

They want to fly! – International students attitudes concerning the climate crisis and their air travel behavior

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Abstract

What do international students think about the impact their travels have on climate change?

As the relationship between academia and higher education institutions with regards to protecting the environment and mobility continues to be complex, universities and other higher education institutions are trying to reduce their carbon footprint. However, international students often travel globally for their study programs and other associated trips, raising questions about their awareness concerning the impact of their travels on climate change.

A qualitative case study conducted in two international study programs in Austria reveals the presence of five different types of students. While most students are aware of climate change, only one group is taking active steps to address it at an individual level. Furthermore, there is also a distinct group of students who are unaware of basic climate change-related issues.

The findings of the study highlight the importance of incorporating climate change education into international study programs on both a curricular and practical level, from the admission process to program-related travels. It is crucial for universities and higher education institutions to address this issue and promote sustainability in international student programs.

Keywords: *Climate change; international study programs; case study; travel behavior.*

1. Introduction – The complicated relationship between climate change, internationalization in academia and higher education

What do international students think about their contribution to climate change and climate change-aware behavior overall? The answer should be simple, as the effects of human-induced climate change have led to a wide range of increasingly catastrophic events. The UN is urging nations around the world to take substantive action to combat climate change (IPCC, 2022). Despite decades of research supporting this call to action and more than 196 parties promising to fulfill the Paris Agreement to limit global warming, actual actions are limited (Nunez et al., 2019). As a result, research and higher education institutions must increase awareness and strengthen their efforts to combat the climate crisis (Borgermann et al., 2022).

However, the situation in universities and higher education institutions is not straightforward. From a normative perspective, internationalization and mobility are considered essential for academic excellence (Altbach et al., 2009). Consequently, many universities and research institutions aim to attract a diverse range of international scholars and students (Uzhegova & Baik, 2022), and they actively organize events such as conferences, research stays, staff and student exchanges, and international study programs (Nurse-Bray et al., 2019). Most of these activities depend on extensive travel, often via heavily greenhouse gas-emitting planes. This tension between academic internationalization and climate change has sparked a widespread discussion in the international higher education community.

At the organizational level, research and educational institutions are reassessing their ecological impact, taking steps to reduce it, and trying to act as role models when it comes to sustainability (Eskander & Istiak, 2022; Filho et al., 2022). Many universities have established guidelines to evaluate and restrict staff travel, substituting on-site events with virtual or hybrid ones, and fostering the creation of an environment that allows for more decentralized research (Filho et al., 2022; Nikula et al., 2022).

When it comes to faculty, the scientific community recognizes the impact of their intensive travels and saw the COVID-19 pandemic as an opportunity to establish a new normal, permanently cutting back on travel and greenhouse gas emissions (Kreil, 2021; Filho et al., 2022). However, individual scholars report that they are afraid of competitive disadvantages if they are not mobile and perceive air travel as intricately tied to doing their work 'well' (Kreil, 2021, p. 60).

For students, the situation is somewhat similar problematic, but even more pronounced. While many students are "demanding action, as evident in the agendas and activities of groups such as Students Organising for Sustainability International in the UK, the Young Academy in the Netherlands, and the Erasmus Student Network in Europe" (Nikula et al. 2022, p. 2), recent surveys indicate that international students, in particular, do not care about the environmental impact of their travel and greenhouse gas emission. For example, only

about 5.5% of Erasmus students engage in sustainable behaviors during their international travels, according to a report by Green Erasmus (2022, p. 26). This supports previous research suggesting that despite the rapid pace of climate change and the potential catastrophes it may bring in the future, many international students view global travel and study abroad experiences as a right rather than a privilege (Reilly and Senders, 2009).

These findings highlight a gap in understanding between organizations and researchers in higher education and students regarding the impact of international mobility on climate change. While institutions and scholars recognize the need to reduce their carbon footprint, students' attitudes towards sustainable behaviors while traveling can be paradoxical. Therefore, this paper aims to contribute to this field of research by addressing the following questions:

1. What perceptions and attitudes do students of international study programs show regarding climate change?
2. How do they evaluate their personal environmental impact?
3. How do they view internationalization as well as their own mobility, when it comes to dealing with the issue of flying and greenhouse gas emissions in particular?

To gain a deeper understanding of this complex issue, a qualitative case study was conducted in Austria during the winter semester of 2022/2023, focusing on two groups of international students – one attending a bachelor's program at the Johannes Kepler University of Linz and one a master's program at the Paris Lodron University of Salzburg. The second section will provide a short discussion about the state of the research in the field, before section three outlines the study design used, describes the sample, and gives insight into methodology. The fourth section will present the empirical findings and provide an in-depth analysis of the data, highlighting the different types of students that could be identified in the case study. The paper will conclude by drawing relevant conclusions and offering recommendations on how international study programs may address climate change education and foster an environment that encourages students to be more aware and conscious of their actions in an international setting.

2. State of knowledge

In response to the urgent issue of climate change, the academic community has initiated a self-reflection process on its greenhouse gas emissions. Numerous universities are implementing policies to reduce their environmental impact, and research shows that scientists are increasingly mindful of their international travel (Eskander & Istiak, 2022; Filho et al., 2022). Similarly, there is a growing body of research that examines students' attitudes towards climate change. While students generally display a high level of awareness of the issue, awareness and concern tend to be greater among those studying science and

academic subjects rather than practical or applied programs (Eskander & Istiak, 2022). Moreover, international students and those in international study programs exhibit notable differences from their peers:

1. International students, particularly those from developing countries or regions severely affected by climate change, tend to display a relatively high awareness of climate change (Uzhegova & Baik, 2022; Eskander & Istiak, 2022).
2. Students participating in international study programs, both short-term and full Bachelor's and Master's degrees, are more likely to engage in environmental campaigns, use public transportation, and recycle than regular students, but show little willingness to limit their travel behavior (Green Erasmus, 2022). Case studies have demonstrated that the level of education on climate change is less important than engagement in climate change relevant actions and workshops (Akrofi et al., 2019).
3. Researchers have noted a cognitive dissonance among students in recognizing the need for action to limit the effects of climate change and committing to changes in their personal behavior, particularly with respect to travel and consumption (Green Erasmus, 2022; Kreil, 2021; Nikula et al., 2022).

Given these observations, it is necessary to explore international students' views on climate change, their responsibility with respect to the climate, and how they perceive their academic and non-academic travels in this context (Reilly & Senders, 2009).

3. Study Design and Sample

The presented study is based on qualitative interviews conducted with students from two different international study programs at two medium-sized universities in Austria - one for a Bachelor's degree program that focuses on management and the other for a Master's degree program that focuses on leadership. Both programs target international students, require them to spend time studying abroad after their initial stay at the host university, are taught entirely in English, and emphasize in their mission statements that their students are expected to become leaders and/or internationally active experts in their respective fields. The study involved interviewing eight students from the Bachelor's program and 21 students from the Master's program. The interviews were conducted using a peer process, where trained student interviewers interviewed the selected group of students to minimize the effect of social desirability. Cluster sampling was employed to select the classes for the interviews, and all students within each selected class were interviewed. The selected class for the Bachelor's program started their studies in October 2021, so they were in their second year of studies, while the selected class for the Master's program started in October 2022, and they were in their first year of the Master's program. The interviewees were given the flexibility to choose

the time and place for their interviews. Those were completed in *CAPI – computer assisted personal interviews* – mode and thus the talks were in person, recorded and transcribed.

The age of the respondents ranged from 20 to 36 years. Three of the bachelor students identified as male, five as female. When it came to the master students seven were men, and fourteen were women. While most of the people in the bachelor's program came from Europe (two eastern Europe, five central Europe, one from Asia), the masters' program had a more diverse class. Around a quarter of them came from Latin America, another quarter from South-East Asia, a quarter from central to northern Europe. The rest came from the Middle East. One individual was from the USA.

The average length of an interview was around twenty minutes, with the shortest one taking ten minutes, and the longest one forty. Before conducting the study, interviewers were introduced to the interview guide, could prepare themselves for one week and could request coaching from the head researcher. While only a limited number of interviewers requested coaching, all of them had some training on the method in corresponding classes.

A semi-structured interview guide was used, including a consent form as well as a metadata sheet to be completed by the interviewers. The first question dealt with the *interviewees travel behavior*, before continuing with questions about the *relevance of travel for their personal and professional lives, their attitudes towards climate change and flight shaming*. The interviews were wrapped by a *summary* provided by the interviewers, that offered the interviewees a chance to amend their statements or add further information.

Next to the four main questions that had to be covered in the pre-arranged order, the interviewers were provided with a set of follow-up questions in case initial responses were insufficient.

The analysis of the data followed the method of typology building through qualitative content analysis, as outlined by Kuckartz (2016). The data was systematically organized, taking into account the relevant aspects previously identified (see section 2). Specific responses were categorized based on commonalities, coded accordingly, and then compared and contrasted with each other. Demographic information was also taken into consideration during this inductive research process. The following section presents the results in the form of a classification.

4. Results and Classification

Taking the interviews into account, five distinct types of students could be identified:

(A) The first type of student comes mostly from less developed regions in Africa or South-East Asia and either consciously or unconsciously contributes to actions against climate change, such as protesting against deforestation or promoting sustainable agriculture.

However, this group shows little concern about their (air) travel behavior and sees it as a means to create professional and social bonds and pursue individual dreams, prestige, and stature. Anchor quote: “[Air Travel] improves the quality of life where people travel to pursue dreams, connect, and gain massive achievements... I’m not seeing myself as environmentally conscious when it comes to traveling... but I want to contribute to a safe world in terms of climate stability.”

(B) The second type of student mostly comes from Western and Northern European countries as well as the USA. They are mostly younger, female students, with only one exception being male. They believe in individuality and, especially, their right to travel because it is highly important to them on a personal and professional level. They feel that they cannot be criticized, even if they harm the environment, as their individual enjoyment is more important. They are oblivious of environmental and societal issues at large and become highly emotional, defending their positions. Anchor quotes: (1) “The plane would fly to Australia with or without me... I’m an individual, I want to live my life to the fullest, and my choices don’t matter in the grand picture.” (2) “The media says flying is really bad... But everybody flies... It can’t be that bad for the environment as everybody does it.”

(C) The third type is the counterpart to the second one and consists of older students, mostly in the master's program, who are well-reflected on their environmental impact and individual behavior. They come from European countries as well as Latin American ones. They are highly aware of the issues of climate change and see hegemonic structures in place that work against substantive change. They see it as their civic duty to act against climate change and bring examples of their personal life, comparing their past actions with their present understanding of the issue. They highlight that, at least in Europe, it is easily possible to travel without resorting to air travel. Anchor quotes: “I travel by train. I plan to move from [Country A] to [Country B] for my next study destination via sharing a pickup with my classmates”; “I flew a lot when I was younger. I would sometimes flight-shame myself now.”

(D) The fourth group is mostly composed of students from South-East Asia and the Middle East. Before participating in international study programs, they were not too concerned about climate change and the impact of their often-frequent air travel behavior. However, they now reflect that more sustainable forms of travel are available. They now recognize the dangers of climate change and believe that individuals can make a difference. Anchor quote: “[...] I think my travel behavior is not environmentally conscious. Especially after this interview, I'm a bit ashamed of my answers. I've realized that some people consider other modes of transportation because of the environment and I didn't even know that.”

(E) The final group is not particularly aware of the environmental impact of their travels or of climate change in general. They also do not place much emphasis on travel, either because they have traveled in the past or because they have never considered it as important and see

it as more of a necessity. They are open to learning about climate change and there is no clear pattern in terms of their socio-demographics or background. They are a residual category. Anchor quote: “I don't think that traveling is that important to me. It's not because of climate change that I don't fly at the moment. I don't really care either way.”

5. Conclusion and Recommendations

The aim of this paper was to investigate the attitudes of international students towards climate change, their personal environmental impact, and internationalization and mobility. The results of the qualitative case study revealed worrying attitudes towards air travel and its prioritization among most interviewees. While the results cannot be quantified, they align with previous quantitative studies while providing a nuanced starting point for future studies, that may aim for generalization.

Firstly, it is concerning that international students, who are being educated to become future decision-makers, lack an understanding of the severity of the climate crisis and their own contribution to it (Nikula et al., 2022). Such apathy and lack of awareness can have disastrous effects on the planet and future generations. Secondly, five distinct groups of students could be identified, with different attitudes. Of those only one group (B), consisting of young, Western, mostly female students, who placed high value on personal enjoyment, showed no reflection on their behavior and were dismissive. Three other groups had varying levels of awareness and willingness to reflect on their impact, either before or after the interviews. And the final group (E) did not have strong opinions on climate change or travel but was willing to learn more.

Those different groups of international students with varying levels of awareness and willingness to reflect on their impact on climate change also hint at a more hopeful outlook concerning the issue, suggesting that universities and higher education institutions can play a crucial role in promoting environmental awareness and sustainability among international students. To do so international study programs need to provide transparent information on the environmental impact of individual mobility during the admission process, creating early awareness. Furthermore, international programs – no matter the discipline – should include mandatory courses on climate change and embed the topic into regular classes as well. And finally, universities offering international study programs should incentivize sustainable mobility among their students and actively promote sustainable transportation for all program-related travels. Grants need to be tied to climate friendly behavior.

By implementing such practices, students can continue to engage in internationalization and mobility programs while gaining a deeper understanding and later promoting sustainable practices, fostering a culture of environmental responsibility.

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