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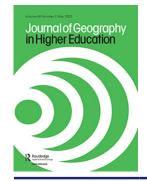
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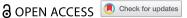
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ARTICLE



An introduction to the co-creation of policy briefs with youth and academic teams

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ABSTRACT

Drawing on insights from a four-day online workshop, which explored geo-engineering and policy making with 13 youth participants, an academic and youth authorial team provide a guide to the cocreation of policy briefs. Drawing on excerpts from the policy brief at different stages of development and commentary provided by the authors during the workshops, we set out four stages including (1) Identifying the key message and audience, (2) Reading and critically engaging with examples of policy briefs during the drafting process, (3) Developing the policy brief text, and (4) Reviewing and revising the policy brief. We have developed this guidance with a co-creative, group work approach in mind and suggest that this has relevance for those working in and beyond the discipline of geography.

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KEYWORDS

Policy briefs: co-creation: policy-makers; youth voice; geoengineering

Introduction

Developing an understanding of the work and role of policy makers and the policy implications of an area of research focus is highly relevant for geographers. This is especially important given the many ways that geography underpins many areas of current policy making for example, climate change, the biodiversity crisis and resource management and is the focus of global decision-making. Whilst policy briefs can take a range of forms, they are typically narrow in focus and use targeted research literature or empirical evidence (Downes & Killeen, 2013) and written by those who have credibility on the topic (Beynon et al., 2012) – here, young people. They provide a clear and concise explanation and analysis of a policy issue, and contain recommendations for addressing the issue (Keepnew, 2016). Although studying geography (and related disciplines such as environmental science and geology) provides a grounding in disciplinary knowledge of how earth systems work at different temporal and spatial scales, undergraduate courses do not always provide students with the knowledge and experience of how to communicate this understanding with influencers and decision makers. Much geographical research has huge relevance for policy makers but has become less and less accessible (Downes & Killeen, 2013) and so policy briefs can act as a bridge between research and policy. Although policy briefs may have a weak effect on beliefs (Benyon et al., 2012), they can be used to inform and educate a wider audience than policy-makers (Keepnew, 2016) and to include laypeople, educators and those working in the field. Geography graduates may be expected to prepare policy briefs in their future employment, particularly if they enter government or the civil service or are involved in regulatory work in industries or non-governmental organisations. Experience writing this type of document is a practical skill, which can translate into the workplace (Boys & Keating, 2009): along with the research, policy briefs involve writing and presentation skills. Research produced by undergraduates also has the potential to influence decision making (Walkington, 2021). Therefore, we suggest it is important that undergraduate students have support to develop this aspect of their academic education.

Establishing an authorial team Following approval from the relevant ethics committee at the lead institution, a four-day workshop took place (during April - May 2021) online with 13 participants (age 17-27) from a range of disciplinary backgrounds. These included under- and post-graduate geographers as well as students of Architecture, Chemistry, Education and Sociology, a school student and members of Young Greens and Youth and Environment Europe. Participants were resident in countries including Albania, China, Czech Republic, the Netherlands, Poland, Portugal and the United Kingdom. During the workshops, participants explored issues and ideas focused on geoengineering and cocreated for a youth audience across Europe (1) an introductory guide to geoengineering and (2) a policy brief for decision makers and influencers (Blake et al., 2021). Drawing on insights from the workshop experience, including excerpts from the policy brief at different stages of development and commentary provided by the authors during the workshops, we provide guidance when co-creating a policy brief with an authorial team that includes youth and academic authors. Contributions made during the workshop are presented in the following sections as unattributed to reflect the co-constructed nature of the work. We set out four stages including (1) Identifying the key message and audience, (2) Reading and critically engaging with examples of policy briefs during the drafting process, (3) Developing the policy brief text, and (4) Reviewing and revising the policy brief. We have developed this guidance with a co-creative, group work approach in mind and suggest that this has relevance for those working in and beyond the discipline of geography.

What is the purpose of a policy brief?

A policy brief is a short document that concisely and clearly states a set of issues to inform and influence individuals and groups responsible for making, writing and implementing policy. Policy briefs usually include a synthesis of the available research relevant to the topic and as

such are grounded in evidence rather than being an "opinion piece". A range of people and organisations write policy briefs including charities and non-governmental organisations and higher education institutions frequently have policy institutes staffed by those with expertise in the fields of policy and engagement. The simple purpose of the policy brief is to provide those who make decisions about areas including legislation and funding with easily comprehensible information about the issue. Through the workshops, we sought to develop a policy brief that shared with influencers and decision makers at local, regional, national and international levels youth perspectives and views regarding geoengineering so that these opinions and voices were heard and featured in policy making now and in the future.

Youth involvement in policy making

Policy is not written by young people and yet it is the youth who live with the consequences of decisions made by policy makers. Within the specific context of climate change, young people have been central to climate justice movements that call for action to tackle the climate emergency (for example, Teach the Future and Fridays for Future) (Teach the Future, n.d.) and yet, these voices are not frequently part of policy making discussions and decisions. Educators argue that didactic approaches to climate change education have been largely ineffective and argue that there is a need to stop "shying away from the Earth's looming runaway climate change" (Rousell & Cutter-Mackenzie-Knowles, 2019, p. 203). They call for educators to seize the moment and to examine what really matters through participatory, interdisciplinary, creative and affect-driven (i.e. driven by feelings and emotions) approaches to climate change education, which involve young people in responding to the scientific, social, ethical and political complexities of climate change. With this in mind, and drawing on the expertise and networks of our partner, Youth and Environment Europe (Youth and Environment Europe, 2021), we sought to provide an opportunity for young people to further develop their skills and capabilities so that they are able to go beyond simply "knowing" about the environment and are empowered to "decide" and "act" for the environment (Mackey, 2012). To this end, we share our perspectives on how to approach co-writing a policy brief so that the insights of students have the potential to inform future policy making. An overview of the four stages, with examples of workshop prompts, examples of the initial ideas shared in the workshops and excerpts from the final policy brief are outlined below.

Four stages of writing a policy brief

Stage 1: identifying the key message and audience

We began to identify the key message of our policy brief by both individually and, as a group, writing down the key words or phrases that occurred to us when thinking about the topic of our policy brief. We considered how these different words connected to the topic, and we looked for links between the words we generated together. Once we had identified these words, we then tried to complete the following sentence: "the key message I want to communicate to decision makers in relation to [geoengineering] is ..." Ideas among the responses included the need for co-operation, international action, and importance of empowerment of people and governments to make decisions (Table 1).

Table 1. Examples of prompts, initial responses and extracts from the final policy brief for each of the four stages of co-creating a policy brief.

Stage	Example prompt provided during the workshop	Initial ideas shared in the workshop in response to the prompt	Example from the final policy brief (Blake et al., 2021)
One: Identifying the key message and audience	"The key message I want to communicate to decision makers in relation to [geoengineering] is "	Proactive co-operation and transparency is crucial. From our group (2) Climate change is a life limiting or terminal illness for us all now and in the future unless we all act. (trying to empower not shame). The need for proactive discussion/negotiation (to lay the groundwork for decisions such as who pays), and for these to be transparent and open to public scrutiny. How to cooperate internationally. Some options are a dramatic last resort. Mitigation first, geoengineering later; empowering first, shaming later. Researchers give methods first, people discuss, and finally governments make decisions.	'Key Message: Geoengineering must be considered in the context of other responses to the climate crisis, including adaptation and mitigation strategies, so that effective long-term solutions can be identified through research. The impacts of climate change and geoengineering strategie change over space and time. This means that the use and governance of geoengineering technologies must involve the perspectives of adults and youth from all parts of the globe. Proposals for geoengineering must be transparent, open and accessible to public scrutiny and regulation. Proactive international cooperation is needed now.' (p. 7)
Two: Reading and critically engaging with examples of policy briefs during the drafting process	"What sections needed to be included in the policy brief? What information and ideas do we want to share?"	Overview of what geoengineering is/ Defining the different geoengineering techniques.	'As the impacts of the climate emergency have become more severe, the proposed responses have become more radical. Geoengineering – sometimes called climate intervention or climate engineering – is the deliberate intervention in the Earth's climate system and describes many different types o activity to control or manage temperatures on Earth. These range from highly technological interventions like stratospheric aerosol injection to those which rely on natura processes, such as large-scale afforestation, microalgae cultivation and restoration of wetlands. Geoengineering has gathered some high-profile support, fo example, from billionaires and scientists at prestigious universities.' (p. 4)

(Continued)

Table 1. (Continued).

Stage	Example prompt provided during the workshop	Initial ideas shared in the workshop in response to the prompt	Example from the final policy brief (Blake et al., 2021)
Three: Developing the policy brief text	Mind map activity to identify the key concepts within geoengineering (see also, Figure 1).	Key concepts that were identified included: Biodiversity, freedom, top-down vs bottom-up, technocracy, carbon capture, uncertainty, reversability, curing the planet, duration of the application/project, need for continuous research.	Key concepts visible in the summary description of the 'problem' (italics indicate key concepts): 'The global community needs to take immediate action to reduce carbon emissions, and, in our view, geoengineering can only ever be part of a temporary solution. Geoengineering is a complex and controversial area of research where there remains great uncertainty as to the effects, feedbacks and permanency of some approaches and techniques. There is a lack of credible and reliable information that is available to and comprehensible by the public. This raises questions as to the extent to which communities are able to make informed decisions about geoengineering approaches that are presented to them. There is a lack of public interest in policymaking related to geoengineering which is of concern.' (p. 8)
Four: Reviewing and revising the policy brief	All substantial edits were made using "comment boxes" to encourage a dialogue between youth in their roles as authors and editors.	"The intensification of various economic sectors, such as energy and agriculture, has resulted in an increase of carbon intensive activities (e.g. burning fossil fuels, deforestation) causing a higher concentration of GHGs " -> Putting this suggestion here because the sentence is not necessarily incorrect but I think there's a distinction to be made between economic sectors (agriculture, energy, transport) and the ensuing unsustainable practices (deforestation, burning fossil fuels, dumping waste into the ocean) currently necessary to maintain their profitability in today's system.	The intensification of various economic sectors, such as energy and agriculture, has resulted in an increase of carbon intensive activities (e.g. burning fossil fuels, deforestation) causing a higher atmospheric concentration of greenhouse gases (GHGs) such as carbon dioxide (CO), methane (CH) and nitrous oxide (NO). GHG emissions have never been higher in human history and current policies have proved inadequate to reduce emissions to a sustainable level, nor to meet the target of limiting warming to 1.5°C above preindustrial levels set by the 2015 Paris Agreement. A warmer climate will lead to more extreme and unpredictable weather patterns, which will likely result in food and water insecurity, as well as migration and conflict. Responding to climate change requires collective action to empower people. (p. 2)



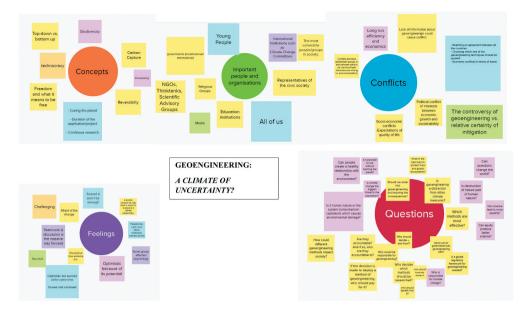


Figure 1. Mind map created by youth participants as a starting point for the writing process.

We would suggest that at this stage in the process it is simply about trying to put some initial ideas on paper, the words or sentence(s) do not need to be concise or polished, this is about creating a starting point. As indicated from the responses above, this allows key themes to be identified, here proactivity, collaboration and transparency in decision-making. The next aspect we considered was our audience. Who did we want to read this document? A range of audiences were identified including the following posted by participants in response to the prompt "who to influence":

- General public
- Students and academics
- Policy makers and politicians
- Business leaders
- Young people

Some of us wanted to write a brief that would have an audience of local, regional, or national government, whereas others felt that because geoengineering was an approach and idea that reached beyond national borders, our policy audience had to have a global reach. Other audiences we considered writing for included non-governmental organisations including those within the charitable sector. As a group, we tried to identify an example organisation or representative of an organisation to help us focus the framing and content of our brief, in our case a collation of national governments similar to that which created the United Nations Paris Agreement (2015). Another aspect we considered when thinking about our audience is how we would like them to encounter and respond to the brief and by when? How will we know if they have engaged with our work? For example, if we were to make recommendations, what could we put in place to record whether these have been acted upon? Working with colleagues from our partner *Youth*



Environment Europe, we discussed the way that we could share the policy brief using social media and timing a series of posts about the brief to coincide with the United Nations Climate Change Conference of Youth 16 which was held in Glasgow, UK, in October 2021. As we moved through each of the four stages, we kept returning to our key message and the audience we had identified. We anticipated that throughout the process of drafting and writing the brief we could refine both our key message and intended audience. However, in order to produce a concise and focused brief it was important to remind ourselves regularly of the answers to these questions: What is our key message? Who are our audience? How and by when would we like them to respond? How will we know if changes have been made?

Stage 2: reading and critically engaging with exemplars of policy briefs during the drafting process

Before we began to write, we researched and read policy briefs that provided a range of examples or templates of what we could achieve for our youth perspectives on geoengineering policy brief (for example, ICELI, 2020; Klassen, 2021; The Royal Society, 2019). Through this research we saw that policy briefs varied in their length (number of pages, word count), format (use of text, images, charts, figures, inclusion of footnotes and/or references), and style. Once we had an idea of the "finished product" in terms of length, format and style, we focused our reading and critical review of policy briefs that others had produced in similar and related areas to our interests. As we read, we considered the answers to the following questions: What key message does the policy brief have? How do the writers communicate their key message? In our view, how effective is their communication? From our answers to these questions, we agreed our key ideas and guiding principles, derived from our critical review and subsequent discussions to support us in the next phase of writing. For example, having read and engaged with other policy briefs we decided that we wanted to limit our brief to two pages and to couple the brief with a Youth Guide to Geoengineering written by youth, for youth, so that young people were able to access reliable and concise information concerning core aspects of geoengineering as well as the policy brief. We decided as a group to include within the policy brief, a mixture of information presented in text, tables, diagrams and illustrations, including some illustrations created by a member of our team. We identified that this mix of approaches would provide an engaging and substantive brief that reflected the youthful perspectives of our authorial team.

We then identified what we wanted the brief to contain after discussion in small groups (see Table 1) and the following list was generated:

- Overview of what geoengineering is/Defining the different geoengineering techniques
- Examples of geoengineering techniques (carbon capture, ocean liming etc.) basic scientific information is needed, e.g. chemical knowledge of carbon dioxide
- Impacts & Limitations
- Wider context, e.g. Social, economic and political conflicts
- An introduction to the topic with opportunities for young people to explore further
- Geoengineering vs mitigation (adaptation)
- Involvement of young people. Children bring a different perspective and ideas e.g. they may identify problems less visible to adults.

This informed the text for the brief: geoengineering had to be considered in the broader context of alternative responses to climate change, and with consideration to social and political contexts. It also needed to both represent youth perspectives and be accessible to young people.

Stage 3: developing the policy brief text

As we were co-creating our policy brief online it was sensible for us to work using a digital shared document that we could use simultaneously. At the outset, we agreed a structure and identified the key content and/or message for each section, along with a suggested word count so that the different sections were well balanced. Table 2 provides some ideas for the order and content of each of the key sections.

Before we moved into "breakout rooms" to work on our assigned sections, we discussed as a whole group different writing strategies and approaches. We explored using bullet points, "mind maps" and key words as ways to begin the writing process (for an example of a mind map produced during the workshops, see Figure 1.) [Figure 1 near here] We agreed that our focus during this initial writing phase was to "get words on to the page" that we could discuss and explore as a group rather than trying to craft "the perfect message". This could be achieved by writing for short bursts (for example, 10 minutes) before re-reading and editing the text. We also returned to our key message and audience identified in stage one and considered how each might section build and develop our message in a clear, concise and direct way for our audience. We were keen to develop an approach and style that communicated our care and passion for the topic of geoengineering in a way that was urgent, positive and empowering. Before we moved

Table 2. Template structure of a policy brief with indicative content.

Section Heading	Indicative Content	
Title	Keep this short, eye catching and jargon free.	
Executive Summary	Two to three sentences summing up the entire brief. These could be structured (1) the problem, (2) the solution, (3) the result. Emphasise the relevance of the research to policy to draw the policy actor's attention to read on.	
The Problem/Challenge in Context	Provide a summary of the problem.	
	Explain the policy issue and why it is particularly important or current. Put the research into context. Explain why the topic is relevant to the reader – why should they care? Make sure that the briefing is clear, right from the start, about how the issue you are writing about relates to policy. What are the timescales and why now? Explain how the policy brief contributes to that issue and provides useful answers.	
Research and Evidence informed Solutions	Present the evidence for your argument and be explicit about methodological strengths and limitations of the evidence you are presenting. Include concise facts, avoid emotive language, and do not assume prior knowledge. Highlight areas of consensus and ongoing debate. Be clear about how you are building on existing knowledge and use open-source information wherever possible.	
Recommendations	In a short paragraph summarise what action you want policymakers to take having read this brief. What/how can they influence? Limit your recommendations to a maximum of three that are clearly differentiated in terms of sequence and priority.	
References, Further Resources and Acknowledgements	Use references sparingly and suggest a few additional sources at the end to give either background or more detail to the policy issue. In the acknowledgement include details of any funding or support in kind received and author information.	

into our writing breakout rooms, we allocated each group the tasks of writing a section and also a one sentence summary of that section which could provide a starting point for the "Executive Summary" of the policy brief, as we had previously identified that this would need to be written last. When writing the policy brief, we had short (20 minute) repeated periods of intense writing in small groups separated by group discussion of our ideas, progress, and experiences of writing so that we continued to engage with each other's work and develop as an authorial team.

Stage 4: reviewing and revising the policy brief

As a group, we recognised that we had all had experience of writing both individually and as a part of a group but that we had little previous experience of reviewing the work of others and providing feedback. We identified that ability to review and edit our own work were skills and experiences that were frequently only informally developed during our undergraduate and post-graduate studies. As a group, we discussed different types of editing, exploring the differences between small scale, superficial edits (for example, grammar and typographical changes) and more substantial changes (for example, reframing an argument). We also considered how to provide feedback to other authors on the sections that they had written and agreed principles that feedback should be focused on improving the work rather than challenging the author and wherever possible should be concise and specific so that the author receiving the feedback clearly understands what developments or changes are being suggested. We agreed that all small changes should be made using "track changes" so that they would be visible to the rest of the team and that more substantial edits should be placed in comment boxes so that they could be part of a conversation between the authors (see Table 1).

As we reviewed and edited the work of other authors, we returned to our key message and considered whether this was present in each of the sections. We challenged ourselves as authors as to whether we could make our key message more visible and/or immediate. In our first phases of reviewing and editing, we focused on agreeing the text of the policy brief and set agreed deadlines by which comments had to be made and then agreed. Once we had agreed on the text, we then considered how to use a range of visual elements (for example, images, charts, diagrams, table, drawings and "call-out" text) to amplify our key message. For example:

Design idea - Could we maybe have the definitions more visually appealing and make them stand out more?

Our final stage of editing included asking people from our own networks to read our policy brief and provide feedback focused on the clarity of our key message and their responses to that message before publishing the completed brief (Blake et al., 2021).

Final guidance and recommendations

We have developed this introduction to writing a policy brief based on our experiences of working collaboratively as a group of authors. There are of course limitations to this method of preparing a policy brief. There is no guarantee that it will be read or used (Conaway, 2013): this requires engagement beyond the written brief. Briefs are short and succinct and prioritise style over detailed substance, and lack theoretical depth compared to other written products (Boys & Keating, 2009). Co-creating a brief with a large and diverse authorial team takes time and requires pedagogical effort to ensure disagreements are aired and resolved. We highlight the importance of discussion and reflection throughout each of the four stages of developing a policy brief that we have identified. Discussion that is respectful, where reasoned opinions are shared, and challenges are made to ideas rather than the individual presenting them is hugely important for collaborative working. In our online discussions, we ensured that we were alert to those within the group who wished to contribute but might feel less able. We encouraged each other to reflect on whose voices and perspectives were not present within our group and how we could ensure these ideas featured in our thinking and writing. When developing a co-authored written output, we used an online shared document where we were able to see the work of different team members and were able to contribute feedback and make suggested edits both synchronously and asynchronously. This opportunity to contribute to the document outside the workshop sessions provided us with time to reflect and think. At the outset, we agreed on a writing timeline with clear goals for each member of the group, which provided us with a sense of direction and purpose. We also underline the importance of providing feedback that is compassionate and constructive - our suggestions were framed as comments focused on improvement and development rather than criticism and challenge. Lastly, during our workshop time together we discussed the different skills and interests that we had and could contribute to the policy brief for example, designing charts and diagrams and creating illustrations. We also identified and collated the different networks and groups we were part of that we could leverage to disseminate our work together. In this way, we sought to draw on the particular capabilities and interests of the group so that these were incorporated into the finished policy brief and ensured that it reached a wider audience.

Further resources

The final policy brief created by the authors can be viewed here:

Youth Guide and Policy Brief. Geo-engineering: A Climate of Uncertainty? Available at: https://georoutesuk.files.wordpress.com/2021/06/geoengineering-2.pdf Accessed on 15 June 2021. [add link to supplementary file here]

The Royal Society (2019) have produced a series of climate change briefings, which we considered during this co-created process and these are available here: https://royalsoci ety.org/topics-policy/projects/royal-society-climate-change-briefings/

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