

The publication of the European Journal of Geography (EJG) is based on the European Association of Geographers' goal to make European Geography a worldwide reference and standard. Thus, the scope of the EJG is to publish original and innovative papers that will substantially improve, in a theoretical, conceptual, or empirical way the quality of research, learning, teaching, and applying geography, as well as in promoting the significance of geography as a discipline. Submissions are encouraged to have a European dimension. The European Journal of Geography is a peer-reviewed open access journal and is published quarterly.

Received: 09/12/2025

Revised: 10/02/2026

Revised: 07/04/2026

Accepted: 26/04/2026

Published: 29/04/2026

Special Issue:

Teaching Geography for a World in Transition - Powerful Teaching in Uncertain Times



Teaching Geography
for a World in Transition

Guest Editors:

Dr Neli Heidari
Dr Uwe Krause
Dr Susan Caldis
Prof. Tine Beneker

EJG Editor:

Dr Alexandros Bartzokas-Tsiompras

DOI: 10.48088/ejg.m.sim.17.2.169.188

ISSN: 1792-1341

E-ISSN: 2410-7433



Copyright: © 2026 by the authors.

Licensee European Association of Geographers (EUROGEO). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license.



Research Article

Students' Perceptions of Stakeholders and Opinions on Democratic Negotiation in Urban Climate-Change Decision-Making

Marine Simon ¹✉ & Alexandra Budke ¹

¹ Institute for Geography Education, University of Cologne, Germany

✉ Correspondence: marine.simon@uni-koeln.de

Abstract: European cities are central arenas of climate mitigation and adaptation, yet local climate policy-making is shaped by complex multilevel governance involving diverse stakeholders. However, a gap remains between this complexity and public perceptions of who is responsible for addressing climate change. At the same time, democratic dissatisfaction among younger generations is growing towards national politics, raising questions about how they perceive local climate decision-making. Geography education, which integrates political and democratic competences, requires empirical insights into students' perceptions and opinions to strengthen their skills in understanding stakeholder roles, governance processes and local negotiations over climate policies. This study addresses these gaps through a survey of 307 students aged 14–20 from France, Germany, Italy, and Spain. The analysis examines students' perceptions of local political actors and stakeholders responsible for climate action, as well as their views on decision-making procedures at the city level via sets of Likert scales and items. Frequency distribution analysis and correlation calculations allow to show that students identify a variety of local stakeholders as important but tend to not consider their own role as decisive. Students mostly support democratic decision-making processes, although being interested in climate change and being a female student are correlated with more democratic positions. However, governance processes seem to not be really well known among students. This study, thus, offers exploratory insights that can inform geography education aimed at fostering informed, participatory engagement with urban climate governance.

Keywords: Climate change education; student perceptions; education for sustainable development; local democratic competence; participatory competence; political geography education

Highlights:

- Students' perceptions of stakeholders responsible for local climate policy are multilateral.
- Students' opinions on local processes of decision-taking are mostly democratic.
- Female students and students interested in climate change supported more democratic opinions.
- Students seem to have difficulties understanding local climate governance.
- Geography education needs to address deficits in local climate governance in an empowering manner

1. Introduction

Climate change poses profound challenges for European cities: more frequent weather events such as heatwaves or floods take a higher toll on cities' inhabitants, activities and infrastructures (IPCC, 2023a, p. 50). At the same time,

urban areas are responsible for a significant proportion of global CO₂ emissions, contributing approximately 70% of the total (IPCC, 2023b, p. 863). Urban planning is a key tool in the fight against climate change, with the implementation of mitigation measures (i.e. reduction of emissions) and adaptation policies to unavoidable climate impacts (e.g. Aboagye & Sharifi, 2024; Grafakos et al., 2019; Reckien et al., 2018). Among other areas, measures in the domains of transport, housing and green spaces are of particular importance. These include the promotion of car-free city centres (Kuss & Nicholas, 2022; Wynes et al., 2018), energy-efficient building renovations (Mi et al., 2019) and urban green infrastructure (Kabisch et al., 2017; Klemm et al., 2017).

City administrations have become pivotal entities in the execution of such measures, which necessitate democratic deliberation and negotiation at the local level (Bulkeley, 2010; Bulkeley et al., 2010). However, the urban level is also characterised by the presence of many different other and often concurring stakeholders such as economic interest groups and the private sector, researchers, or members of the civil society, including NGOs, citizen initiatives and cultural associations. Some of these stakeholders intervene beyond the scale of the city in a multilevel governance system (Bulkeley, 2010; Kern et al., 2008; Linke et al., 2022; Shtjefni et al., 2024). Consequently, local decisions on the necessary adaptation or mitigation measures are the result of negotiations, collaboration, and/or controversial debates within the local urban societies and among the different actors (e.g. Linke et al., 2022; Trell & Van Geet, 2019). As the various interested parties are subject to different impacts in regard to climate adaptation or mitigation measures, they are able to derive benefit from them in different ways. However, they also possess divergent interests and a variety of means of influencing the achievement of objectives. It is evident that these divergent interests, concerns and perceptions of problems have the potential to result in conflicts regarding the measures to be adopted. For instance, while certain stakeholders regard limitations on gasoline-powered private transportation, such as car-free city centres, as both necessary and forward-looking, others are concerned about potential economic disadvantages. There is therefore a high complexity: complexity through the local political landscape due to the involvement of multiple stakeholders at various levels in the local decision-making process; and complexity through decision-making processes with regard to local policies for climate change adaptation or mitigation.

The civil society, individuals, younger generations and students, who are the current and future voters and stakeholders in these communities where decisions are made that affect them today and tomorrow, must be able to understand this complexity of the local political system. Geography education, as a pivot discipline between the natural and social sciences, is best positioned to tackle the objective of developing these competences and promoting political (Budke, 2016) and democratic education (Friedrichs, 2020; Gryl, 2025; Himmelmann, 2005; Schulz et al., 2025) as part of a broader climate education, which is already integrated in European curricula (Enke & Budke, 2023). Understanding the identified stakeholders and decision-making complexity to discuss and implement measures towards a sustainable and climate-friendly city requires several skills: identifying the local actors involved and their interests (Kuckuck, 2014; Vasiljuk & Budke, 2021), evaluating decision-making processes in urban planning (Maier & Budke, 2016), and understanding, evaluating and taking a position on local political debates on climate policies and issues (Hanke et al., 2025). Different broader competences are enhanced through these skills; among them, system competence (e.g. Brockmüller, 2019; Fögele et al., 2020; Rempfler & Uphues, 2011), perspective-taking competence (Vasiljuk & Budke, 2021), but also action, participatory competence (Frith, 2014; Sass et al., 2020; Schönstein & Budke, 2024) and maturity (Dorsch & Kanwischer, 2019).

However, geography education, as well as climate education and education for sustainable development, face numerous challenges while teaching about climate change. Firstly, it is important to note that climate change education in formal contexts has frequently been subject to criticism on the grounds of its inadequacy. The criticism is centred on the fact that it focuses on a "deficit perspective", where students receive a one-way transmission of climate knowledge from teacher to student (Suldoovsky, 2017). In contrast, more "active" and empowering methods are often scarce (Crandon et al., 2022). On the contrary, climate deniers and disinformation are often considered as being more efficient, because of the media they are using which are widely popular among students (Cooper, 2011). Secondly, current European curricula already include climate change in a multiscale and multiperspective manner. However, interdisciplinary approaches relating scientific, social and political stakes are lacking in these curricula (Enke & Budke, 2023; Yaar-Waisel & Leininger-Frézal, 2025). Thirdly, there is an absence of studies that address who students consider to be stakeholders or political actors with the responsibility to address climate change at the urban scale. Little is known on the normative views of students with regard to local democratic decisions, and on their comprehension of governance processes. In this context, it is interesting to see whether they view different social actors as jointly

responsible, which is in line with democratic decision-making, or whether they believe that political leaders in particular should make decisions, which would support authoritarian practices. Furthermore, an analysis is necessary to determine the extent to which they perceive themselves as responsible and relevant actors. As political scientists have warned, there is a possibility that young generations may be affected by a “democratic deconsolidation” (Foa & Mounk, 2016, 2017; Grassi et al., 2024; Wuttke et al., 2022). While support for democracy remains prevalent, young people appear to be more inclined to support alternative authoritarian or military rule than was previously the case. Research has demonstrated that democratic deconsolidation appears to be less pertinent at the local level (Franke et al., 2026; Hegewald, 2024; Schnaudt, 2013). However, to the best of our knowledge, the impact of democratic deconsolidation on students at the local level, and its influence on their perception of governance decisions in contexts involving multiple stakeholders, remains unexplored. It is imperative that geography educators devise empowering geography classes on contentious and uncertain political and geographical issues, including local decision processes on climate policies. In order to inform the sphere of geography education and to facilitate the design of suitable educational material, it is fundamental to gain insights into students’ perceptions of these topics.

Therefore, in this study, we present an exploratory survey led with 307 students (14-20 years old) from France, Germany, Italy and Spain. We analysed the students’ perceptions of political and local stakeholders responsible for climate change politics and opinions on decision-making processes at the city level. We examined the following research questions (RQ):

- RQ1: What are European students’ perceptions on stakeholders responsible for climate policy at the local scale?
- RQ2: What are European students’ opinions on decision-taking processes at the city level regarding local climate change policies?

This article begins with the theoretical framework used as a basis for the study (Theoretical background). This is followed by a description of the methodology (Materials and methods). The results section presents the survey results on students’ perceptions and opinions (Results). Then, we discuss the implications for teaching complex democratic negotiations around climate policies (Discussion).

2. Theoretical background

As has been demonstrated in the existing literature, students’ knowledge of climate change and its mechanisms is insufficient. It has been documented that students frequently hold misconceptions regarding climate change, including a lack of comprehension surrounding the functioning of the greenhouse effect and erroneous assumptions concerning its association with pollution or ozone layer depletion (Choi et al., 2010; de Rivas et al., 2024; Liarakou et al., 2011; Rajeev Gowda et al., 1997; Shepardson et al., 2011; Škodová et al., 2025). Furthermore, students frequently misjudge the measures that need to be implemented (McNeill & Vaughn, 2012), by confusing environmental actions such as waste sorting with actions against climate change (Özdem et al., 2014), but also by failing to differentiate between measures that fall under climate adaptation and those that fall under mitigation (Bofferding & Kloser, 2015; Ratinen, 2021).

A discrepancy has been also identified between the modes of local governance of climate change undertaken by diverse stakeholders at varying responsibility levels and the perceptions of the public regarding the entity most responsible for tackling climate change (e.g Klein et al., 2018; Persson et al., 2021; Storbjörk et al., 2019; Thaler & Levin-Keitel, 2016). The prevailing perception amongst the general public identifies national, regional and local authorities as optimal entities for the implementation of climate policy (European Commission. Directorate General for Climate Action, 2025; Grahn & Jaldell, 2019; Persson et al., 2021; Trelle & Van Geet, 2019). The general public also considers other stakeholders, such as private companies, to be important. However, the civil society and individual level of responsibility are mentioned less frequently (Brock et al., 2023; European Commission. Directorate General for Climate Action, 2025; Persson et al., 2021). It is evident that the prevailing public opinion does not accurately reflect the complexity of governance across various political scales and stakeholder groups. Among young people and students, the identification of the actors involved is often more multilateral than among the general public (Özdem et al., 2014); they also consider climate policy as being the result of the collaboration between different stakeholders (European Commission. Directorate General for Climate Action, 2025; Hui, 2024). But, in another study, they take the national governments for responsible for climate inaction (Hickman et al., 2021). As a consequence, there is a need for more geographical and political education, encompassing an understanding of the various political actors involved, as well as

an in-depth exploration of the mechanisms and practices of local governance with respect to climate policies within urban settings.

In recent years, various studies have shown that young people in Europe are becoming less supportive of the democratic system. These studies refer to “democratic deconsolidation”, which is affecting even well-established democracies. This hypothesis of “democratic deconsolidation” has been examined in Europe (Grassi et al., 2024; Wuttke et al., 2022) and at the level of specific countries. For instance, recent studies have indicated a decline in the level of support for democracy among young people in Germany, France, Spain and Italy (Bedock, 2024; Lorente & Jiménez-Bravo, 2025; Tsatsanis et al., 2021; Wuttke et al., 2020, 2022). Whilst the majority of authors demonstrate that diffuse support for democracy (Easton, 1975) remains stable (Tsatsanis et al., 2021; Wuttke et al., 2020), they also highlight the specific discontent with both democracy itself and its political representatives (Belchior & Teixeira, 2024; Foa & Mounk, 2016, 2017; Grassi et al., 2024). Young people often feel inadequately represented and are less inclined to participate in elections (Angelucci et al., 2025; Henn & Weinstein, 2006; Improta & Mannoni, 2025; Tiberj, 2017). Furthermore, there has been a recent shift in their voting patterns, with an increasing propensity to support far-right political movements (Zagórski et al., 2021) and to endorse authoritarian or military-led regimes (Bedock, 2024; Wuttke et al., 2022). In the context of this “democratic deconsolidation”, authors have proposed several potential explanations. Firstly, they argue that the current generation of youth is distinct from previous ones in terms of their experiences. Specifically, they have been exposed to economic crises, increased individualisation of consumer behaviour, and the digitalisation of society (Denemark et al., 2016; Tsatsanis et al., 2021). Democracy’s institutions are “slow by design”, in contrast to the consumption patterns of current individualised products and media by the younger generation (Wuttke et al., 2022, p. 417). Secondly, it has been suggested by other authors that the polarisation of political debates and parties has the potential to be detrimental to the pluralistic nature of democratic structures (Foa & Mounk, 2017; Somer & McCoy, 2019).

Other analyses have explored possible differences among young people. Firstly, the level of education and qualifications has been demonstrated to be a determining factor in terms of support for democracy (Bedock, 2024; Belchior & Teixeira, 2024). Secondly, young men are more likely to express scepticism towards democracy in comparison to young women (Belchior & Teixeira, 2024). Finally, analyses focus on the differences between rural and urban areas with regard to this distrust. In France, peri-urban areas appear slightly more inclined to support non-democratic forms of government (Bedock, 2024). This is in contrast to other analyses which have indicated a “crisis of trust” in democracy and politics in rural and peripheral areas (Hegewald, 2024, p. 1749; Zumbrunn & Freitag, 2023). It has been demonstrated that, in general, young people residing in urban centres are less affected by disaffection than their counterparts residing in other areas (Bedock, 2024).

Political research has identified a variety of democratic decision-making processes. These include consensus-oriented processes, in which it is agreed upon between fixed preferences; majoritarian perspectives, in which competing interests are present and a majoritary vote leads to a decision; and deliberative, in which negotiation and debate underpin collective decisions (Held, 2006; Hendriks, 2010; Lijphart, 1984). A limited number of studies have examined how young generations prefer one or more decision-making processes. Adolescents possess a complex understanding of democratic processes and favor one of the three decision-making processes depending on their age and on the evaluated situation (e.g. Helwig et al., 2003; Nieuwelink et al., 2018).

Nevertheless, the extent to which “democratic deconsolidation” impacts local democracy, and the opinions of young people regarding local decision-making processes, remains uncertain. It has previously been demonstrated that the crisis of confidence in democracy most likely has a greater effect on the national level than on the local level (Hegewald, 2024). In this context, it is crucial to inform geography educators on how students perceive local political actors, stakeholders, and decision-making processes at the city level. Political education is a central component of geography classes, focusing on key and current issues such as the sustainable redesign of European cities. Teaching democratic competencies for reflection, argumentation, and participation in societal negotiations is also essential (Budke, 2016; Gryl & Budke, 2016; Jekel et al., 2025; Kuckuck, 2015). Therefore, in this exploratory study, we analysed the perceptions of local political actors and opinions on decision-making processes with 307 high school students aged from 14 to 20 years old from France, Germany, Spain and Italy to get an explorative insight in these questions.

3. Materials and Methods

3.1. Study framework

To assess students' perceptions of the various local-level climate action actors and decision-making processes, a paper-based questionnaire was administered to 307 high school students (314 students had taken part and 307 answered the questionnaire, thus providing an overall response rate of 97.7%) from four European countries (France, Germany, Spain and Italy). This study was conducted as part of the Erasmus+ project, "ECCI – Escape Climate Change Initiative"¹. In this project, two escape games were developed, tested and refined in several iterations across the four consortium countries. First, an analysis of the needs and school curricula of the four countries was carried out (Enke & Budke, 2023). In the second phase, the games (one paper-based and one digital) were developed based on the identified content of the school curricula in the four countries. Gamification to teach about climate change has been identified as a possible successful educational strategy in past research (Fernández Galeote et al., 2021; Jolly & Budke, 2023; Lux & Budke, 2020; Ouariachi et al., 2020). Accompanying documents for teachers and teaching sequences to introduce and debrief/reflect on the games were also developed (Crookall, 2010; Lux & Budke, 2023). The efficacy of the games and materials was then assessed through three successive trials with secondary school students in the four countries. The data presented in this study was obtained during the last test iteration of the project. The study was conducted before the students engaged with the escape games, and thus the results reflect their perceptions and opinions at the pre-intervention stage. The possibility of conducting the survey in the four countries involved in the project made it possible to carry out an international study and, potentially, a comparison of the perceptions and opinions of secondary school students, thereby establishing an assessment of the needs for developing geography lessons and didactic tools such as escape games about local climate policy that could be implemented beyond the national level.

3.2. Sample

This article presents a study conducted during the last large-scale test in June 2024, which involved 307 students aged from 14–20 years old from four countries: 22 from France, 22 from Germany, 230 from Italy and 33 from Spain. 92 of students were female, 206 were male (four students identified as gender-neutral and five students did not answer). All of the students were secondary school pupils from medium-sized (Ancona and Modena) or large (Cologne, Madrid and Paris) cities, and studied at general education institutions (Ancona, Cologne, Madrid and Paris) or at a school focusing on computer science (Modena). The selection of institutions and students was made on a convenience basis by the European project partners, which is the reason why the number of students varies and why this study is primarily exploratory in nature. All school principals, teachers, parents and students were previously informed and gave their consent to this study.

3.3. The measurement of students' perceptions of stakeholders responsible for climate policy at city level (RQ1).

The measurement of students' perceptions and opinions necessitates a number of preliminary considerations. Firstly, it is important to note that both perceptions and opinions are the result of the knowledge available to the respondent, as well as of their beliefs, values, and choices (Dowler et al., 2006). Furthermore, they are the result of their social interactions and experiences (Dowler et al., 2006; Filho et al., 2023; Weber, 2010). The perceptions and opinions measured are the aggregation of individuals' views at a given moment and may therefore change depending on the context (Dowler et al., 2006). In scientific literature, the terms "perception" and "opinion" are frequently treated as equivalent (Dowler et al., 2006; Filho et al., 2023), however, the term "opinion" is more frequently used in the disciplines of sociology and political science working on democratic evolutions (Bergman, 1998). Furthermore, we hypothesise a subtle discrepancy in the connotations of both terms, as other authors also do (for example Crisol-Moya et al., 2020). While analysing the perceptions of climate policy stakeholders is close to evaluating the respondents' knowledge, evaluating their opinions on local decision-making processes involves assessing their normative views and values on

¹ The ERASMUS + Project Escape Climate Change Initiative (Project number: KA220-SCH-D224FD32) took place between 2022 and 2025 and involved following partners: two high education institutions, the Institute for Geography Education from the University of Cologne (Germany) and the Università Politecnica della Marche (Italy); two firms specialised in game development and game design, Biosentinelle (France) for the paper game and Melazeta (Italy) for the digital game; and two NGOs, Association pour la transition Bas Carbone (ABC, France) and Design for Change (DFC, Spain). More information can be found on the project website: <https://www.ecciproject.eu/> and the games can be played while accessing the learning platform: <https://app.ecciproject.eu/>.

local democracy and governance. It is precisely on this basis that the study differentiates between the two terms and the respective research questions.

In order to assess perceptions of those responsible for climate policy at city level, a Likert scale composed of different items was utilised, with each item corresponding to a local or general political actor. To ensure the validity of the scale, the list of items was first compiled from existing literature. The European Commission's Eurobarometer survey encompasses a wide range of actors. These include national governments, the European Union, large companies, local and regional authorities, civil society organisations such as environmental non-governmental organisations (NGOs), the respondents themselves, and schools and universities (European Commission. Directorate General for Climate Action, 2025). Other studies have also mentioned experts, scientists and local associations (Grahm & Jaldell, 2019; Persson et al., 2021; Trell & Van Geet, 2019). Consequently, the stakeholders most frequently cited in the surveys by respondents who provided valid answers were selected for the local-level study. The nomenclature employed for these stakeholders was modified in a manner that rendered it more specific, including "The government", "The mayor", "Big companies", "Various interest groups", "Environmental activists" and "Scientists" (see Box 1). The category "Students" was incorporated with the objective of enabling respondents to self-identify as stakeholders, in accordance with the methodology employed in the European survey (European Commission. Directorate General for Climate Action, 2025, see Box 1). The category "Political parties in the city" was added to include the diversity of local political actors and the potential for conflict in local democratic negotiations (see Box 1). The resulting list was validated based on responses given during previous exploratory tests carried out as part of the European project in June 2023 and February 2024. In these tests, participants were presented with the following open-ended question: "Who is responsible? Name as many individuals and groups as possible who, in your opinion, are responsible for greater climate protection." The open responses provided by students could be integrated in our closed list as follows: 77% in June 2023 (N = 82) and 68% in February 2024 (N = 134). A number of the unclassifiable responses exhibited misconceptions, with students identifying "culprits" of climate change rather than those responsible for the necessary policies. One of these, "Rich people" (4.5% of occurrences), was included in the list as a negative response, as the literature recommends including items formulated both positively and negatively to prevent bias in the responses (Croasmun & Ostrom, 2011; see Box 1). The question was formulated as follows: "How important are the following stakeholders in deciding which measures should be taken in European cities to tackle climate change?" Students were invited to select one option per actor or stakeholder from the following possibilities: "Very important", "Important", "Moderately important", "Of little importance", "Not important at all" or "Don't know". In order to reflect the reality of current governance and local democracy, which involves many different stakeholders at several levels, all stakeholders could be identified as important, thus enabling a coherent scale to be constructed. All nine items forming this Likert scale were tested for reliability using Cronbach's alpha coefficient, which yielded a relatively satisfactory result: $\alpha = .68$. Although the alpha does not reach the threshold of .70, which is considered in the literature to be the minimum required to affirm the consistency and reliability of the scale, the scale appears to be robust enough given the construct's validity based on the literature and the two previous test iterations (Taber, 2018).

Box 1. Items to measure perceptions of stakeholders responsible for climate policy at the city level. Own elaboration.

Question: "How important are the following stakeholders in deciding which measures should be taken in European cities to tackle climate change?"

Item 1: "The mayor"

Item 2: "Various interest groups"

Item 3: "Scientists"

Item 4: "The government"

Item 5: "Political parties in the city"

Item 6: "Environmental activists"

Item 7: "Rich people"

Item 8: "Big companies"

Item 9: "Students"

3.4. The measurement of opinions on democratic climate policy decision-making at the city level (RQ2).

The majority of studies that have evaluated opposition to democracy have utilised data from two major sources: the World Values Survey (Gorman et al., 2019) and the European Values Survey (Tsatsanis et al., 2021; Wuttke et al., 2022). Nevertheless, the indices created using these data do not always achieve satisfactory reliability (e.g. Ciftci, 2010); furthermore, the underlying construct, “support for democracy”, is not stable and therefore not always comparable across countries (Ariely & Davidov, 2011). The same objections apply to the present study. This is due to the fact that European cities do not possess uniform powers in the domains of climate policy (Shtjefni et al., 2024). Additionally, they demonstrate varying degrees of advancement in establishing networks of stakeholders involved in climate policymaking or local political cultures of climate governance (Kern et al., 2008; Rutherford & Jaglin, 2015; Shtjefni et al., 2024). Consequently, the analysis proposed in this article was based on the development of a set of dependent variables formed from Likert-type items (see Box 2). Each item measured support for local democracy or the local governance system for climate policy. The respondents were invited to indicate their response to a claim by selecting one of the following options: “I strongly agree”, “I agree”, “Neutral”, “I disagree”, “I strongly disagree”, “Don’t know”. The question was formulated as follows: “How much do you agree with the following claims?” The first criterion for the creation of items was support for, or lack of support for, local democratic processes responsible for the development of climate policy. The initial two items were formulated in a positive manner and measured support for local democracy as a participatory system and as a pluralistic and elective system (see Claims 1 and 2, Box 2). Two items were formulated in a negative manner: firstly, the lack of support for plurality of opinions and stakeholders was assessed (see Claim 3, Box 2). Secondly, support for authoritarian local power in decision-making on climate issues was measured (see Claim 4, Box 2, as it has also been measured in the World Values Survey, e.g. Bedock, 2024; Gorman et al., 2019; Wuttke et al., 2022). Three other items were developed to measure support for local governance, whereby local decisions are the result of negotiations and/or conflicts between stakeholders and local political actors. Two of these were developed to assess support for governance (see Claims 5 and 6, Box 2). The final one was designed to measure the lack of support for governance as a negotiating and sometimes conflictual process (see Claim 7, Box 2). Some items from this set also enabled the measurement of support for different democratic principles in decision-making (Held, 2006; Hendriks, 2010; Lijphart, 1984). Claim 2 and 5 represented support for the majoritarian perspective in which the voting allows for the decision-making between different competing interests. The concept of deliberative democracy, wherein dialogue and negotiation result in decisions made among citizens, was represented by Claims 1 and 6. Claim 7 emphasised support for a consensus-oriented perspective, which is characterised by the achievement of agreement through consensus.

Box 2. Items to measure support or lack of support for democratic decision-making and governance processes. Own elaboration.

- **Claim 1:** “The solutions for climate protection in European cities would actually be very simple if everyone did their part and participated in negotiating and implementing solutions.”
- **Claim 2:** “As many people as possible should develop proposals and argue for them on how European cities can adapt to climate change. The proposals should then be put to a vote.”
- **Claim 3:** “It is not good when many people are involved in finding solutions for adapting to the consequences of climate change in European cities, as this leads to conflicts.”
- **Claim 4:** “If everyone proposes different solutions for adapting to the consequences of climate change in European cities, it is very difficult to reach decisions. It is better if one person, e.g. the mayor, makes the decision alone.”
- **Claim 5:** “Decisions on climate protection are complex and it is not possible to satisfy everyone.”
- **Claim 6:** “In order to find solutions to the consequences of climate change in European cities, everyone must make compromises.”
- **Claim 7:** “Everyone must agree in order to find solutions: however, the multitude of different opinions makes this difficult.”

3.5. Independent variables

As personal interest in climate change can influence how students perceive political actors and local decision-making processes regarding climate-related policies, a four-item Likert scale was created with following overall question: "What do you think about climate change? Please indicate the extent to which you agree with each statement" using following responses: "I strongly agree", "I agree", "Neutral", "I disagree", "I strongly disagree", "Don't know". The first item measured interest in the topic (Krapp, 2000):

"I am interested in the topic of climate change."

The second and third items measured support for city-level mitigation and adaptation measures, respectively (adapted from Frick et al., 2023 and Schahn, 1999):

"I believe that it is very important for cities to take measures to combat climate change."

"I believe that it is very important for cities to take measures to adapt to climate change."

Finally, the final item measured the respondents' personal interest in participating in climate policy (adapted from Frick et al., 2023 and Schahn, 1999):

"I would like to participate in measures to combat and adapt to climate change in cities."

This Likert scale was tested for reliability, yielding a satisfactory Cronbach's alpha of .73. To complete the analysis, the variables of the students' age, gender and country were also taken into account.

All questions from the questionnaire were translated into the four project languages. The German translation of "Moderately important" and "Neutral" as a middle point answer in the Likert scales and items was made using the wording "*teilweise*" and "*teils/teils*", which mean "partly" and "half/half". Subsequent to the translation process, the project partners were responsible for the dissemination of the questionnaires within the various educational institutions.

3.6. Statistics

To determine whether it would be possible to group students from the four countries together for the analysis, two Kruskal–Wallis tests were conducted (Cohen, 2008). The first test utilised the mean of the responses provided on the Likert scale representing stakeholders, while the second test employed the mean of the responses given for the variables measuring support for democracy. This was necessary in view of the differences in numbers between the groups, with Italian students predominating. These tests showed that there were no differences in the central tendencies of the four groups ($\chi^2(3) = 1.6257$, $p = .65$ and $\chi^2(3) = 4.3836$, $p = .22$), meaning they could be considered together in subsequent analyses. However, the study is based on highly uneven numbers and remains exploratory, as the sample observed is based on a convenience selection made within the framework of the European project by different partners.

The main analysis involved the calculation of the frequency distribution of responses and of descriptive statistics for each set of variables. To further explore the results with the independent variables, correlation calculations, a Mann-Whitney-U test and multivariate regression analyses were then performed (Cohen, 2008; Cohen et al., 2013).

4. Results

4.1. Students' perceptions on local stakeholders and political actors at the city level regarding local climate change policies.

Results on the first research question (RQ1) are presented in Figure 1. When European secondary school students were asked about the importance of the various stakeholders involved in determining the measures to be taken in European cities to address climate change, they ranked scientists as the most significant group, with 89% giving them a positive rating (while selecting either "Very important" or "Important", see Figure 1). National and local authorities with "The government" and "The mayor" ranked second and third in terms of importance, with 75% and 74% positive ratings respectively. "Big companies" were also evaluated as mostly important, as were political parties in the city with 56% positive ratings (see Figure 1). The category "Diverse interest groups" showed hesitancy among the students, with 47% positive ratings but also 41% ratings as "Moderately important" (see Figure 1). "Environmental activists" were identified as important by 50% of students, but 24% considered them as only moderately important and 26% of little importance

or not important at all (see Figure 1). Students ranked their own category as being second less important with only 34% positive ratings, 31% judging their importance as moderate and 35% of little importance or not important at all (see Figure 1). Finally, students ranked “Rich people” as being mostly of little importance or unimportant at all with 41% negative ratings (while selecting either “Of little importance” or “Not important at all”, see Figure 1).

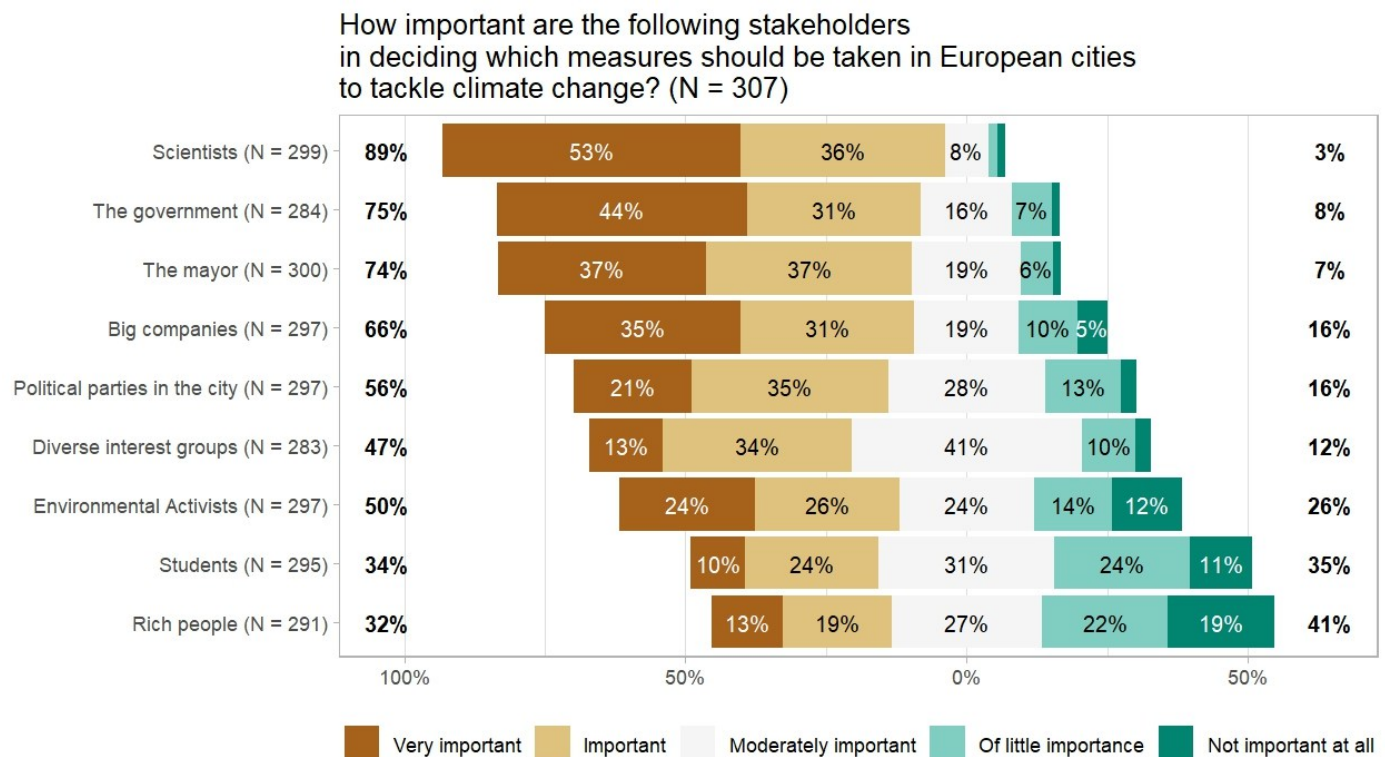


Figure 1. European students’ perceptions on stakeholders responsible for climate measures at the city level. Positive responses are positioned on the left, while negative responses are positioned on the right, with neutral responses occupying the central area. Percentages in bold are used to calculate the sum of positive responses on the left-hand side and the sum of negative responses on the right-hand side. For each item, the precise number of valid responses is specified. Own elaboration.

A Kruskal-Wallis test showed no significant differences between the responses of students from different countries ($\chi^2(3) = 0.85127, p = .83$) or between genders ($\chi^2(3) = 5.8013, p = .12$) with regard to the dependent variable using the mean of the Likert scale. However, the older the students were, the more important they evaluated all stakeholders ($r = .199, p = .003$). To see if the own personal interest towards climate change had a possible link with the perceptions of the importance of stakeholders in climate policy, a correlation test was conducted to assess the linear relationship between the means of the two Likert scales. A positive and significant moderate correlation was identified between the means, $r = .397, p < .001$. This suggests that, in this exploratory study, interest in the climate change issue was positively associated with the perceived importance of stakeholders and political actors in addressing climate change at the urban level. Students who expressed a lower interest in the climate change issue tended to assign a lower level of importance to all the actors involved. However, differences were only significant for the items "Environmental activists" and "Students". Students who expressed a higher level of interest in climate change issues assessed "Environmental activists" as important with 60.7%, while students less interested assessed them as important with 38.6%. The former also assessed "Students" as important with 40.1%, while the latter with 26.8%. The differences were statistically significant ($\chi^2(4) = 19.891, p < .001, V = .259$ and $\chi^2(4) = 10.447, p < .001, V = .188$). To complete the results, a multivariate regression analysis was run to predict the assessment of local stakeholders as important from interest towards climate change, age, gender and country (coded as dummy variables). This resulted in a significant model $F(6, 200) = 11.534, p < .001, R^2 = .257$, showing a moderate effect (Cohen, 1988). The individual predictors were examined further and it was found that interest towards climate change significantly predicted assessment of local stakeholders

as being important ($\beta = .418, p < .001$), as did age ($\beta = .305, p < .001$) and gender (with being a female student significantly predicting a positive evaluation of stakeholders, $\beta = -.182, p = .007$).

4.2. Students' opinions on democratic decision-taking processes at the city level.

Results on students' opinions on democratic decision-taking processes at the city level (RQ2) are presented in Figure 2.

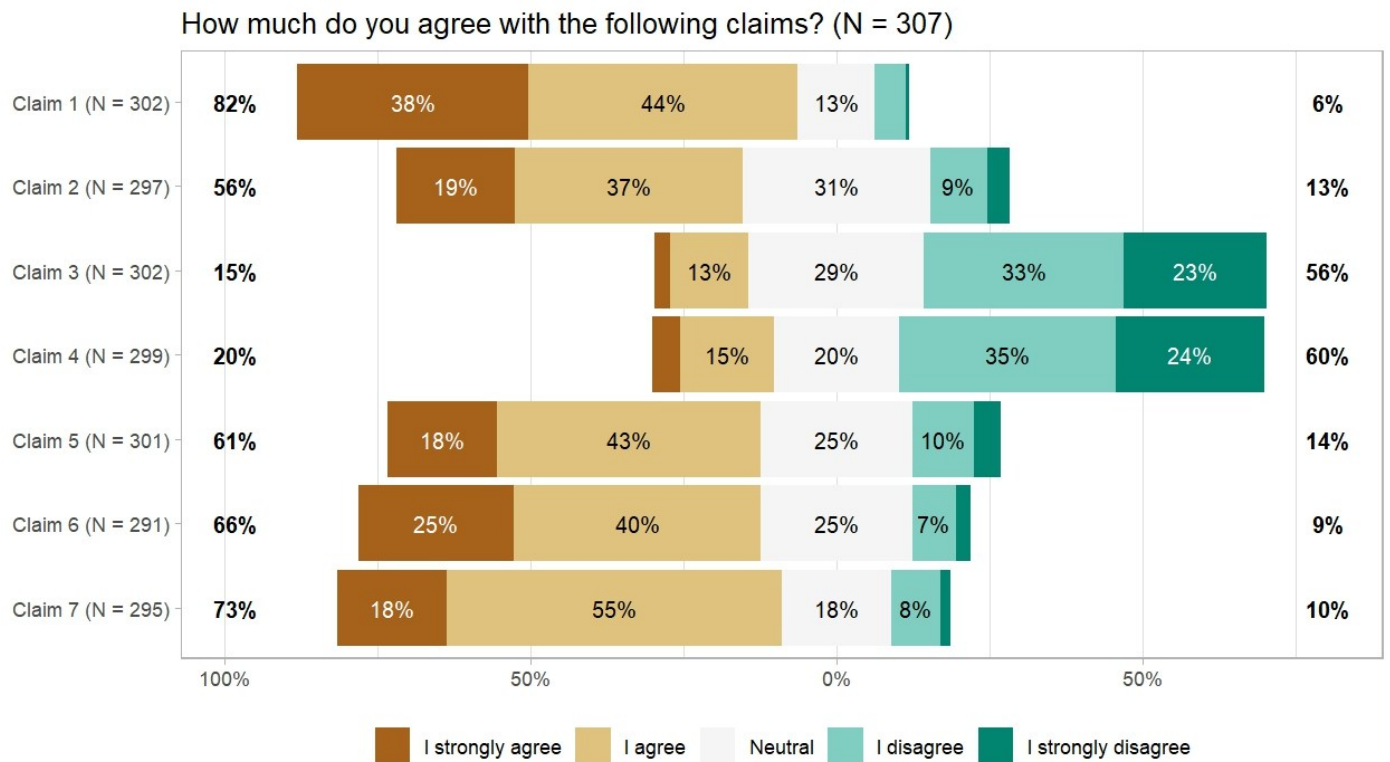


Figure 2. European students' opinions on decision-taking processes on climate policy at the city level. Positive responses are positioned on the left, while negative responses are positioned on the right, with neutral responses occupying the central area. Percentages in bold are used to calculate the sum of positive responses on the left-hand side and the sum of negative responses on the right-hand side. For each item, the precise number of valid responses is specified. **Claim 1:** "The solutions for climate protection in European cities would actually be very simple if everyone did their part and participated in negotiating and implementing solutions." **Claim 2:** "As many people as possible should develop proposals and argue for them on how European cities can adapt to climate change. The proposals should then be put to a vote." **Claim 3:** "It is not good when many people are involved in finding solutions for adapting to the consequences of climate change in European cities, as this leads to conflicts." **Claim 4:** "If everyone proposes different solutions for adapting to the consequences of climate change in European cities, it is very difficult to reach decisions. It is better if one person, e.g. the mayor, makes the decision alone." **Claim 5:** "Decisions on climate protection are complex and it is not possible to satisfy everyone." **Claim 6:** "In order to find solutions to the consequences of climate change in European cities, everyone must make compromises." **Claim 7:** "Everyone must agree in order to find solutions: however, the multitude of different opinions makes this difficult". Own elaboration.

Claims 1 to 4 were designed to measure support, or lack of support, towards democratic decisions at the city level. The responses indicate an overall support for democratic processes. Claim 1 was the most positively ranked with 82% of students in agreement (38% strongly agreeing, 44% agreeing, see Figure 2). Students also mostly agreed with Claim 2, with 19% of students strongly agreeing and 37% agreeing, although 31% were neutral on this claim (see Figure 2). Claim 3 and Claim 4 measured the lack of support for democratic processes and were supported by only 15% and 20% of the students, respectively (see Figure 2).

Claims 5 to 7 were designed to measure support or lack of support for governance processes at the city level which are characterised by negotiations and/or conflicts between different stakeholders. The findings reveal a rather

paradoxical outcome, with the three claims being supported by students. While Claim 5 and Claim 6 received support from 61% and 66% of students, respectively, (see Figure 2), Claim 7 was also supported by 73% of students (18% strongly agreed, 55% agreed, see Figure 2). Noteworthy in these results is also the fact that students expressed often neutral opinions with five claims (Claims 2-6) being evaluated at more than 25% with “Neutral”.

Finally, a Kruskal-Wallis test showed no significant differences between countries ($\chi^2(3) = 4.3323, p = .022$) regarding the overall mean of these Likert items. However, a Mann-Whitney-U-Test was calculated to determine if there was a difference between the support for democracy of female and male students. The distributions did not differ between both groups, Kolmogorov-Smirnov $p > .05$. There was a statistically significant difference in median support for democratic processes between female (Mdn = 3.86) and male (Mdn = 3.71) students, $U = 5978.00, Z = -2.278, p = .023, r = -.141$. To see if the own personal interest towards climate change had a possible link with the opinions on decision-taking processes at the city level, a correlation test was measured to assess the linear relationship between the means of the Likert scale measuring interest in the climate change topic and the set of Likert items measuring support for democracy and governance processes (negative phrased items were reverse coded to reflect only support for democracy). A positive moderate significant correlation was identified between the means, $r = .305, p < .001$. This suggests that, in this exploratory study, interest in the climate change topic was positively correlated with support for democratic processes and governance practices among different stakeholders at the city level. To complete the analysis, a multivariate regression analysis was run to predict support for democracy and governance processes from interest towards climate change, age, gender and country (coded as dummy variables). This resulted in a significant model $F(6, 231) = 4.714, p < .001, R^2 = .109$, showing a moderate effect (Cohen, 1988). The individual predictors were examined further and it was found that interest towards climate change significantly predicted support towards democratic processes and governance practices ($\beta = .290, p < .001$) whereas other variables such as age ($\beta = -.018, p = .795$) or gender ($\beta = -.109, p = .110$) were not significant predictors.

5. Discussion

5.1. Discussion and implications for geography education

In this study, an exploratory approach was adopted to analyse how students perceive local political actors responsible for local climate policy, and what their opinions are on the decision-making processes involved. To this end, a survey was conducted among 307 secondary school students in France, Germany, Italy and Spain. Our analysis provides insight into students' needs and suggests ways to teach geography and local climate policy in a context where cities and the local level are becoming increasingly important for climate policy, with multiple local actors involved and local governance characterised by negotiation and collaboration.

The findings on the first research question (RQ1) indicated that students have a multilateral perception of the actors responsible for climate policy at city level (see Figure 1), consistent with the findings of other studies (European Commission. Directorate General for Climate Action, 2025). The stakeholders that were identified as being the most important in our survey are the same as those identified as the most important in other surveys, namely local or national elected institutions and big companies (European Commission. Directorate General for Climate Action, 2025; Grahn & Jaldell, 2019; Persson et al., 2021; Trelle & Van Geet, 2019). In accordance with the findings of other studies (Persson et al., 2021), students in this study ascribed a high level of importance to scientists and experts, but differed in placing them first. Students demonstrated a greater degree of hesitation with regard to local political and societal actors, identifying them as less important than other stakeholders (see Figure 1). The majority of students did not self-identify as significant local political actors (see Figure 1). Finally, they mostly did not identify “Rich people” as important. In light of the findings, it can be concluded that students possess a general awareness of the multiple stakeholders involved in the formulation of climate policies. However, the specific nature of local governance remains poorly understood, with stakeholders from the local political sphere and civil society being less evidently recognised as significant actors.

The results on the second research question (RQ2) demonstrated that the majority of students express support for local democracy (Figure 2) and democratic decision-making methods (plurality, voting, collaboration and negotiation). The rejection of negative items by the majority, which measured a lack of support for democracy, particularly those pertaining to decision-making by a single person, such as the mayor (Claim 4, see Figure 2), is indicative of this. These results align with previous findings indicating general diffuse support among young people for democracy, despite less

specific support for democracy (Easton, 1975; Tsatsanis et al., 2021). Consequently, the present study did not demonstrate a general “democratic deconsolidation” at the local government level.

However, between 15% and 20% of the students showed lack of support for democratic processes (Claims 3 and 4, see Figure 2). This finding suggests the possible occurrence of “democratic deconsolidation” among a subset of students, as evidenced by other authors (Bedock, 2024; Belchior & Teixeira, 2024; Foa & Mounk, 2016, 2017; Grassi et al., 2024; Tsatsanis et al., 2021; Wuttke et al., 2022). Other studies have indicated that this phenomenon is likely to be more prevalent at the national level (Hegewald, 2024). Through our study, it can be hypothesised that “democratic deconsolidation” is also observable at the local level as evidenced by a lack of interest in local climate politics and/or policies, and in democratic decision-making processes.

While many students expressed support for governance, which involves debate, compromise and negotiation between stakeholders, they also demonstrated lack of support for governance negotiation while favouring consensus in decision-making (see Figure 2). This finding suggests that many students may lack a comprehensive understanding of governance as a decision-making process, which inherently involves collaboration between stakeholders, as well as negotiation and conflict resolution between diverse interests (Linke et al., 2022; Reckien et al., 2018; Trell & Van Geet, 2019). However, the fact that the majority of students in our study support a consensus-oriented approach to democratic decision-making (Lijphart, 1984) is consistent with findings from other studies (Helwig et al., 2003; Nieuwelink et al., 2016). The present study found that all three forms of democratic decision-making were supported by the majority at the local level. The most supported perspective was deliberative democracy (Claims 1 and 6 with 82% and 66% support, respectively), followed by the consensus-oriented perspective (Claim 7 with 73% support) and, finally, the majoritarian decision-making perspective (Claims 2 and 5 with 56% and 61% support, respectively). It has been demonstrated by other studies that adolescents are capable of supporting a variety of democratic decision-making processes. These preferences are contingent on factors such as the age of the adolescents and the specific situation under consideration (Helwig et al., 2003; Nieuwelink et al., 2016, 2018).

Finally, the present study provided confirmation at the local level of analyses already conducted in other surveys, showing a significant difference between female and male participants in terms of evaluation of the stakeholders as being important and support for democracy (e.g. Belchior & Teixeira, 2024). The study also demonstrated, in an original approach, that personal interest in the climate change topic was significantly correlated and predicted the perception of stakeholders as important to tackle climate change at the city level and support for democracy (see Results). Despite the necessity to further confirm these exploratory results, there is compelling evidence from psychological research demonstrating a strong correlation between interest and engagement (Krapp, 2000). Other political and sociological studies have proposed an explanation while demonstrating that disaffection with democracy can be associated with far-right opinions, which are frequently characterised by climate scepticism (Forchtner, 2019).

Our results underscore the necessity for more comprehensive geographical education on climate governance within urban areas, which is an increasingly important aspect of climate policy (Bulkeley, 2010; Bulkeley et al., 2010; Linke et al., 2022), despite the varying degrees of advancement among cities in this domain (Kern et al., 2008; Shtjefni et al., 2024). There is a need to educate more precisely on the specific modes of local decision-making and governance processes with regard to climate policy. This necessitates the undertaking of specific case studies of cities in order to address the diversity of local decision-making processes. Indeed, while some decisions are made collaboratively (Linke et al., 2022; Trell & Van Geet, 2019), others involve alternating phases of negotiation and returns to unilateral decision-making by elected authorities (Storbjörk et al., 2019). This suggests a necessity for a “real-time” geography course, which strives to mirror social realities as close as possible. It is also necessary to provide authentic material (Lütje & Budke, 2021) and to demonstrate the complexity and multiperspectivity of the local governance situation (Vasiljuk & Budke, 2021). The implementation of such a course may present significant challenges, primarily due to the time required for publishing school textbooks and developing validated educational materials. However, it should be noted that some European curricula, such as those in Germany and France, already incorporate the study of the climate policy at the local level (Enke & Budke, 2023). It is imperative to generalise these approaches and enable educators to use local studies as a foundation for geography lessons that are closely aligned with local political realities, with a view to empowering students.

The finding that students did not consider their own role to be of significance also calls for further educational action. Students have means to take action, even if they have not yet exercised their right to vote. Furthermore, it is crucial for them to be able to identify their own agency possibilities, as this is fundamental for the development of their

participating competence (Jekel et al., 2025). For instance, research in the field of political science has demonstrated that student empowerment is frequently facilitated by personal engagement in student or youth organisations, such as youth assemblies (e.g. Harada, 2023; Tucci et al., 2021). In this context, the role of geography education becomes essential. By fostering a capacity for reflection and analysis among students as well as factual knowledge on stakeholders, ways to be engaged democratically, geography lessons have the potential to serve as a foundation for understanding the dynamics of political engagement and of community involvement.

Consequently, educators specialising in climate and sustainable development education must devise effective strategies to engage with young people who demonstrate a lack of interest or engagement, as identified in our study. It is imperative that innovative activities for students are provided that deviate from top-down “deficit” approaches (Suldovsky, 2017), which are inherently incompatible with genuine and efficient student empowerment (Monroe et al., 2019). As previously mentioned, geography lessons should be based on concrete and specific local case studies rooted in reality. Such alternative pedagogical approaches, including games and projects, would have the capacity to shift towards a less “deficit”-centred approach to climate change education and allow to foster participative and democratic competences (Jekel et al., 2025) among students.

5.2. Limitations and avenues for future research

Despite the insights this study provides into students’ perceptions and opinions about local climate politics, it is important to note the limitations of the study. First, the sample, which was a convenience sample, was largely uneven, although the Kruskal-Wallis test allowed results to be pooled together (see Materials and Methods). The study was exploratory in nature and thus requires further research with a larger sample size. Secondly, the present quantitative survey represents only self-reported opinions and perceptions at a specific moment in time. In order to gain a more complete understanding of and to corroborate students’ views, it would be necessary to conduct more comprehensive qualitative interviews.

However, some results indicate potential avenues for future research. First, the weight attributed to scientists by students in our study, who all reside in medium-sized or large cities, would require further analysis. For example, it would be interesting to ascertain the extent to which it is consistent with other studies demonstrating that young city-centre residents are more inclined than those in other areas to favour an expert-led government for climate policy, a phenomenon that can be paradoxically anti-democratic (Bedock, 2024). Further research is also required to investigate “democratic deconsolidation” at the local scale. An important avenue for future research would be for example to differentiate between large and small cities. Finally, the present study demonstrated that some students lack interest in local democracy in relation to climate policies and local climate actors. A further research direction could involve the investigation of the consistency of this tendency across different topics and/or local actors.

Funding: This work was co-funded by the Erasmus + programme of the European Union (Grant number KA220-NW-21-36-32587).

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Acknowledgments: 1. The authors want to thank the editors and three anonymous referees who offered insightful and immensely useful critique of an earlier draft of this article. This article forms part of the Special Issue (SI_TGEO), [Teaching Geography for a World in Transition. Powerful Teaching in Uncertain Times](#), published in the European Journal of Geography. The Special Issue draws inspiration from the 2026 [EUROGEO Conference](#), held in Tilburg, The Netherlands, 21 to 22 May 2026. The collection brings together research on geography education and geographical inquiry, with a focus on powerful geographical knowledge, spatial thinking, and critical, future oriented pedagogies. Contributions address key transformations shaping contemporary geography, including deglobalisation, multipolar world orders, postcolonial critique, contested knowledge and places, and the integration of artificial intelligence in educational practice and research. The Special Issue is edited by **Dr. Neli Heidari**, University of Bremen, Germany, **Dr. Uwe Krause**, Fontys University of Applied Sciences, The Netherlands & Ege University Izmir, Türkiye, **Dr. Susan Caldis**, Macquarie University, Australia, **Prof. Tine Beneker**, Utrecht University, The Netherlands, and **Dr. Alexandros Bartzokas-Tsiompras**, National Technical University of Athens, Greece, & Associate



Editor of the European Journal of Geography. **2.** The authors thank their European partners, students and teachers from the schools involved in the survey, and the student assistant who helped during the project.

Data Availability Statement: Datasets from this study may be provided from the corresponding author on request via e-mail.

Contribution to the Special Issue Topics: This article aims to inform researchers and geography educators about the perceptions and opinions of secondary school pupils in four European countries, within a geopolitical and democratic context characterised by uncertainty and fragmentation. It highlights the need to empower students to understand and influence climate policy and democratic decision-making at a local level.

References

- Aboagye, P. D., & Sharifi, A. (2024). Urban climate adaptation and mitigation action plans: A critical review. *Renewable and Sustainable Energy Reviews*, 189, 113886. <https://doi.org/10.1016/j.rser.2023.113886>
- Angelucci, D., Carrieri, L., & Improta, M. (2025). ‘No Participation Without Representation’: The Impact of Descriptive and Substantive Representation on the Age-Related Turnout Gap. *Political Studies*, 73(1), 126–148. <https://doi.org/10.1177/00323217241229316>
- Ariely, G., & Davidov, E. (2011). Can we Rate Public Support for Democracy in a Comparable Way? Cross-National Equivalence of Democratic Attitudes in the World Value Survey. *Social Indicators Research*, 104(2), 271–286. <https://doi.org/10.1007/s11205-010-9693-5>
- Bedock, C. (2024). Qui doit gouverner ? Jeunesse(s) et soutien à différents modes de gouvernement en France. *Agora Débats/Jeunesses*, n° 98(3), 7–24. <https://doi.org/10.3917/agora.098.0007>
- Belchior, A. M. D. C., & Teixeira, C. P. (2024). Breaking with mainstream politics while engaging with polarized: Determinants of young Europeans’ support for democracy. *Journal of Youth Studies*, 27(7), 986–1005. <https://doi.org/10.1080/13676261.2023.2187693>
- Bergman, M. M. (1998). A Theoretical Note on the Differences Between Attitudes, Opinions, and Values. *Swiss Political Science Review*, 4(2), 81–93. <https://doi.org/10.1002/j.1662-6370.1998.tb00239.x>
- Bofferding, L., & Kloser, M. (2015). Middle and high school students’ conceptions of climate change mitigation and adaptation strategies. *Environmental Education Research*, 21(2), 275–294. <https://doi.org/10.1080/13504622.2014.888401>
- Brock, A., Williams, I., & Kemp, S. (2023). “I’ll take the easiest option please”. Carbon reduction preferences of the public. *Journal of Cleaner Production*, 429, 139398. <https://doi.org/10.1016/j.jclepro.2023.139398>
- Brockmüller, S. (2019). *Erfassung und Entwicklung von Systemkompetenz – Empirische Befunde zu Kompetenzstruktur und Förderbarkeit durch den Einsatz analoger und digitaler Modelle im Kontext raumwirksamer Mensch-Umwelt-Beziehungen*. Pädagogische Hochschule Heidelberg.
- Budke, A. (2016). Potentiale der Politischen Bildung im Geographieunterricht. In A. Budke & M. Kuckuck (Eds), *Politische Bildung im Geographieunterricht* (pp. 11–23). Franz Steiner Verlag. <https://elibrary.steiner-verlag.de/book/99.105010/9783515113250>
- Bulkeley, H. (2010). Cities and the Governing of Climate Change. *Annual Review of Environment and Resources*, 35(Volume 35, 2010), 229–253. <https://doi.org/10.1146/annurev-environ-072809-101747>
- Bulkeley, H., Broto, V. C., Hodson, M., & Marvin, S. (Eds). (2010). *Cities and Low Carbon Transitions*. Routledge. <https://doi.org/10.4324/9780203839249>
- Choi, S., Niyogi, D., Shepardson, D. P., & Charusombat, U. (2010). Do Earth and Environmental Science Textbooks Promote Middle and High School Students’ Conceptual Development About Climate Change?: Textbooks’ consideration of students’ misconceptions. *Bulletin of the American Meteorological Society*, 91(7), 889–898. <https://doi.org/10.1175/2009BAMS2625.1>
- Ciftci, S. (2010). Modernization, Islam, or Social Capital: What Explains Attitudes Toward Democracy in the Muslim World? *Comparative Political Studies*, 43(11), 1442–1470. <https://doi.org/10.1177/0010414010371903>
- Cohen, B. H. (2008). *Explaining Psychological Statistics*. John Wiley & Sons.
- Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2.). Lawrence Erlbaum Associates.

- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd edn). Routledge. <https://doi.org/10.4324/9780203774441>
- Cooper, C. B. (2011). Media Literacy as a Key Strategy toward Improving Public Acceptance of Climate Change Science. *BioScience*, 61(3), 231–237. <https://doi.org/10.1525/bio.2011.61.3.8>
- Crandon, T. J., Scott, J. G., Charlson, F. J., & Thomas, H. J. (2022). A social–ecological perspective on climate anxiety in children and adolescents. *Nature Climate Change*, 12(2), 123–131. <https://doi.org/10.1038/s41558-021-01251-y>
- Crisol-Moya, E., Romero-López, M. A., & Caurcel-Cara, M. J. (2020). Active Methodologies in Higher Education: Perception and Opinion as Evaluated by Professors and Their Students in the Teaching-Learning Process. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01703>
- Croasmun, J. T., & Ostrom, L. (2011). Using Likert-Type Scales in the Social Sciences. *Journal of Adult Education*, 40(1), 19–22.
- Crookall, D. (2010). Serious Games, Debriefing, and Simulation/Gaming as a Discipline. *Simulation & Gaming*, 41(6), 898–920. <https://doi.org/10.1177/1046878110390784>
- de Rivas, R., Vilches, A., & Mayoral, O. (2024). Secondary School Students’ Perceptions and Concerns on Sustainability and Climate Change. *Climate*, 12(2), 17. <https://doi.org/10.3390/cli12020017>
- Denemark, D., Donovan, T., & Niemi, R. (2016). *The Advanced Democracies: The Erosion of Traditional Democratic Citizenship* (pp. 181–206). <https://doi.org/10.1515/9781626375567-010>
- Dorsch, C., & Kanwischer, D. (2019). Mündigkeitsorientierte Bildung in der geographischen Lehrkräftebildung – Zum Potential von E-Portfolios. *Zeitschrift für Geographiedidaktik (ZGD)*, 47(3), 98–116. <https://doi.org/10.18452/21264>
- Dowler, E., Bauer, M. W., Green, J., & Gasperoni, C. (2006). Assessing public perception: Issues and methods. In C. Dora (Ed.), *Health, Hazard and Public Debate: Lessons for Risk Communication from the Bse/Cjd Saga* (pp. 40–60). WHO Regional Office for Europe. <https://researchonline.lshtm.ac.uk/id/eprint/7224/>
- Easton, D. (1975). A Re-Assessment of the Concept of Political Support. *British Journal of Political Science*, 5(4), 435–457.
- Enke, K. A., & Budke, A. (2023). Preparing students for a changing world: How geography curricula in Europe are tackling climate change. *Frontiers in Education*, 8, 1216780. <https://doi.org/10.3389/feduc.2023.1216780>
- European Commission. Directorate General for Climate Action. (2025). *Climate change: Eurobarometer report*. Publications Office. <https://doi.org/10.2834/3928510>
- Fernández Galeote, D., Rajanen, M., Rajanen, D., Legaki, N.-Z., Langley, D. J., & Hamari, J. (2021). Gamification for climate change engagement: Review of corpus and future agenda. *Environmental Research Letters*, 16(6), 063004. <https://doi.org/10.1088/1748-9326/abec05>
- Filho, W. L., Yayeh Ayal, D., Wall, T., Shiel, C., Paco, A., Pace, P., Mifsud, M., Lange Salvia, A., Skouloudis, A., Moggi, S., LeVasseur, T., Vinuesa Antonio, G., Azeiteiro, U. M., Ioannis, N., & Kovaleva, M. (2023). An assessment of attitudes and perceptions of international university students on climate change. *Climate Risk Management*, 39, 100486. <https://doi.org/10.1016/j.crm.2023.100486>
- Foa, R. S., & Mounk, Y. (2016). The Danger of Deconsolidation: The Democratic Disconnect. *Journal of Democracy*, 27(3), 5–17.
- Foa, R. S., & Mounk, Y. (2017). The Signs of Deconsolidation. *Journal of Democracy*, 28(1), 5–15.
- Fögele, J., Mehren, R., & Rempfler, A. (2020). *Tipping Points – Schlüssel zum tiefgründigen Verständnis komplexer dynamischer Systeme bei Lernenden?* <https://doi.org/10.18452/22030>
- Forchtner, B. (2019). Climate change and the far right. *WIREs Climate Change*, 10(5), e604. <https://doi.org/10.1002/wcc.604>
- Franke, H., Hebenstreit, J., Holtmann, E., Jaeck, T., Pollak, R., Reiser, M., Sand, M., & Zissel, P. (2026). *Deutschland-Monitor '25. Gesellschaftliche und politische Einstellungen. Themenschwerpunkt: Wie Veränderungsbereit ist Deutschland?* Zentrum für Sozialforschung Halle e.V. an der Martin-Luther-Universität Halle-Wittenberg, Institut für Politikwissenschaft, Friedrich-Schiller-Universität Jena, & GESIS-Leibniz-Institut für Sozialwissenschaften.
- Frick, V., Gossen, M., Holzhauser, B., & Winter, F. (2023). *Zukunft? Jugend fragen! 2021* (p. 130). Umweltbundesamt. <https://www.umweltbundesamt.de/publikationen/zukunft-jugend-fragen-2021-0>
- Friedrichs, W. (2020). *Demokratie ist Politische Bildung* (pp. 9–30). https://doi.org/10.1007/978-3-658-29556-1_2

- Frith, C. D. (2014). Action, agency and responsibility. *Neuropsychologia*, 55, 137–142. <https://doi.org/10.1016/j.neuropsychologia.2013.09.007>
- Gorman, B., Naqvi, I., & Kurzman, C. (2019). Who Doesn't Want Democracy? A Multilevel Analysis of Elite and Mass Attitudes. *Sociological Perspectives*, 62(3), 261–281. <https://doi.org/10.1177/0731121418785626>
- Grafakos, S., Trigg, K., Landauer, M., Chelleri, L., & Dhakal, S. (2019). Analytical framework to evaluate the level of integration of climate adaptation and mitigation in cities. *Climatic Change*, 154(1), 87–106. <https://doi.org/10.1007/s10584-019-02394-w>
- Grahn, T., & Jaldell, H. (2019). Households (un)willingness to perform private flood risk reduction – Results from a Swedish survey. *Safety Science*, 116, 127–136. <https://doi.org/10.1016/j.ssci.2019.03.011>
- Grassi, E., Portos, M., & Felicetti, A. (2024). Young People's Attitudes towards Democracy and Political Participation: Evidence from a Cross-European Study. *Government and Opposition*, 59(2), 582–604. <https://doi.org/10.1017/gov.2023.16>
- Gryl, I. (2025). Demokratiebildung in der geographischen Bildung. In S. Achour, M. Sieberkrob, D. Pech, J. Zelck, & P. Eberhard (Eds), *Handbuch Demokratiebildung und Fachdidaktik. Band 2: Fachperspektiven* (pp. 141–151). Wochenschau Verlag.
- Gryl, I., & Budke, A. (2016). Bildung für nachhaltige Entwicklung - zwischen Utopie und Leerformel? Potentiale für die politische Bildung im Geographieunterricht. In Budke, Alexandra & M. Kuckuck (Eds), *Politische Bildung im Geographieunterricht* (pp. 57–75). Franz Steiner Verlag.
- Hanke, M., Graulich, D., Felzmann, D., Klüsener, C., Pettig, F., Siegmund, A., Sprenger, S., & Uxa, M. (2025). Kontroversen und Konsensus in der Klimabildung aus Perspektive der Geographiedidaktik: Bericht von einer Podiumsdiskussion. *OpenSpaces: Zeitschrift für Didaktiken der Geographie*, 2025, 65. <https://doi.org/10.17185/DUEPUBLICO/84617>
- Harada, A. (2023). How to involve a diverse group of young people in local government decision making: A case study of Danish youth councils. *Compare: A Journal of Comparative and International Education*, 53(5), 820–836. <https://doi.org/10.1080/03057925.2021.1976615>
- Hegewald, S. (2024). Locality as a safe haven: Place-based resentment and political trust in local and national institutions. *Journal of European Public Policy*, 31(6), 1749–1774. <https://doi.org/10.1080/13501763.2023.2291132>
- Held, D. (2006). *Models of Democracy*. Polity Press.
- Helwig, C. C., Arnold, M. L., Tan, D., & Boyd, D. (2003). Chinese Adolescents' Reasoning About Democratic and Authority-Based Decision Making in Peer, Family, and School Contexts. *Child Development*, 74(3), 783–800. <https://doi.org/10.1111/1467-8624.00568>
- Hendriks, F. (2010). *Vital Democracy: A Theory of Democracy in Action*. OUP Oxford.
- Henn, M., & Weinstein, M. (2006). Young people and political (in)activism: Why don't young people vote? *Policy & Politics*, 34(3), 517–534. <https://doi.org/10.1332/030557306777695316>
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & Susteren, L. van. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5(12), e863–e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)
- Himmelman, G. (2005). *Was ist Demokratiekompetenz? Ein Vergleich von Kompetenzmodellen unter Berücksichtigung internationaler Ansätze* (p. 66 pages). BLK : Berlin. <https://doi.org/10.25656/01:257>
- Hui, E. S. Y. E. (2024). Who's environmentally responsible for climate change? An analysis of international school students' views. *Education 3-13*, 0(0), 1–12. <https://doi.org/10.1080/03004279.2024.2447326>
- Improta, M., & Mannoni, E. (2025). Ghosted by politics? Young generations and the crisis of representation in Italy. *Contemporary Italian Politics*, 1–19. <https://doi.org/10.1080/23248823.2025.2561482>
- IPCC. (2023a). Sections. In H. Lee & J. Romero (Eds), *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 35–115). IPCC.
- IPCC. (2023b). Urban Systems and Other Settlements. In P. R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, & J. Malley (Eds), *Climate Change 2022—Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment*

- Report of the Intergovernmental Panel on Climate Change (1st edn, pp. 861–952). Cambridge University Press. <https://doi.org/10.1017/9781009157926.010>
- Jekel, T., Gryl, I., Lauffenburger, M., Kanwischer, D., Budke, A., & Schulze, U. (2025). Reflection, Argumentation, and Participation through Geomedia: A Model of Emancipatory Use for Teacher Training. *Journal of Geography*, 124(1), 12–21. <https://doi.org/10.1080/00221341.2024.2432933>
- Jolly, R., & Budke, A. (2023). Assessing the Extent to Which Players Can Build Sustainable Cities in the Digital City-Builder Game “Cities: Skylines”. *Sustainability*, 15(14), 10780. <https://doi.org/10.3390/su151410780>
- Kabisch, N., Korn, H., Stadler, J., & Bonn, A. (Eds). (2017). *Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-56091-5>
- Kern, K., Alber, G., & Energy, S. (2008). Governing climate change in cities: Modes of urban climate governance in multi-level systems. *Competitive Cities and Climate Change*, 171, 171–195.
- Klein, J., Araos, M., Karimo, A., Heikkinen, M., Ylä-Anttila, T., & Juhola, S. (2018). The role of the private sector and citizens in urban climate change adaptation: Evidence from a global assessment of large cities. *Global Environmental Change*, 53, 127–136. <https://doi.org/10.1016/j.gloenvcha.2018.09.012>
- Klemm, W., Lenzholzer, S., & van den Brink, A. (2017). Developing green infrastructure design guidelines for urban climate adaptation. *Journal of Landscape Architecture*, 12(3), 60–71. <https://doi.org/10.1080/18626033.2017.1425320>
- Krapp, A. (2000). Interest and Human Development During Adolescence: An Educational-Psychological Approach. In *Advances in Psychology* (Vol. 131, pp. 109–128). North-Holland. [https://doi.org/10.1016/S0166-4115\(00\)80008-4](https://doi.org/10.1016/S0166-4115(00)80008-4)
- Kuckuck, M. (2014). Konflikte im Raum: Verständnis von gesellschaftlichen Diskursen durch Argumentation im Geographieunterricht. Mosenstein und Vannerdat.
- Kuckuck, M. (2015). *Die Rezeptionsfähigkeit von Schülerinnen und Schülern bei der Bewertung von Argumentationen im Geographieunterricht am Beispiel von raumbezogenen Konflikten*. Humboldt-Universität zu Berlin. <https://doi.org/10.18452/23295>
- Kuss, P., & Nicholas, K. A. (2022). A dozen effective interventions to reduce car use in European cities: Lessons learned from a meta-analysis and transition management. *Case Studies on Transport Policy*, 10(3), 1494–1513. <https://doi.org/10.1016/j.cstp.2022.02.001>
- Liarakou, G., Athanasiadis, I., & Gavrilakis. (2011). What Greek secondary school students believe about climate change? *International Journal of Environmental and Science Education*, 6(1), 79–98.
- Lijphart, A. (1984). *Democracies*. Yale University Press.
- Linke, S., Erlwein, S., Van Lierop, M., Fakirova, E., Pauleit, S., & Lang, W. (2022). Climate Change Adaption between Governance and Government—Collaborative Arrangements in the City of Munich. *Land*, 11(10), 1818. <https://doi.org/10.3390/land11101818>
- Lorente, J., & Jiménez-Bravo, I. (2025). A future of authoritarian citizens? Explaining why Spanish youth are losing faith in democracy. *Frontiers in Political Science*, 7, 1553307. <https://doi.org/10.3389/fpos.2025.1553307>
- Lütje, A., & Budke, A. (2021). „Es sind doch Begegnungen, wonach wir suchen“. *GW-Unterricht*, 1, 35–50. <https://doi.org/10.1553/gw-unterricht161s35>
- Lux, J.-D., & Budke, A. (2020). Alles nur ein Spiel? Geographisches Fachwissen zu aktuellen gesellschaftlichen Herausforderungen in digitalen Spielen. *GW-Unterricht*, 1, 22–36. <https://doi.org/10.1553/gw-unterricht160s22>
- Lux, J.-D., & Budke, A. (2023). Reflexives Spielen? Wie junge Spielende Repräsentationen gesellschaftlicher Themen in digitalen Spielen reflektieren. *MedienPädagogik: Zeitschrift für Theorie und Praxis der Medienbildung*, 188–211. <https://doi.org/10.21240/mpaed/00/2023.06.04.X>
- Maier, V., & Budke, A. (2016). The Use of Planning in English and German (NRW) Geography School Textbooks. *Rigeo*, 6(1), 8–31.
- McNeill, K. L., & Vaughn, M. H. (2012). Urban High School Students’ Critical Science Agency: Conceptual Understandings and Environmental Actions Around Climate Change. *Research in Science Education*, 42(2), 373–399. <https://doi.org/10.1007/s11165-010-9202-5>
- Mi, Z., Guan, D., Liu, Z., Liu, J., Vigié, V., Fromer, N., & Wang, Y. (2019). Cities: The core of climate change mitigation. *Journal of Cleaner Production*, 207, 582–589. <https://doi.org/10.1016/j.jclepro.2018.10.034>

- Monroe, M. C., Plate, R. R., Oxarart, A., Bowers, A., & Chaves, W. A. (2019). Identifying effective climate change education strategies: A systematic review of the research. *Environmental Education Research*, 25(6), 791–812. <https://doi.org/10.1080/13504622.2017.1360842>
- Nieuwelink, H., Dekker, P., Geijssel, F., & Ten Dam, G. (2016). ‘Democracy always comes first’: Adolescents’ views on decision-making in everyday life and political democracy. *Journal of Youth Studies*, 19(7), 990–1006. <https://doi.org/10.1080/13676261.2015.1136053>
- Nieuwelink, H., ten Dam, G., Geijssel, F., & Dekker, P. (2018). Growing into politics? The development of adolescents’ views on democracy over time. *Politics*, 38(4), 395–410. <https://doi.org/10.1177/0263395717724295>
- Ouariachi, T., Li, C.-Y., Elving, W. J. L., Ouariachi, T., Li, C.-Y., & Elving, W. J. L. (2020). Gamification Approaches for Education and Engagement on Pro-Environmental Behaviors: Searching for Best Practices. *Sustainability*, 12(11). <https://doi.org/10.3390/su12114565>
- Özdem, Y., Dal, B., Öztürk, N., Sönmez, D., & Alper, U. (2014). What is that thing called climate change? An investigation into the understanding of climate change by seventh-grade students. *International Research in Geographical and Environmental Education*, 23(4), 294–313. <https://doi.org/10.1080/10382046.2014.946323>
- Persson, E., Knaggård, Å., & Eriksson, K. (2021). Public Perceptions concerning Responsibility for Climate Change Adaptation. *Sustainability*, 13(22), 12552. <https://doi.org/10.3390/su132212552>
- Rajeev Gowda, M. V., Fox, J. C., & Magelky, R. D. (1997). Students’ Understanding of Climate Change: Insights for Scientists and Educators. *Bulletin of the American Meteorological Society*, 78(10), 2232–2240. <https://doi.org/10.1175/1520-0477-78.10.2232>
- Ratinen, I. (2021). Students’ Knowledge of Climate Change, Mitigation and Adaptation in the Context of Constructive Hope. *Education Sciences*, 11(3), 103. <https://doi.org/10.3390/educsci11030103>
- Reckien, D., Salvia, M., Heidrich, O., Church, J. M., Pietrapertosa, F., De Gregorio-Hurtado, S., D’Alonzo, V., Foley, A., Simoes, S. G., Krkoška Lorencová, E., Orru, H., Orru, K., Wejs, A., Flacke, J., Olazabal, M., Geneletti, D., Feliu, E., Vasilie, S., Nador, C., ... Dawson, R. (2018). How are cities planning to respond to climate change? Assessment of local climate plans from 885 cities in the EU-28. *Journal of Cleaner Production*, 191, 207–219. <https://doi.org/10.1016/j.jclepro.2018.03.220>
- Rempfler, A., & Uphues, R. (2011). Systemkompetenz und ihre Förderung im Geographieunterricht. In *Geographie und Schule* (Vol. 33, Issue 189, pp. 22–26; 31–33).
- Rutherford, J., & Jaglin, S. (2015). Introduction to the special issue – Urban energy governance: Local actions, capacities and politics. *Energy Policy*, 78, 173–178. <https://doi.org/10.1016/j.enpol.2014.11.033>
- Sass, W., Boeve-de Pauw, J., Olsson, D., Gericke, N., De Maeyer, S., & Van Petegem, P. (2020). Redefining action competence: The case of sustainable development. *The Journal of Environmental Education*, 51(4), 292–305. <https://doi.org/10.1080/00958964.2020.1765132>
- Schahn, J. (1999). Skalensystem zur Erfassung des Umweltbewusstseins (SEU3). *Zusammenstellung sozialwissenschaftlicher Items und Skalen (ZIS)*. <https://doi.org/10.6102/ZIS167>
- Schnaudt, C. (2013). Politisches Vertrauen. In J. W. van Deth & M. Tausendpfund (Eds), *Politik im Kontext: Ist alle Politik lokale Politik? Individuelle und kontextuelle Determinanten politischer Orientierungen* (pp. 297–328). Springer Fachmedien. https://doi.org/10.1007/978-3-531-19249-9_11
- Schönstein, R. F., & Budke, A. (2024). Teaching action competence in education for sustainable development – a qualitative study on teachers’ ideas, opinions, attitudes and self-conceptions. *Frontiers in Education*, 8. <https://doi.org/10.3389/educ.2023.1256849>
- Schulz, W., Ainley, J., Fraillon, J., Losito, B., Agrusti, G., Damiani, V., & Friedman, T. (2025). *Education for Citizenship in Times of Global Challenge: IEA International Civic and Citizenship Education Study 2022 International Report*. Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-65603-3>
- Shepardson, D. P., Niyogi, D., Choi, S., & Charusombat, U. (2011). Students’ conceptions about the greenhouse effect, global warming, and climate change. *Climatic Change*, 104(3), 481–507. <https://doi.org/10.1007/s10584-009-9786-9>
- Shtjefni, D., Ulpiani, G., Vettors, N., Koukoufikis, G., & Bertoldi, P. (2024). Governing climate neutrality transitions at the urban level: A European perspective. *Cities*, 148, 104883. <https://doi.org/10.1016/j.cities.2024.104883>

- Škodová, M., Madleňák, T., & Mihoková, M. (2025). Critical Spots and Misconceptions in Students' Understanding of Problems and Challenges in Europe. *European Journal of Geography*, 16(2), 406–418. <https://doi.org/10.48088/ejg.m.sko.16.2.406.418>
- Somer, M., & McCoy, J. (2019). Transformations through Polarizations and Global Threats to Democracy. *The ANNALS of the American Academy of Political and Social Science*, 681(1), 8–22. <https://doi.org/10.1177/0002716218818058>
- Storbjörk, S., Hjerpe, M., & Glaas, E. (2019). “Take It or Leave It”: From Collaborative to Regulative Developer Dialogues in Six Swedish Municipalities Aiming to Climate-Proof Urban Planning. *Sustainability*, 11(23), 6739. <https://doi.org/10.3390/su11236739>
- Suldovsky, B. (2017). The Information Deficit Model and Climate Change Communication. In *Oxford Research Encyclopedia of Climate Science*. <https://doi.org/10.1093/acrefore/9780190228620.013.301>
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Thaler, T., & Levin-Keitel, M. (2016). Multi-level stakeholder engagement in flood risk management—A question of roles and power: Lessons from England. *Environmental Science & Policy*, 55, 292–301. <https://doi.org/10.1016/j.envsci.2015.04.007>
- Tiberj, V. (2017). *Les citoyens qui viennent. Comment le renouvellement générationnel transforme la politique en France*. Presses Universitaires de France. <https://doi.org/10.3917/puf.tiber.2017.03>
- Trell, E.-M., & Van Geet, M. T. (2019). The Governance of Local Urban Climate Adaptation: Towards Participation, Collaboration and Shared Responsibilities. *Planning Theory & Practice*, 20(3), 376–394. <https://doi.org/10.1080/14649357.2019.1629573>
- Tsatsanis, E., Borghetto, E., Freire, A., & Montero, J. R. (2021). Generational and Ideological Gaps in Democratic Support: Seeds of Deconsolidation in Post-Crisis Southern Europe? *South European Society and Politics*, 26(2), 209–237. <https://doi.org/10.1080/13608746.2021.2016245>
- Tucci, I., Recotillet, I., Berthet, T., & Bausson, S. (2021). *Conseils de jeunes et participation: Étude auprès des collectivités et de jeunes engagés* (No. INJEPR-2021/05; INJEP NOTES & RAPPORTS, p. 65). Institut national de la jeunesse et de l'éducation populaire (INJEP).
- Vasiljuk, D., & Budke, A. (2021). Multiperspectivity as a Process of Understanding and Reflection: Introduction to a Model for Perspective-Taking in Geography Education. *European Journal of Investigation in Health, Psychology and Education*, 11(2), 529–545. <https://doi.org/10.3390/ejihpe11020038>
- Weber, E. U. (2010). What shapes perceptions of climate change? *WIREs Climate Change*, 1(3), 332–342. <https://doi.org/10.1002/wcc.41>
- Wuttke, A., Gavras, K., & Schoen, H. (2020). Leader of the free world or pioneer in democracy's decline? Examining the democratic deconsolidation hypothesis on the mass level in East and West Germany. *Research & Politics*, 7(1), 2053168019900822. <https://doi.org/10.1177/2053168019900822>
- Wuttke, A., Gavras, K., & Schoen, H. (2022). Have Europeans Grown Tired of Democracy? New Evidence from Eighteen Consolidated Democracies, 1981–2018. *British Journal of Political Science*, 52(1), 416–428. <https://doi.org/10.1017/S0007123420000149>
- Wynes, S., Nicholas, K. A., Zhao, J., & Donner, S. D. (2018). Measuring what works: Quantifying greenhouse gas emission reductions of behavioural interventions to reduce driving, meat consumption, and household energy use. *Environmental Research Letters*, 13(11), 113002. <https://doi.org/10.1088/1748-9326/aae5d7>
- Yaar-Waisel, T., & Leininger-Frézal, C. (2025). Bridging Geopolitics and Environmental Issues in Geography Education: Exploratory Teachers' Insights from France and Israel. *European Journal of Geography*, 16(2), 184–196. <https://doi.org/10.48088/ejg.t.yaa.16.2.184.196>
- Zagórski, P., Rama, J., & Cordero, G. (2021). Young and Temporary: Youth Employment Insecurity and Support for Right-Wing Populist Parties in Europe. *Government and Opposition*, 56(3), 405–426. <https://doi.org/10.1017/gov.2019.28>
- Zumbrunn, A., & Freitag, M. (2023). The geography of autocracy. Regime preferences along the rural-urban divide in 32 countries. *Democratization*, 30(4), 616–634. <https://doi.org/10.1080/13510347.2023.2171995>

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of EUROGEO and/or the editor(s). EUROGEO and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions, or products referred to in the content.

euro
ge • **European Journal of Geography**