this context, we have identified three main types of learning among our interviewees, namely (a) organizational and methodological know-how, (b) knowledge about oneself, and (c) socially-constructed learning.

In the first category, we particularly notice practical, organizational and methodological know-how, such as shaping, organizing and clarifying one's arguments to be better received and understood by a wider audience:

> **Int. 1:** *What I have learned is a lot of social technologies and digital technologies, like the entire range of online platforms [. . .] the collaboration platforms, the different communication platforms that you use. [. . .] Organizational process; how to manage diffuse processes, that are normally horizontal and inclusive, but then also have to become hierarchical and very acute in terms of a non-violent direct action.*

> **Int. 2:** *I already have learned something really about what is the best narrative, the best way to engage people.*

> **Int. 3:** *I've learned a lot in terms of organizing meetings, facilitating meetings, [. . .]. And also, just learning new tools for outreach, as we were organizing scientific talks, especially at the beginning, during the initial stages of the pandemic, learning how to structure a Youtube video, how to coordinate among different people that might participate in a conference.*

> **Int. 5:** *I learned communication skills I would never have had. I do have good communication skills as long as I get the chance to prepare something beforehand. But if you're in something like climate you get fired difficult questions at you all the time. You have to learn to think a bit quicker. Do you need to answer these questions? If so, how do you answer them? So, it's pushing my communication skills into a whole other kind of, you know, I'm certainly not there yet, but it is making me think quicker and think more on my feet, which is something I wasn't able to do. It pushes me to be more organized. This is so urgent, you know, we have such a short timeframe. [. . .] We don't have 4 or 5 years to deal with something, we have a couple of months to plan the next action.*

> **Int. 6:** *And then, I have learned also how to phrase and to be concise, punchy, precise, and because that's the stake that's the goal of Twitter. Is to have an effect when people read you, you want to have an if on his mind, on her mind. And so, you have to choose the way you write what you want to say. What do you want to touch, and so that's a rhetoric exercise. You learn rhetoric, basically.*

Communication skills are mentioned the most in this first category. Here, we are moving away from the perception of the scientist as someone who only produces scientific results. In the aforementioned extracts, scientists act discursively ("an effect on people"). This demonstrates adjusting to the medium ("the goal of Twitter"), and to the audience ("be concise, punchy, precise"), as a way to democratize science and to address complex questions in a suitable, audience-oriented fashion.

Moreover, our interviewees also highlighted the transferability of these skills to their domain of expertise or to other fields:

> **Int. 1:** *My social media use [...] was kind of low level.* ***And now suddenly I'm engaging in social media, and that obviously also benefits my academic career.***

> **Int. 2:** *So yeah, I feel like it's been very viable,* ***and I've also been able to transfer some of these skills to my own research****.*

> **Int. 5:** *There is now such a focus to everything that we have to do, and that really helps prioritize. So that's a skill which* ***is so important in science****.*

> **Int. 6:** *And these skills then* ***can be used in other media and situations****.*

The above extracts illustrate that certain skills and know-how are not as clear-cut and isolated as one would tend to believe. Below, we present a case where certain practices have evolved as a result of this engagement with activism. That is, skills mastered before joining academic activism are now put to its service:

> **Int. 3:** ***About maybe 2 years ago*** *I would mostly use my Twitter* ***to promote myself and my papers and my group's papers*** *and now I rarely do that. I mostly use it to raise* ***the voices of people that are protesting, to sort of promote scientific mobilization, to connect scientists****. So, I'd say* **now***, it's* ***much more heavily****, an account about the* ***emergency*** *than it is about my particular field of science.*

Furthermore, beyond these changes in perspective and praxis, we also observe a significant change in attitudes and a reconsideration of one's priorities, as scientists-activists focus on the urgency of taking action to preserve humanity, and not on self-promotion. The temporal (and conceptual) contrast between "2 years ago" and "now" highlights the impact of citizen and scientific engagement on one's perception of their mission in the world. Beneath this past-present contrast, there seems to be a displacement from the individual self ("myself," "my") into a disobeying and protesting "we." Indeed, it is highlighted in existing literature that scientists may become more aware of their role in enabling academia-driven change for socio-environmental wellbeing through citizen engagement (Haklay et al., 2021).

In the second learning category, knowledge about oneself, we highlighted expressions of knowledge about the self. These are instances of learning that can be qualified as existential, resulting from a process of distancing from and reflecting on oneself and one's internal experience prior, during and in the post-activism experience:

> **Int. 4:** *I learned about* ***acceptance****, I learned about* ***tolerance*** *and I learned about* ***ignorance****, and not exactly because everybody's ignorant.* ***But how ignorant I was****! How ignorant we still are.*

> **Int. 6:** *But It's more on the psychological point of view.* ***It helps me knowing myself better also****.* ***The way I would react. The border lines I should not pass****.*

> **Int. 7:** ***I have found that by doing something, by acting, by getting involved, I feel whether it succeeds or not, I feel better****. It's easier to go from day to day knowing I'm actively involved.*

> **Int. 8:** *And then* ***to learn to deal with your emotions*** *because being under pressure in the social environment in which they consider you ill is not easy. So, in parallel, I'll also engage in meditation. For instance, mindfulness meditation allows you to deal with emotional concerns. And which is very widespread in this social movement, XR (Extinction Rebellion) and so on. Then, especially in my participation as a normal citizen in XR (Extinction Rebellion), for instance,* ***I learned some kind of stepping out of my status and my role in society. And being just one of any other****.*

When interviewees refer to what they have learnt since their engagement in academic activism, their statements are particularly paratactic and enumerative. The discourse becomes dynamic, their eyes light up and their gestures accentuate this vibrant flow, almost like the effervescence that a scientific discovery produces in a researcher.

The extracts above imply that the interviewees gained considerable self-knowledge, drawing satisfaction from their involvement, and from managing emotions, learning to be simple and anonymous. Additionally, it seems that involvement in academic activism may also be a humbling experience. It almost seems like an oxymoron that it is through activism that one learns "to accept," "to tolerate," to "realize one's ignorance."

This reality is a stark contrast to the stereotypical representations of the very word "activism" since in the collective unconsciousness collective action is often exclusively understood as "violent." We have also noticed the frequent recurrence of verbs like "learn," "know," and "find out," which underline not only the informal learning potential about themselves as a result of their

engagement, but also the fact that these learnings are experienced as scientific findings; as if their object of research has become their own self, their own identity, vivid, moving, just like science, and certainly not immutable.

Finally, the third category, socially-constructed learning, is inextricably linked to the second. It still includes learning that impacts on the individual level, but also involves learning that is constructed with "the social other" (scientist or general public). It is precisely the social dimension of learning which is highlighted and emphasized (underlined below) by adverbs of intensity and adjectives relating to enrichment, fulfillment and union:

> **Int. 2:** ***Learning from the people and listening to what their problems are, with respect to climate change, and then they would talk about their social day-to-day problems. I think that's tremendously enriching****. […] So, I find this way of engagement really* ***fulfilling****, although I must say that on many occasions, I don't agree with what my colleagues say. But I think this is an aspect of* ***enrichment*** *as well, because if we all thought in the same way, definitely that would be rather boring. So, I think this is also something that I have learned quite a lot.*

> **Int. 3:** *I've learned a lot* ***in terms of [..] learning to listen and sort of make space for people with very different backgrounds****.*

> **Int. 4:** *[…] I think* ***we need to nurture our knowledge, nurture ourselves, be more in contact with people****, and be in contact with nature.* ***I think when humans can join themselves together, and to know who are we and what's our purpose in the planet****, then, it's a utopic momentum but then it would be when we will be in equilibrium with everyone, and I think that's what I've learned.* ***To know people and to know who they are their purposes, their calls****.*

Here, the social, geographical, cultural or academic background of one's interlocutors is not of substantial importance. One learns to listen, to exchange knowledge and experience and to empathize. Despite the fact that the ultimate goals may still seem utopian or hard to reach, bringing people closer together and opening up to others is perceived as a significant step forward for humanity.

5.3 The impact of academic activism on educational practices

Prior to conducting the interviews, we questioned the motivations behind scientists' impulse to join academic activism movements. During the interviews' analysis we realized that it is activism itself that constitutes the real turning point in their lives. As pointed out in the previous section, this engagement has taught these scientists to be open to themselves and others. Regarding the academic duties of the interviewees, it seems that the focus is more on using their position as a (global) teacher to awaken, shape and mobilize the generations they are educating. From this perspective evidence may be questioned, the established order is critically examined, and the traditional thinking patterns and transmissive, vertical teaching models are replaced by more horizontal, maëutical approaches.

> **Int. 1:** *And* ***you give them different perspectives****. [...]* ***I don't just give them the received wisdom****.* ***But I push them, and I confront them a little, and I make things a little uncomfortable for them****. So [...]* ***academic activism is unsettling. It pushes the boundaries****.*

> **Int. 5:** *I am also involved in teaching.* ***How is it that we can teach this master's degree when in 2- or 3-years' time these students will be coming out into a world*** *where the biggest problem is the rising sea level, and you know, in the small island States.* ***I teach on global masters, so the students may be from anywhere****. They may be from Bangladesh, which is threatened by sea level rise. They may be from somewhere that is threatened by conflict that's exacerbated by this.* ***So, there's nothing that we do now that isn't touched by this and so I now find it since that kind of snapping point a couple of years ago****.*

Therefore, their role as educators is not merely to transmit "ready" scientific knowledge, but to raise awareness of imminent dangers. The career-oriented priorities, such as the impact and dissemination of one's work and research, are therefore reversed. It seems that a certain transition occurs from being a scholar-scientist to adopting the role of a pedagogue-scientist.

> ***Int. 3: I often interrupt my lectures to give teach-ins****. And generally, I think, almost overwhelmingly, the response from my students has been very positive when I do this.* ***Sometimes I get an applause which I almost never get at the end of a lecture****. People are just tired of listening to me talk. Because it's a bit of like a release of energy,* ***young people are constantly thinking about this completely affecting them****.*

> **Int. 6:** ***If I had to speak with a student today, I clearly will try to lead them to some form of activism****. And for many reasons, because I think also,* ***I'm more confident with my own values****, and* ***I'm more able to assume the consequences of pushing them really far in interpersonal relation, but also in the political field. And also, for their own future****.*

> **Int. 8:** *Fundamentally through students you have probably the* ***most direct impact on society****. And also, because, in the German-speaking world, I am aware of the work of Max Weber. Yeah. He wrote about the value of neutrality. And reading his work, it speaks mainly of the value of neutrality in terms of the professors in teaching. So, when I teach student in a business school,* ***I'm aware that I should not preach to them, so expose them to different ideas. So, I don't have an activist agenda with the students, I think. But I try to expose them to stuff that the more conventional teacher would not expose them to****.*

As seen in the above passages, the interviewees' positions are not exactly the same, but their viewpoint is one of engaged scientists addressing an audience of students already informed or ready to be informed. In this context, the interviewees have come to realize that they can no longer pretend that everything is in order. Interviewees 6 and 8 in particular feel the need to assert, directly or indirectly (e.g., the notion of "axiological neutrality" mentioned in the last extract), that scientific knowledge is no longer equal to wisdom but becomes an entirely political act. It seems that their commitment to academic activism and the collective momentum of such actions have been the driving force behind asserting their values, assuming their choices, and finally transmitting their convictions to their students.

Eventually, it becomes evident that they stand opposite their conventional peers, either by generating enthusiasm through their fervor (Int. 3), or by encouraging action taking (Int. 6), or even by promoting objective reflection while remaining committed (Int. 8).

6 Conclusion

By approaching academic activism as a learning and self-transformative process both on individual and collective level, this paper contributes to a more thorough understanding of this rising social phenomenon. Through a series of eight interviews with scholars actively engaged in academic activism, this study analyzed their experiences based on three dimensions: (a) the perceptions of self, (b) the learning component, and (c) the teaching component, namely the impact of activism on their educational practice. The presented samples highlight the process of interviewees generating meaning through engaging them in reflections on various forms of activism, spanning from science advocacy and public talks to acts of non-violent civil disobedience.

The analysis carried out in the study has highlighted deep-rooted perceptions and attitudes of academic activists engaged in collective forms of climate action. In particular, all interviewees defended academic activism, depicting it as a conscious act, a necessity or a duty to be fulfilled during the climate emergency. Furthermore, our analysis identified three types of learning experienced by the academic activists, namely (a) organizational and communication skills, (b) knowledge about oneself, with a particular focus on becoming tolerant toward different viewpoints or realizing one's own ignorance, and (c) a (self-)learning process that is constructed through meaningful interaction with "social others."

The analysis seems to convey that academic activism itself is a turning point in the lives of the scholars engaged in it. Their narratives imply with certainty that they have found true meaning and a sense of purpose in their personal and professional lives through academic activism. This transformative experience is one they seek to transmit and share with people of all ages, especially during their educational and teaching activities.

The narrative examined in this study allows us to highlight the strong social meaning of identity for the interviewees and their role as researchers. In fact, the notions of identities *idem* and *ipse* transcend the individual actors and become part of a collective dynamic. That of a group of activists (*ipse*) who are radically opposed to the stereotypical conception of the scientist (*idem*) whose life is punctuated by the constant search for funding and publication opportunities. This restrictive, stereotypic, vision of the scientist reduces them to the sole dimension of an individual, that has limited concern over their social mission, and who remains reticent, preferring to promote their career rather than denounce and warn the wider public. By contrast, the *ipse* dimension encompasses a sense of responsibility toward revealing the truth together with a political and social commitment, and a long-term vision for the impact of current actions on the future of humanity. Although this quest to change the world is sometimes seen as a childish dream that accompanies the scientist throughout their life (*idem* identity), it is the *ipse* identity that ensures that the dream is not forgotten and the person persists in their quest, constantly rediscovering and reinventing their identity through regular interaction between the individual and the group. For most of the interviewed scientists, their commitment to activism seems to be a trigger for the *ipse* dimension of their identity. Through this commitment, their way of being, teaching and transmitting knowledge is no longer the same.

Reflecting on the insights generated from the interviews' analysis, it should be acknowledged that there is still a long way to go to uncover the multiple dimensions of self-transformation within academic activism. Specific limitations linked to our research include the overrepresentation of scholars of the Global North in the purposive sample as well as potential limitations posed by personal statements and trajectories that cannot be regarded as representative of academic activists' self-transformation characteristics. Moreover, the selection of the interviewees' was made from networking with academic activist communities and is not based on pre-defined selection criteria.

In summary, the current study suggests that engaging in collective action fosters a process of (self-)learning among academic activists. Through this process, they adopt a more open and inclusive identity, transforming into active citizens. Importantly, this transformation is not seen as an individual endeavor but rather as a consequence of their collaboration and interaction with others.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by Katja Dupret, Roskilde University and an anonymous committee member of the Re:ERUA Project. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

Funding

Part of the research was supported by the project "Academic activism as manifestation of societal engagement and social innovation in responsible research" (https://web2learn.eu/portfolio/re_act/) granted by the open call "collaboration on pilot experiments for conducting responsible research" (grant: 10.000 euros, WP3 leader: Ass.-Prof. Katia Dupret) of the ERUA (European Reform University Alliance), a European Universities Initiative funded by the European Union. https://erua-eui.eu/.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Baldauf, H., Develotte, C., and Ollagnier-Beldame, M. (2017). The effects of social media on the dynamics of identity: discourse, interaction and digital traces. *Alsic* 20:alsic.3004. doi: 10.4000/alsic.3004

Berné, O., Agier, L., Hardy, A., Lellouch, E., Aumont, O., Mariette, J., et al. (2022). The carbon footprint of scientific visibility. *Environ. Res. Lett.* 17:124008. doi: 10.1088/1748-9326/ac9b51

Blondeau, N., Allouache, F., and Potolia, A. (2020). Littératures des migrations et des exils: espaces de partage et de réflexion sur les imaginaires des langues. *Italiano LinguaDue* 12, 491–432. doi: 10.13130/2037-3597/15003

Bucholtz, M., and Hall, K. (2005). Identity and interaction: a sociocultural linguistic approach. *Discour. Stud.* 7, 585–614. doi: 10.1177/1461445605054407

Chenoweth, E. (2020). The future of nonviolent resistance. *J. Democr.* 2020, 69–84.

Colin, L., and Le Grand, J. L. (2008). *L'éducation tout au long de la vie*. Paris: Economica/Anthropos.

Delmestri, G. (2019). *Pledge: EGOS by Train (#OS4F)*. Available online at: https://delmestri.blog/2019/05/03/pledge-egos-by-train-os4f/ (accessed April 15, 2024).

Delmestri, G., Etchanchu, H., Bothello, J., Habersang, S., Gutierrez Huerter, G., and Schüssler, E. (2021). "OS4Future: an academic advocacy movement for our future," in *Personal Sustainability Practices*, eds. M. Starik and P. Kanashiro (Cheltenham: Elgar Online), 218–229.

Druckman, J. N. (2022). Threats to science: politicization, misinformation, and inequalities. *Ann. Am. Acad. Polit. Soc. Sci.* 700, 8–24. doi: 10.1177/00027162221095431

Gardner, C. J., Thierry, A., Rowlandson, W., and Steinberger, J. K. (2021). From publications to public actions: the role of universities in facilitating academic advocacy and activism in the climate and ecological emergency. *Front. Sustain.* 2:679019. doi: 10.3389/frsus.2021.679019

Haklay, M., Fraisl, D., Greshake Tzovaras, B., Hecker, S., Gold, M., et al. (2021). Contours of citizen science: a vignette study. *Royal Soc. Open Sci.* 8:202108. doi: 10.1098/rsos.202108

IPCC (2022). "Summary for policymakers," in *Climate Change 2022: Impacts, Adaptation and Vulnerability*, eds. H. O. Pörtner, D. C. Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A. Alegría, et al. (Cambridge: Cambridge University Press), 3–33.

Kaun, A., and Uldam, J. (2018). Digital activism: after the hype. *N. Media Soc.* 20, 2099–2106. doi: 10.1177/1461444817731924

Kenny, K. (2021). Academic activism, pasts, presents and futures of critical publishing. *Ephemera Theor. Polit. Org.* 21, 203–215.

Koc-Michalska, K., Lilleker, D. G., and Vedel, T. (2016). Civic political engagement and social change in the new digital age. *N. Media Soc.* 18, 1807–1816. doi: 10.1177/1461444815616218

Lesourd, F. (2009). *L'homme en transition. Education et tournant de vie*. Paris: Economica/ Anthropos.

Maingueneau, D. (2014). *Discours et analyse du discours. Une Introduction*. Paris: Armand Colin.

Maingueneau, D. (2021). *Analyser des textes de communication*. Paris: Armand Colin.

Mariette, J., Blanchard, O., Berné, O., and Ben Ari, T. (2022). An open-source tool to assess the carbon footprint of research. *Environ. Res.* 2:e035008. doi: 10.1088/2634-4505/ac84a4/meta

OS4Future (a). *OS4F Action Statement*. Available online at: https://os4future.org/os4f-action-statement/ (accessed April 15, 2024).

OS4Future (b). *Our Mission*. Available online at: https://os4future.org/ (accessed April 15, 2024).

Parsons, E. C. M. (2016). "Advocacy" and "activism" are not dirty words–how activists can better help conservation scientists. *Front. Mar. Sci.* 3:229. doi: 10.3389/fmars.2016.00229

Pereira, Â. G., and Völker, T. (2020). "Engaging with citizens," in *Science for Policy Handbook*, eds. V. Šucha and M. Sienkiewicz (Amsterdam: Elsevier), 78–95.

Pineau, G., and Le Grand, J. L. (2013). *Les histoires de vie. Que sais-je?* Paris; Presses Universitaires de France.

Racimo, F., Valentini, E., Rijo De León, G., Santos, T. L., Norberg, A., Atmore, L. M., et al. (2022). *The Role of Life Scientists in the Biospheric Emergency: A Case for Acknowledging Failure and Changing Tactics*. Geneva: Zenodo.

Ramasubramanian, S., and Sousa, A. N. (2021). Communication scholar-activism: conceptualizing key dimensions and practices based on interviews with scholar-activists. *J. Appl. Commun. Res.* 49, 477–496. doi: 10.1080/00909882.2021.1964573

Ratamäki, O., Faehnle, M., Heiskanen, H., Peltola, T., and Quimbayo Ruiz, G. (2019). *Science, Activism and Societal Impact- Diversity of Relationships*. Available online at: http://www.collaboration.fi/2019/04/17/science-activism-and-societal-impact-diversity-of-relationships/ (accessed April 15, 2024).

Ricœur, P. (1985). *Temps et récit I et II*. Paris: Editions du Seuil.

Ricœur, P. (1990). *Soi-même comme un autre*. Paris: Editions du Seuil.

Ripple, W., Wolf, C., Newsome, T., Barnard, P., and Moomaw, W. (2019). World scientists' warning of a climate emergency. *BioScience* 70, 8–12. doi: 10.1093/biosci/biz088

Rödder, S. (2022). *Telling the Truth, Uniting Behind the Science- Climate Coalitions and Science's Place in Society*. Available online at: https://blogs.lse.ac.uk/impactofsocialsciences/2022/10/13/telling-the-truth-uniting-behind-the-science-climate-coalitions-and-sciences-place-in-society/ (accessed April 15, 2024).

Schmidt, G. A., and Donner, S. D. (2017). Scientific advocacy: a tool for assessing the risks of engagement. *Bullet. Atom. Scient.* 73, 344–347. doi: 10.1080/00963402.2017.1364008

Sciences Citoyennes (2022). *Journée d'été des savoirs engagés et reliés*. Available online at: https://www.helloasso.com/associations/association-sciences-citoyennes/evenements/journees-d-ete-des-savoirs-engages-et-relies (accessed April 15, 2024).

Scientist Rebellion (a). *How to… Teach-in/Educational Disobedience*. Available online at: https://scientistrebellion.com/teach-in/ (accessed April 15, 2024).

Scientist Rebellion (b). *Our Positions and Demands*. Available online at: https://scientistrebellion.com/our-positions-and-demands/ (accessed April 15, 2024).

The Lancet Planetary Health (2022). Walking the talk? *Lancet Planet. Health* 6:7. doi: 10.1016/S2542-5196(22)00099-7

Thierry, A., Horn, L., von Hellermann, P., and Gardner, C. J. (2023). "No research on a dead planet": preserving the socio-ecological conditions for academia. *Front. Educ.* 8:1237076. doi: 10.3389/feduc.2023.1237076

Urai, A. E., and Kelly, C. (2023). Rethinking academia in a time of climate crisis. *eLife* 12:e84991. doi: 10.7554/eLife.84991