Knowledge mobilisation strategies for responsible and inclusive academic research

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ABSTRACT

The present article introduces the concept of knowledge mobilisation (KMb) strategies in university research by linking university social responsibility with the concept of inclusive and responsible research, which implies an ethical perspective of equity and inclusion in responding to citizens' needs. The study objective is to discover the ethical position and KMb strategies in 80 research groups from five European countries. The amount and type of strategies applied are analysed from information gathered in semi-structured interviews and from KMb indicators. The results show that these strategies are still not widely used and point to four key elements in researchers' ethical positions: commitment, knowledge recognition, dialogue and cooperation. Strategies range from the initial formulation of the research problem to a sustainability plan for the research projects. The conclusions identify an emancipatory ethical perspective that rebalances power relationships between researchers and stakeholders, but that generates tension with public research policies and research quality evaluation criteria.

KEYWORDS Knowledge mobilisation; inclusive responsible research; strategies; participatory research; ethical perspective

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Introduction

The challenge facing academic researchers, understood from an ethical perspective of social responsibility, is to achieve quality with equity and to guarantee the principles of accessibility, equal opportunities and inclusion (UNESCO 2009). The academic research mission is there-fore not only to share knowledge to society, but also to guarantee the construction and gener- ation of knowledge that benefit society in terms of improvements and wellbeing for all its citizens (Piekut and Valentine 2017). This mission raises some theoretical and practical ques- tions onthe way researchers responds to citizens' needs and what form research takes when it is committed to developing more democratic, participatory and fair ways of building knowledge.

From social responsibility to inclusive responsible research

University social responsibility (USR) implies social commitment (Miotto, Blanco, and Del Castillo 2018), which means solving the important problems facing society and

that call for social, economic and cultural innovations (VanceLee and Kelly 2017). In the academic research, this ethical perspective entails developing strategies related to quality, ethics, commitment to the community and sustainability (Burget, Bardone, and Pedaste 2017). This socially engaged approach of researchers is manifested in a more inclusive and responsible way of doing research by recognising and taking on board equity and normativity (Ribeiro et al. 2018).

In this sense, transparency and dialogue with stakeholders should therefore be priori- tised in order to educate responsible citizens who are concerned about their social, environmental and economic impacts (Miotto, Blanco, and Del Castillo 2018).

Taking an inclusive approach to research implies active citizen participation, and particularly engaging vulnerable groups in the research process (Nind 2017). Its origins lie in collaborative studies with people with intellectual impairments, in which the individuals being studied are involved in decision making and carrying out the research (Sanahuja, Moliner, and Escobedo 2021). The discussion introduced by Nind (2014) on how inclus-ive education embraces other related approaches such as participatory and emancipatoryresearch is interesting. This has been critical in making visible the right of marginalisedpeople, such as people with intellectual disabilities (and others), to generate knowledgeabout oneself as co-researchers. The strategies the researchers use in this endeavour are based on the collaborative, shared construction of knowledge (Fullana et al. 2017), thusmaking research processes more democratic and creating spaces for the social mobilis-ation of knowledge, which in turn favours more horizontal relationships based on dialo-gue between researchers and participants (Chalachanová et al. 2020). Therefore, thesefacets are what make such research emancipatory, transformative and a driver of socialchange (Walmsley, Strnadová, and Johnson 2018). Such research mobilise participants'knowledge by taking into account their voices, needs and interests and involving them in the research process to construct knowledge together (Vienni Baptista and Rojas 2019).As researchers working in the Social Sciences and in particular in the field of edu- cation, we wonder how our academic research can serve the diverse society more respon-sibly and equitably from different areas of knowledge. We apply this participatory andethically engaged approach of knowledge mobilisation to academic research in order to improve our practices and their social impact. Consequently, the aim of this study is to investigate how researchers from different academic areas and traditions adoptthis approach in the various stages of the research process, what their positioning isand how they develop research based on values of social justice, equity and sustainability.

Knowledge mobilisation strategies in developing inclusive responsible research

The concept of knowledge mobilisation (KMb), coined in 2004 by the Social Sciences and Humanities Research Council (SSHRC) of the Government of Canada, is defined as (SSHRC 2017): 'an umbrella term that encompasses a wide range of activities related to the production and use of research results including the synthesis, dissemination, sharing and co-creation and co-production of knowledge by researchers and users ofthat knowledge (4)'.

KMb strategies develop this responsible and inclusive approach to research along three basic axes: co-creation of knowledge, horizontal and effective communication, and change orientation (Sales, Lozano, and Escobedo-Peiro 2021).

Regarding knowledge co-creation, KMb strategies are found throughout the whole process of generating, accessing, exchanging and using the information (Labbé et al. 2020; Powell, Davies, and Nutley 2018). Powell et al. identify the following strategies: '*facilitating networks, developing regular meetings of researchers and practitioners to discuss practice challenges [and] supporting peer to peer introductions*' (2018, 14). Vance- Lee and Kelly (2017) associate KMb with 'engagement', which they consider to be one ofthe elements that have encouraged researchers to take their stakeholders into account. Several studies use the term in this sense, such as Flynn and Ford's (2020) commu- nity-based research with Indigenous communities in the Arctic. Skipper and Pepler (2021) describe the experience of designing a toolkit with teachers using a co-creation approach to achieve the research objectives and KMb. The study by Abma and others (2017) in the context of participatory health research also explores how health research- ers can achieve a social impact by involving a range of different public health actors in anon-linear process of learning together about urgent problems.

Concerning communication strategies to mobilize knowledge, Mitchell, Harvey, and Wood (2021) emphasise the process of building tacit knowledge through collaborative spaces of dialogue, reflection and situated learning. On the one hand, communication requires horizontality in the collective construction of 'rules' and norms of action that improve the articulation between the research process and its application (Bombardet al. 2018). On the other hand, dissemination requires a commitment between research- ers and stakeholders so that the results have a real impact on the social context (Landryet al. 2008).

Indeed, change orientation is the third key element of KMb strategies, as both a meansand an end to transform reality and improve the lives of the people involved and their contexts. They are understood as tools or methods that foster the transfer of the research results into action (Bennet and Bennet 2007). Examples of such strategies include the process of adopting and appropriating knowledge for its practical application (Naidorf 2014) or the use of the research outcomes by agents from the context in which the research took place (Levin 2011). This conception emphasises the ethical dimension of research and 'by drawing on shared understanding, people can be mobilised to make decisions and take action' (Bennet and Bennet 2007, 15).

KMb strategies are directly related to the researchers' conceptions of the research, its objectives and the processes used to disseminate it. In our view, KMb strategies are not based on an instrumental or utilitarian concept of participation where researchers retain control over the process and the results, which is more similar to a knowledge transfer model. Rather, the participation must have an emancipatory component that comes from the ethical perspective of transformative research which enquires not just *for* but *with* citizens (Armstrong et al. 2019). Therefore, to identify this type of inclusive partici-pation in KMb practices in academic research, we should focus on the interactionbetween researchers and participants during the research process. Some previous studies have explored the positionality of the researchers. Krücken, Mishra, and Sei- denschnur (2021) argue that a researcher cannot expect to understand the world of prac- tice only from the theories and models proposed in the world of academic research. The human relationships that researchers create and foster between themselves and the par- ticipants are what become the essence of the project and their main aim is to cultivate interactivity between researchers and professionals. In their work, Skipper and Pepler

(2021) advocate creating communities of practice as a strategy for mutual learning that is capable of incorporating multiple voices and perspectives. These communities are spaces for the co-analysis and co-construction of knowledge and presentation, and the joint organisation of events to disseminate the results (Vienni Baptista and Vilsmaier 2021).

In order to apply these key elements of KMb strategies and assess them in aca- demics' research practices, several studies have classified the strategies and generated indicators to identify them. In this sense, we rely on the classification of Landry et al. (2008) who consider that interaction strategies, as opposed to information strat- egies, are those that generate collaborative and multidirectional personal interactions between researchers and participants. Moliner, Arnaiz, and Sanahuja (2020) highlightthe joint search for solutions to problem-situations, the joint presentation at confer- ences, courses or workshops and the co-analysis of inclusive practices as interactive strategies.

We have considered the indicators for assessing KMb activities developed in Labbe's and others study (2020) to be relevant to our study. These indicators are: access to results;type of participation in the project; products developed jointly and strategies for dissemi-nation; and the degree of involvement for practice change. Their results show that inter- active KMb strategies are effective in engaging stakeholders in research processes whose results affect them, that create spaces for joint exchange and reflection, and that encou- rage decision makers to collaborate with new stakeholders, particularly vulnerable groups.

Taking this previous literature into account, our study starts from the need to relate socially responsible research with an inclusive approach to citizen participation in aca- demic research. Considering that the responsible and inclusive research approach offers the most possibilities to contribute to the aims of social transformation andequity, this study poses the question of how research groups approach knowledge mobil-isation in the various stages of the research process. Do research groups engage stake- holders as participants? Do they use knowledge mobilisation strategies? What is the research groups' ethical positionality vis-à-vis stakeholder participation? How many knowledge mobilisation strategies derive from this ethical positionality and what are they? To answer these questions, the study analyses the ethical positionality and the KMb practices used by academic research groups in five European countries. Thestudy results allow us to draw conclusions on their implications for developing a more inclusive responsible research.

Methods

The general methodology used in this research project is a combination between a qualitative study based on semi-structured interviews with several academic research groups and a quantitative study that classifies the responses from the interviews ina series of ordinal level indicators, considering both the research area and the type of research (basic/applied) as independent variables. Both the interview and the indicators were validated theoretically and empirically by an expert panel of six national and eight international experts and through a pilot test with 17 research groups.

Participants

The research groups participating in the study were selected using the quota non-probability sampling technique, in which *area* and *type* of research were considered as the classification variables. This selection should have yielded at least six groups for interviews from each area (arts and humanities, sciences, social and legal sciences, engineering and architecture, and health), three corresponding to basic and three to applied research areas. However, as can be seen in Table A1 (Appendix), the quotas for research type could not always be met because of the research traditions in those areas. For example, we were only able to find two applied research groups in the area of science. Nonetheless, every attempt was made to meet the quota per area and a total of 80 research groups were interviewed in five European countries (Austria, Romania, Slovenia, Serbia and Spain), representing 791 researchers, of whom 52.9% were men and 47.1% were women.

Data gathering

Data were collected through interviews. The groups were first contacted and appointments arranged with the coordinators. Prior to the interview, participants signed an informed consent explaining the purpose of the interview and guaranteeing anonymity and confidentiality in the process and the results.

The interview consisted of three parts. The first part contextualised the research undertaken by the groups interviewed: the subject area, the stakeholders, and its connection with USR. The second part covered the entire research process from a participatory perspective. The questions focused on the stakeholders' participation in each stage of the research process: identifying the problem, research design, data gathering, data analysis, dissemination and sustainability. Finally, the third part took an inclusive ethical perspective on participation to explore the reasons behind the research groups' decisions to include stakeholder participation or not. In this case the questions varied according to the response given in the participatory stage, ranging from more reflective types of question for less *participatory* groups, to questions aimed at differentiating a *knowledge transfer* type of participation based on an instrumental, one-directional approach from a more inclusive type of *knowledge mobilisation* participation in which stakeholder participation has a clear emancipatory objective.

During the interview, the answers provided by the interviewees were scored according to the level of stakeholders' participation. These scores were: Level 1, no participation; Level 2, instrumental participation (transfer model); Level 3, full participation including decision making (mobilisation model).

The interviews were recorded and transcribed and then returned to the participants for them to revise and confirm the transcription. Codes were assigned to each interview to identify its origin and preserve anonymity (see Table A2 in Appendix).

Following the data analysis, an individual report was sent to each participating group with some questions for reflection. These questions formed the basis for a future day of meetings and debate with other research groups.

Data analysis

The data analysis was performed at two levels. The quantitative analysis was carried out by codifying the indicators on KMb practices. In this case, of the 80 groups interviewed we identified those which reported knowledge mobilisation practices. These data have also been used to describe research profiles in the framework of a broader project,which are not the focus of the present study. Once the groups that mobilise knowledge had been identified, a thematic analysis was performed on the interviews to describe and analyse the KMb practices undertaken throughout the research process. This was a deductive analysis based on the theoretical categories and the study objectives. The the- matic analysis is based on the categorisation proposed in the works of Landry et al. (2008), and Moliner, Arnaiz, and Sanahuja (2020), which allows us to analyse in detail and organise in patterns or themes both the positioning of the participants and theirKMb practices. We could understand and contrast the participatory and ethical frame- works of participants because we discussed the results with them in two moments.The first one during the interview, where, after the answer we show the different levels and description of the indicators and they placed themselves in the specific score,explaining their position, reasons and strategies they used. The second moment was after the interview, when they received a report with the summary of their answersand their position in the indicators. Then, they could clarify or change any answer ifthey were not agree.

All participants were informed of the aim and characteristics of the research and the conditions were agreed. They signed the informed consent aligned with the guidelines ofthe Ethics and University and Social Responsibility Committee of Universitat Jaume I. The ethical issues of confidentiality and anonymity were taken into account and the results were returned and discussed, and the conditions for their dissemination were agreed to by the participants in the study.

Findings

First, in order to answer the first two research questions on whether stakeholders partici- pate in the research and if so, whether or not that participation corresponds to knowledge mobilisation strategies, we present the number of participatory strategies in the different stages of the research process detected in the interviews (Table A3 in Appendix).

Taking into account the researchers' ethical positionality when using these participa- tory strategies is what allows us to ascertain whether they really are knowledge mobilis- ation strategies and they are explicitly and consciously used with the purpose of emancipating the stakeholders. Table A4 in Appendix shows the number of interviewsin which mobilisation strategies were actually detected; as can be seen, in all cases this number is the same or lower than those in Table A3.

Regarding the quantity of KMb strategies, the quantitative results show that the applied research groups adopt more KMb practices than the basic research groups. The difference between knowledge areas was lower, however, as knowledge mobilisation strategies were found in all areas. The results also showed that not all participatory strat- egies are grounded in an inclusive approach. In fact, a participatory strategy was detectedin more groups while fewer groups motivate and defend this strategy from an inclusive ethical approach.

The results show the different KMb strategies used throughout the research process and the reasons and ethical implications of these strategies as expressed by the research- ers interviewed (see Figure A1 in Appendix).

The narrative of findings emphasises the voice of the participants, illustrating the ideas or categories with a selection of the most characteristic fragments of each of them taken from the interviews conducted.

Who is the research for?

Of the 80 groups analysed, 53 have clearly identified their interest groups: from the public administration, companies and specific social groups: students, teachers, patients, LGTBI groups, jurists, abused minors, rural youth. The research groups' social responsibility is made explicit in the way they specify who are their stakeholders and how they are aware of the ethical and social repercussions of their projects: '*Science should be there to servepeople and society*' (SL09LB11). '*We do what we can to change it, because that's our responsibility*'. (SP04AA7).

Look for practical solutions

Groups that mobilise knowledge in their research not only clearly identify who they are researching for, but also understand that they are targeting groups that are in a position of inequality in a range of services, for example the rural digital divide (SP26LA7), or address contemporary concerns such as recycling and microplastics(AT02EA6).

The knowledge mobilisation strategy of formulating the research problems and objec- tives starts from a practical problem:

> The research problem they are working on came about by identifying the problems and needs that arise at a practical level in the professional field, when the law is applied, andare reflected in empirical data. (SP01LB4)

Or it may arise from needs detected in the research context between the research group and the participating stakeholders:

> The purpose of stakeholder participation is to make research projects real and not just a response to the interests of the research itself, but attend to the needs of the centre and have an impact in the context. (SP12AA8)

The research problem therefore becomes meaningful in the context in which it is applied:

> The agents in the territory end up delimiting the lines of research. The studies they design benefit their day-to-day activity, so they become more meaningful. (SP26LA7)

Diverse knowledges recognition. Who is the expert?

Inclusive stakeholder participation in the research process is based on an ethical view of their input: The researchers recognise stakeholders' knowledge, learning and viewpoints. This recognition is essential when formulating research problems.

> The stakeholders are clearly defined; they aren't regarded as passive interviewees or partici-pants in the research process, but as active individuals who act as co-creators of the research.(SL11AA80)

For this to happen, research spaces or environments must be created that the participantsfind natural and that match their profile and day-to-day professional tasks. The reality is understood to be complex and the repercussions of including the participants are taken into account.

The research design and methodologies are selected on this premise, and therefore participatory methodologies such as action research are particularly appropriate:

> The emphasis lies in applying innovative methods that attempt to get close to the partici- pants in a considerate, appropriate manner […] and give the participants the chance to influence the situation. (AT05EB8)

> As this is action research, stakeholders are an essential part of the process, in which their role is to contribute their knowledge and viewpoints, in the same way as the research group does.(SP24LA3)

Thus, academics who share roles with stakeholders in this design phase try to balance the power relations between researchers and stakeholders.

> Only the research team and potential partners are involved in defining the project. This phase is intentionally very self-reflective and focuses on issues of inclusiveness and sensi- tivity to cultural and ethical issues. In addition, inclusion within the project team is a pri- ority. (AT05EB8)

However, pursuing a more horizontal relationship in all the stages of the research challenges expert knowledge and the asymmetrical relationship between researchers and stakeholders.

> The end purpose is to create rich debates, empower them, reaffirm the role of indirect sta- keholders too (family members, politicians, students …), promote knowledge mobilisation, horizontal interaction between researchers and society, and break down the stereotypical role of the researcher as specialist. (SP26LA7)

This positionality can cause tensions in terms of expert knowledge, technical capacities and control over the research, with respect to stakeholders' participation:

> In practice, research tends to leave this part in the hands of an expert in this field, but obviously with the agreement of the whole research group. In the case of qualitative researchmaybe more than one person does the analysis, but with quantitative research, it's usually just one individual. (SL01AA6)

This is the tension the researchers themselves perceive in the data collection and analysis phases and that often conditions the inclusive participation of the stakeholders. Co- research is not always possible in these stages, as it is regarded as more technical and therefore left to academic researchers.

Collaborative work

By recognising diverse knowledges, cooperation can lead to *co-research*, especially in participatory methodological designs in which stakeholders contribute practical knowledge,

are co-owners of the data or involve new stakeholders such as students or the public administration. For example, to formulate the research problem together, collaborative spaces are created where all the participants contribute their ideas and take decisions:

> The stakeholders, the professionals and the NGO networks are incorporated into the process of reflection bilaterally, not through a formal procedure, but rather each team member makes their contacts and sets up meetings and contacts in parallel, workshops, videocalls, etc. to gradually bring them into the process and the work plan as contact develops. They always work in collaborative spaces (e.g. Google docs) so the work is transparentand they can see what contribution they need at any moment. (SP20LA11)

Negotiation is the strategy used to co-design the project, in which different points of vieware heard and the impact of applying this design in the real context is analysed.

> We have to negotiate the whole procedure with them, with the centre. We have to negotiate everything, from reviewing the surveys, to the timing, who's going to participate, when andhow, through to the working groups. (SP14HA4)

Methodological designs are gradually moving towards more participatory approaches, in which dialogue is an inherent part of the method as a democratic and transparent processfor doing science. For this negotiation in collaborative work to function, '*it is very impor-tant to build trust, strengthen exchange with institutions and commitment to the territory*' (AT05EB8).

Co-analysis

The knowledge mobilisation strategy for collaborative data analysis is to take part of the research team meetings, in which tasks are shared as a mixed group or spaces are createdto give the stakeholders a voice.

> They participated in the meetings by presenting the information collected and analysing it together with the research group. They had regular meetings and information was passed on to them, and sometimes they also met together with the health staff. In one of the hospitals, ajoint commission was set up, called: Commission for intercultural health mediation, which works together. (SP24LA3)

These spaces encourage collaborative knowledge building where:

> The questions and dialogue with all stakeholders contribute new ideas on how to gather and treat the data. The stakeholders had a specific space to create their own exchange; the research team only participated but it didn't guide. (AT12EA04)

Thus, in the data analysis stage the groups that mobilised knowledge validate the interpretation of their results from the stakeholders' point of view: '*The researchers also co-analysed the data with the teachers and created feedback loops with the students*' (AT10LA4).

Sharing production and dissemination

Communication has a specific weight in KMb strategies, especially in the dissemination phase, the moment of the research process in which stakeholders are most involved. This implies that researchers keep in mind different formats, audiences and accessible language:

> All the researchers and interested parties are involved in this part of the research. They always try to create infographics that are then circulated on social media platforms for the general public, at conferences, and scientific papers are considered afterwards. (SL10LA9)

The knowledge mobilisation strategy is to collaborate on writing articles for dissemina- tion: '*They act as co-creators of the research*' (SL11AA80), highlighting the accompanying role of the researchers in developing the skills needed for dissemination:

> They don't find it easy to write about their experiences. I think it's something that should be done an awful lot more. They find it hard because they don't have time and they aren't used to it. (SP12AA8)

Each member contributed in line with their expert knowledge, which makes the pro- duction strategy more efficient:

> Greater effect if all parties participate in the dissemination process. The results have a greaterreach and [it is] more efficient and effective. (SL03LA11)

This leads to co-authorship of open access materials and teaching materials from the results, thus linking academic teaching with research for knowledge mobilisation:

> The mediators took part in preparing the book and were co-authors of two chapters (repro- ductive health and mental health). (SP24LA3)

> The results are also disseminated indirectly through teaching material, by creating new material for curricula, and in supervising bachelor's, master's and PhD theses. (SP18AB2)

The aim of this collaborative production and dissemination is not only to inform, butalso to enable stakeholders and empower them to use the results in order to improve their initial situation. In fact, they consider that doing feedback of resultsof research is not only an ethical and social obligation, but also gives meaning totheir projects.

> This process of devolution is continuous and forms part of the transformation of their own lives and collectives. It is done through participatory dynamics and techniques, such as virtual meetings or the New Rurality Forum. (SP26LA7)

To ensure that the results of the research reach as many people as possible researchers usenon-scientific channels such as interviews in the mass media (press and radio) or social networks (Facebook, Twitter, YouTube). '*Scientific journals are important, but not every- one reads them* ' (SL10LA9).

They also take part in fairs, talks for associations, in schools, with families, confer- ences, specialist seminars, dissemination meetings and forums, research groups' or inter- national organisations' websites, open access publications, information or training material (reports, documentaries, teaching materials), university teaching, training set- tings, etc. The aim of disseminating research projects through diverse channels is create culture and transform society:

> Because it's the only way of bringing the results of research in this new field [additive man- ufacturing] to users in the industry, citizens, designers, children, etc., and to promote research, science and collaboration with stakeholders. (RS04EA5)

The research groups are aware of the ethical obligation to bring research (especially basic research) to citizens, but again the use of alternative channels to disseminate the results of research funded with public money can lead to tensions:

> We sometimes do these things proactively, but not very often. My main work is the scienceand the research and if I do these things [dissemination activities], I want to do them well soit takes up a lot of time. So we do it every few years. (AT01SB12)

> We think it's more interesting to do dissemination in schools, but most of our effort goes into the academic side. Disseminating [the results] to society is what we've committed to doing because these are publicly funded projects and we therefore have to do this dissemi- nation in other schools, the town council, press conferences, wherever. (SP12AA8)

There seems to be little time or communicative culture for participatory dissemination. Research evaluation criteria place researchers in a dilemma:

> Deciding which journals to publish in causes some contradictions, because there are journals with a wide circulation but they aren't indexed, so they're no good for accreditations or official academic promotion systems because they aren't impact journals. This means that when you're on track for accreditation, you submit articles to indexed impact journals,even though you know that actually the potential readers of the research, judges for instance, read the specialised journals that aren't included in these indexed impact journals. (SP01LB4)

Use of knowledge: towards empowerment

Both the collaborative work strategies and the recognition of diverse knowledge generate empowerment in the use of methodological tools by the participants, who appropriate this knowledge to generate new knowledge:

> In the refugee project, for example, our students had to present their ideas to the refugee students of the PROSA project ['school for all project'] and in this way we facilitated an exchange of roles. (AT05EB8)

A good strategy is to use open access platforms: '*Open data are designed to be reused to produce new results, which in turn are also open*' (RS05EB10). Then the knowledge generated in the research therefore has an immediate use.

> Use of the results is directed towards transfer and training, so they are useful for teaching students, useful for society, for NGOs considering their communications, etc. […] they spawn guidelines, behavioural directives, ethics codes, etc., that belong to both parties. (SP20LA11)

This strategy of creating spaces for the research dissemination and sustainability can generate learning and brings society closer to science in order to raise awareness among citizens:

> It is necessary to be able to show the results to those responsible for education and transport -so that they do not remain in a drawer-, because it is understood that there is a problem in this area. This is why the aim is to raise awareness by involving those responsible for this problem so that together we can find solutions to improve school transport. (SP27AA1)

In addition, those involved in the research must also take possession of the co-created knowledge and use it to benefit other communities:

> Teachers or even the families from the schools where we do the research sometimes take part, through conferences, other training, through networks in which the information is shared with other schools, etc., because we believe the dissemination also 'belongs' tothem. (SP28LA8)

Research groups that promote inclusive participation in the use of knowledge state that the aim is to empower stakeholders to transform their reality:

> We seek to empower stakeholders to change the social reality, and we constantly feedback the results, the practice and the discussion with them in order to reorient the process if appropriate. (SP20LA11)

Once the research is over, the sustainability of the project should be guaranteed.

> Sustainability is always part of the research. We have a strategy prepared beforehand and it'sused by everyone involved in the research. (SL03LA11)

However, this is the weakest aspect of knowledge mobilisation, the research groups haveto apply for new funding in order to plan and ensure the sustainability of the results, since using them after the project is finished is not usually included in all funding pro- grammes. This also causes tension among the researchers, who either have to include sus- tainability as a future objective or rule it out because of lack of time and resources. Furthermore, it makes more difficult the continuity of collaborative work with partici- pants and the application of results in their contexts.

> The materials designed were not piloted as such. The project came to an end with the prep- aration of the materials and as they were put into use, they were improved according to needand depending on how they worked. The projects are aligned in such a way that the results of one project can be exploited in the application for the next ones. (SP16LA7)

Hence, the analysis of KMb strategies in academic research provides some good examplesof social responsibility and inclusion, but it also reveals the tensions generated by this participatory perspective in the current European research context.

Discussion

As we have seen in the results of this study, KMb strategies do not predominate among the research groups interviewed but they do occur in all knowledge areas, especially in applied research.

In this study we have focused on researchers who undertake their enquiry from a pos-ition of responsible awareness and inclusive sensitivity, and on the strategies to engage stakeholders as participants in all stages of the research, from identifying its beneficiariesto the sustainable use of its outcomes. These results suggest that throughout the research process, the groups that mobilise knowledge through inclusive participation start off from a situated knowledge that attends to the problems and needs of the context and recognises different knowledges that integrate and engage, on a continuum from asses- sing their contributions at one end to co-research at the other. This implies not only a debate about the content of the projects, but also about creating safe spaces of mutual trust (Skipper and Pepler 2021), where relationships between researchers and users,the context, types of knowledge and the evaluation of knowledge mobilisation are all taken into account (Powell, Davies, and Nutley 2018). The results that reflect the value

of recognising knowledge, dialogue and cooperation coincide with the work of Borri-Anadon, Prud'homme, and Ouellet (2020), who regard these aspects as falling withinthe emancipatory position adopted by the research groups that carry out inclusive research. These groups generate shared spaces for working and dissemination, they nego-tiate and take decisions in the process, and they write collaboratively and share author- ship. Therefore, an inclusive knowledge mobilisation perspective can be used to rebalance power to make relationships more horizontal and to co-create knowledge, not as a technicality, but as a political, cultural and ethical matter (Abma et al. 2017; Ribeiro et al. 2018).

In relation to knowledge mobilisation strategies, collaboration between researchers and participants in the search for solutions to real problems is also defended in work by Briscoe and others (2015) and Holmes and others (2017). On the strategies of data co-analysis and joint dissemination identified in our results, these are what Landry and others (2008) term interaction strategies; in other words, they involve a personal, multidirectional relationship. On the question of joint, diversified dissemination strat- egies, Moliner, Arnaiz, and Sanahuja (2020) state that these are means to democratise knowledge that move away from the hierarchical way of understanding knowledge and advocate more accessible conceptions that are committed to change. Diversifying formats and audiences, sharing events and creating joint products are active mobilisation strategies that, according to the literature, have a much greater impact than passive strat-egies because the stakeholders take the initiative (Cooper, Rodway, and Read 2018). In fact, these strategies have an essential educational component: they create educational materials and spaces with which to raise awareness and sensitivity, and generate a parti- cipatory and scientific culture that can transform reality. In this line, the study by Gunson, Murphy, and Brown (2021) shows the change in young people's attitudes after a KMb programme about climate change, while Baranek, Frank, and Aldrich (2021) find that knowledge mobilisation strategies connect social transformation with improved research and professional practices.

As regards using the knowledge generated in a sustainable way, all the previously mentioned strategies combine to trigger an empowering and critical learning in both researchers and participants. According to Naidorf and Alonso (2018), this is a process of acquisition, interpretation, appropriation and efficient use that spurs action and transforms those who participate and their communities and may have a social impact in other contexts. In fact, the study of Muhonen, Benneworth, and Olmos-Peñuela (2020) point out four Social Sciences and Humanities pathways to societal impact: interactive dissemination, cocreation, reacting to societal change and driving societal change. This diversity reflects different types of knowledge and research orien- tations, different productive interactions and kind of societal impact.

However, this inclusive and responsible research perspective is not without its ten- sions. The researchers recognise the difficulties of citizen participation in all types of pro-jects and in some stages of the research, in which expert knowledge remains in the handsof academics and certain methodologies, data analysis procedures or scientific publi- cations are neither conceived for nor value a type of research that is more closelylinked to society. The researchers in Cooper, Rodway, and Read (2018) study in Canada also acknowledged that they did not dedicate much time to building connections with their audiences because of the intense need to produce large amounts of high quality

research. Hence, in order to do more responsible and accessible research, the emphasis is not only on expert knowledge but also on taking democratic decisions about what are considered to be highly technical matters (Vienni Baptista and Vilsmaier 2021). This puts a strain on researchers' ethical and epistemological positionalities (Lundström, Jöström, and Hasslöf 2017).

Indeed, the researchers in our study spoke about this tension between the principles responsible and inclusive research and research evaluation criteria. They feel that time pressures and the demands to do research and publish come into conflict with stake- holder participation. Naidorf and Alonso (2018) warn that changing knowledge mobil- isation practices will be difficult if the conditions in which knowledge production processes occur are not made visible. The responsibility shown by the research groups in their mobilisation practices also places a strain on the concept of science, the inclusive objective of research, and the sustainability of its results and the strategic use made of them (Krücken, Mishra, and Seidenschnur 2021). Criticism of European policies on research and innovation focuses on the way introducing more products and services into the markets and the pursuit of economic growth are the only targets prioritised (Burget, Bardone, and Pedaste 2017). The instruments and policies offered by govern- ments for the promotion of new knowledge tend to be very focused on companies and on the instrumental use of knowledge, when there are other social agents demanding new knowledge. As Soysal and Baltaru (2021) point out, higher education should trans- form by linking the three institutional logics – knowledge production, economic value, and global actorhood- that make more societally engaged and inclusive university as an organisation. For this reason, it is important to analyse how capable public policies on scientific research are of mobilising knowledge in terms of research agendas, research evaluation (and the industrialisation of scientific research) and the use and usefulness of knowledge in complex societies (Naidorf and Alonso 2018).

Conclusions

To conclude, we highlight some of the implications of the analysis of these knowledge mobilisation practices in academic research groups in Europe.

Although researchers are increasingly aware of the need to carry out responsible and inclusive research, very few of them introduce knowledge mobilisation strategies, especially in applied research, in which it seems easier to create links with society. Con- sidering the critical role of academic researchers can play in the research knowledge pro-duction and use, they have the opportunity to include this responsibility as a part of their work (Marin et al. 2020). An educational campaign is needed to raise awareness among researchers about the concept of inclusive research and sharing and generating new mobilisation strategies. This training for researchers would link up with academic teach-ing and teaching citizens science, which provides the means for citizens to participate in democratic decision making on contemporary scientific and technological matters. This would generate networks between institutions and researchers and would open up the possibility to create spaces for discussion among students, teachers and researchers on responsible and inclusive research (Levinson 2017).

Therefore, the implication is not only a question of transforming the culture of enquiry in research groups, but rather that for knowledge mobilisation '*to become a tool for*

democratisation and social inclusion, transformation in individuals and organisations must be promoted ' (Pérez, Cruz, and García 2018, 108, our translation). This is a cultural change that would be reflected in research plans, programmes and public policies, in which par-ticipation and inclusion would be supported with public funds and the management and evaluation of the academic research. Funders could consider the development of com-munities of practice where researchers, practitioners and other organisations '*come together within the scope of a large research grant*' (Mitchell, Harvey, and Wood 2021, 9). The mobilisation strategies analysed in this study offer some good examples of the via- bility of this approach that are consistent with socially responsible research and that alert us to the need to continue in-depth reflective and critical discussion on inclusion in research (Burget, Bardone, and Pedaste 2017), based on sustainable development objec-
tives (Van't Land and Herzog 2017).

The impact of this study for researchers, participants, managers and funders focuses on making visible and critically analysing knowledge mobilisation strategies to promote actions that improve academic research contexts. Following Holmes and others (2017) proposal, the actions suggested by our study are: developing models for knowledge co- creation and establishing shared evaluation systems; encouraging and promoting distrib-uted leadership; and contributing to science as knowledge for situated action. Finally, a culture of communication must be generated, and resources must be made available for transformation.

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Appendix

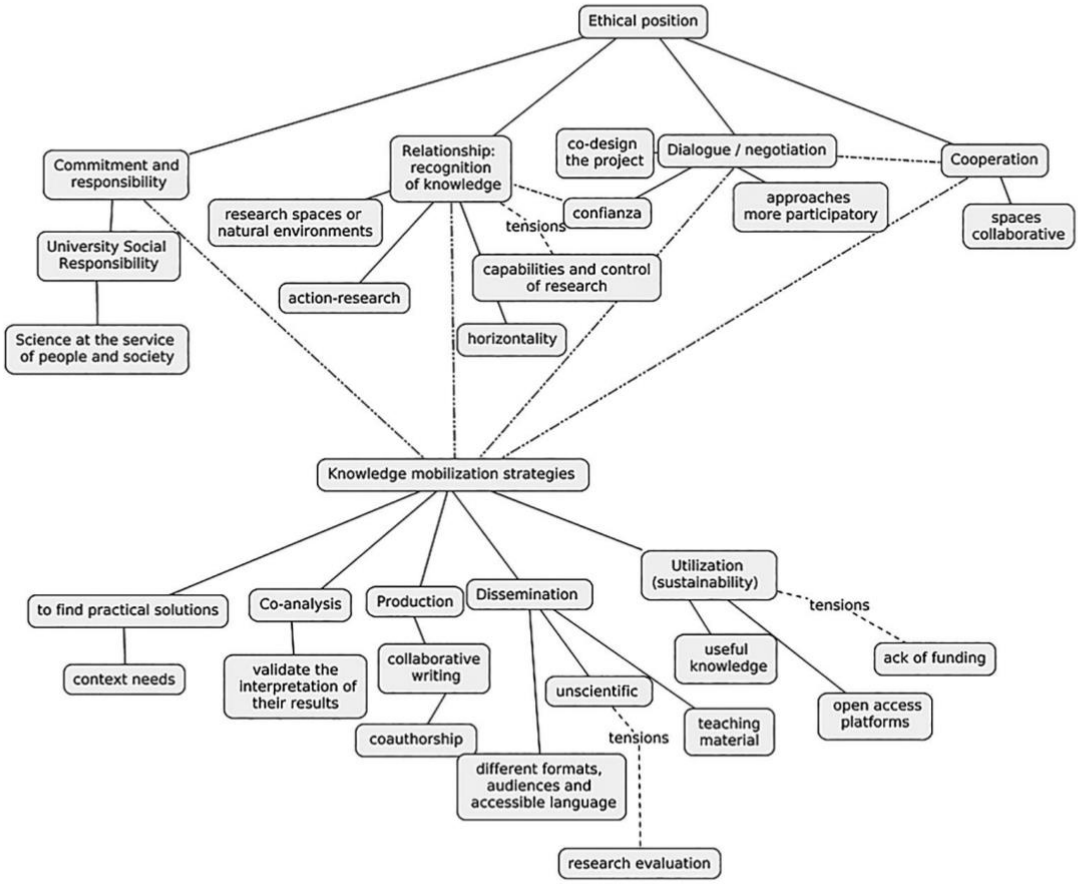

Figure A1. Relational map of categories.

Table A1. Sample distribution.

	TYPE		
AREA	Basic	Applied	TOTAL groups
Arts and humanities	3	6	9
Sciences	9	2	11
Social and legal sciences	12	15	27
Engineering and architecture	8	19	27
Health	3	3	6
Total	35	45	80

Table A2. Interview identification codes.

Country	Interview number	Area of research	Type of research	Number of researchers
AT: Austria		A: Arts and humanities	B: Basic	
SL: Slovenia		S: Sciences	A: Applied	
SP: Spain		E: Engineering and architecture		
RO: Romania		H: Health		
RS: Serbia		L: Social and legal sciences		

Table A3. Number of groups that use participation strategies with their stakeholders in the research process, classified by area and type of research.

	Arts and humanities		Engineering and architecture		Health		Social and legal sciences		Sciences		
Type of research	B.	A.	B	A.	B.	A.	B.	A.	B.	A.	Total participatory strategies
Identify stakeholder	1	5	5	14	2	3	8	12	2	1	53 (66.3%)
Formulate problem	0	4	1	6	0	1	4	10	0	2	28 (35%)
Research design	0	1	0	3	0	1	1	6	1	1	14 (17.5%)
Data gathering	0	3	0	2	0	0	2	5	2	0	14 (17.5%)
Data analysis	0	2	1	4	0	0	1	4	0	0	12 (15%)
Dissemination type	1	1	1	6	0	1	3	11	1	0	25 (31.3%)
Dissemination channels	2	6	2	13	1	3	7	12	3	0	45 (56.3%)
Sustainability plan	0	4	0	2	0	2	4	7	1	1	21 (26.3%)
Total groups (type)	3	6	8	19	3	3	12	15	9	2	80
Total groups (area)	9		27		6		27		11		

Table A4. Number of groups that use knowledge mobilisation strategies with their stakeholders in the research process, classified by area and type of research.

	Arts and humanities		Engineering and architecture		Health		Social and legal sciences		Sciences		
Type of research	B.	A.	B	A.	B.	A.	B.	A.	B.	A.	Total KMb strategies
Identify stakeholder	1	5	5	14	2	3	8	12	2	1	53 (66.3%)
Formulate problem	0	3	2	6	0	1	0	6	0	1	18 (22.5%)
Research design	0	1	0	1	0	1	0	4	0	0	7 (8.8%)
Data gathering	0	2	0	2	0	0	0	5	0	0	9 (11.3%)
Data analysis	0	2	1	3	0	0	0	3	0	0	9 (11.3%)
Dissemination type	1	1	1	5	0	1	1	8	0	0	18 (22.5%)
Dissemination channels	2	5	2	9	1	3	7	10	2	0	41 (51.3%)
Sustainability plan	0	2	0	2	0	2	3	6	0	1	16 (20%)
Total groups (type)	3	6	8	19	3	3	12	15	9	2	80
Total groups (area)	9		27		6		27		11		