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PSYCLIC

DIGITAL EDUCATION

TO TACKLE CLIMATE CHANGE

PROJECT PARTNERS:

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PSYCLIC – OPENING NEW OPPORTUNITIES TO LEARN ABOUT CLIMATE CHANGE

To achieve long-term sustainability individuals, groups, and organizations need to mitigate climate change and adapt to the new environmental scenarios. Indeed, climate change is a process that cannot be ignored in any way any longer. Not only it is happening everywhere, and the effects are more noticeable every year, but it has also been happening for decades with an impact on every ecosystem of the planet. This means that climate change is a fundamental issue that affects every person, group, and organization.

Professionally, we need as much expertise as we can gather. More practitioners are needed with experience in every field to help mitigate climate change as much as possible while facilitating rapid adaptation to a progressively damaging climate change.

Climate change is caused by humans and human behavior, even if some issues seem technological and environmental problems, the origin is still human behavior. Therefore, there is a critical need for being able to count on behavioral experts that contribute to explaining current behaviors. Additionally, behavior change experts who are able to motivate individuals, groups, and organizations to engage in mitigation and adaptation behaviors are equally necessary.

To achieve this, a more comprehensive range of educational opportunities is needed. This education must be included in vocational training and applied science universities. However, nothing will have an impact as far-reaching as education about climate change for students during their bachelor and master programs. The capacity of highly trained professionals with behavioral change expertise can have a trickling-down effect that will benefit the whole world.

Because of how crucial education in climate change is, an urgent need is currently a pressing matter to provide specialized education on how to understand and improve the sustainability behavior of people, groups, and organizations. This need to increase both the amount and quality of sustainability-related education is met with an insufficient amount of education resources being offered.

Creating new courses or even programs on this topic is not a realistic possibility for many institutions. In some cases, the development of new content might not be feasible due to local difficulties, and in other cases, climate change might not be a preference whatsoever. Therefore, it is crucial to offer alternatives to institutions that due to factors such as lack of local expertise, different agendas, or the difficulties linked to generating new content cannot offer education on climate change and behavior themselves. This education alternative should be easy to implement and adapt to the specific programs.

The most straightforward contribution to facilitating education in climate change at bachelor and master levels is offering online courses that can be imported. Additionally, to maximize the reach of these courses, they should include content that can be learned in a self-guided manner. The PSYCLIC project offers the latest content about climate change and human behavior. This material will be available to be directly imported digitally at any university program. Additionally, it has a modular structure that is self-guided by default.

However, the education resource that the PSYCLIC project offers will not make a meaningful impact unless the target community (i.e., institutions that could offer education on the topic of climate change and behavior but do not do so) is eager to use the education resources that the project will offer.

To understand if the profile of scholars that the PSYCLIC project has as the target are ready and kin on using what the project will offer, we reached other colleagues to explore the demands and barriers for ready to use digital education material on climate change and behavior.

THE WAY WE EXPLORED HOW READY COLLEAGUES ARE

We contacted colleagues to understand how a digital education material about climate change and human behavior (like the one PSYCLIC project will develop) might be relevant and could be demanded by them. A total of 21 colleagues participated with an average age of 38.42 (*SD* = 10.72) years old. Among them, 47.62% (*n* = 10) were working at the University of Groningen (the Netherlands), 28.57% (*n* = 6) at the Saarland University (Germany), and 23.81% (*n* = 5) at the University of Barcelona (Spain). A 61.90% (*n* = 13) identified themselves as women and the remaining as men, without any participant identifying themselves with non-binary gender identity. The average years of experience was 10.60 (*SD* = 9.80). When asked to answer the topics they were teaching, 72% of the times the

participants answered that they have experienced teaching one of the core topics of the PSYCLIC project; environmental, social, and I/O psychology, whereas the rest of the answers were distributed among other disciplines of psychology.

After ethical approval by the Ethical Committee of the Psychology Department of the Saarland University (Germany), we distributed the survey among colleagues not participating in the project directly while being as close as possible. We decided to approach the data collection this way to be able to capture the profile of scholars that the project PSYCLIC targets; that is, people already close to the field of climate change and human behavior that were not directly taking advantage of digital education applied to climate change yet.

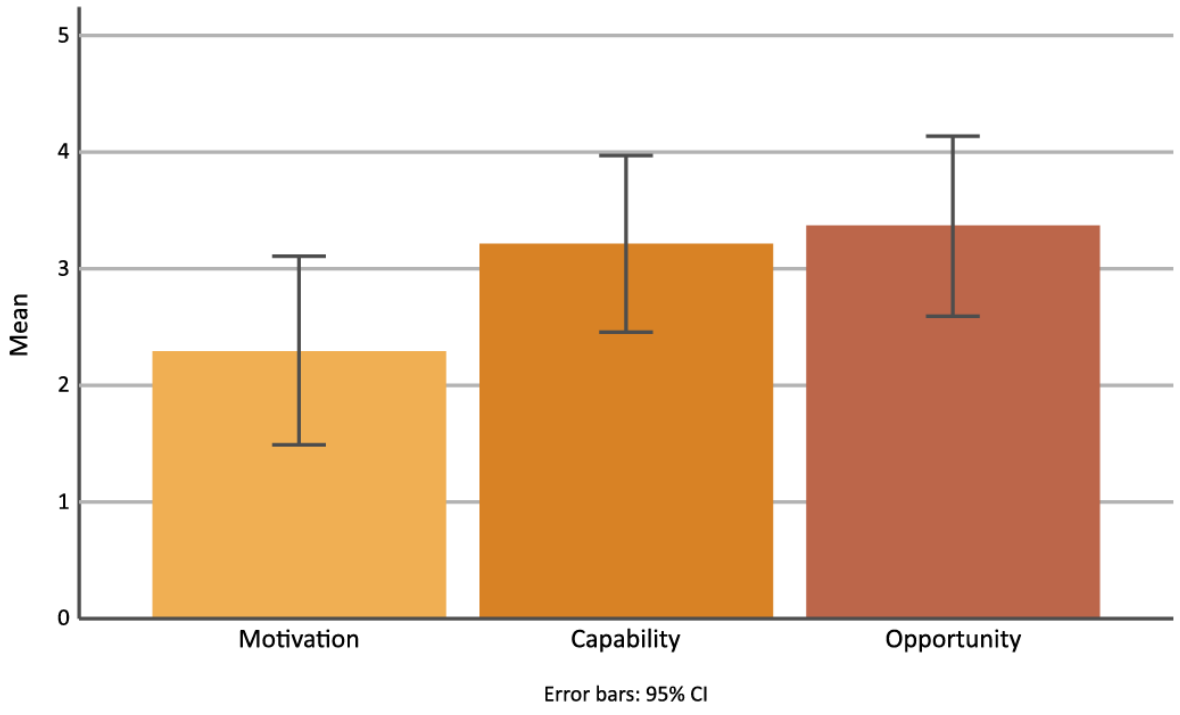
We asked an array of questions covering two overall topics, digital education, and education in climate change. We asked each participant if they were using digital resources for education. In case of a positive answer, we further asked which types of digital education resources have their strengths and limitations. If the participant was not using any type of digital education platform, we asked them why they were not used.

In addition to the questions about digital education, we also asked about teaching climate change. We asked if the participants included the topic in their teaching. Depending on their answer, we explored reasons to include or not to include the topic of climate change in their teaching.

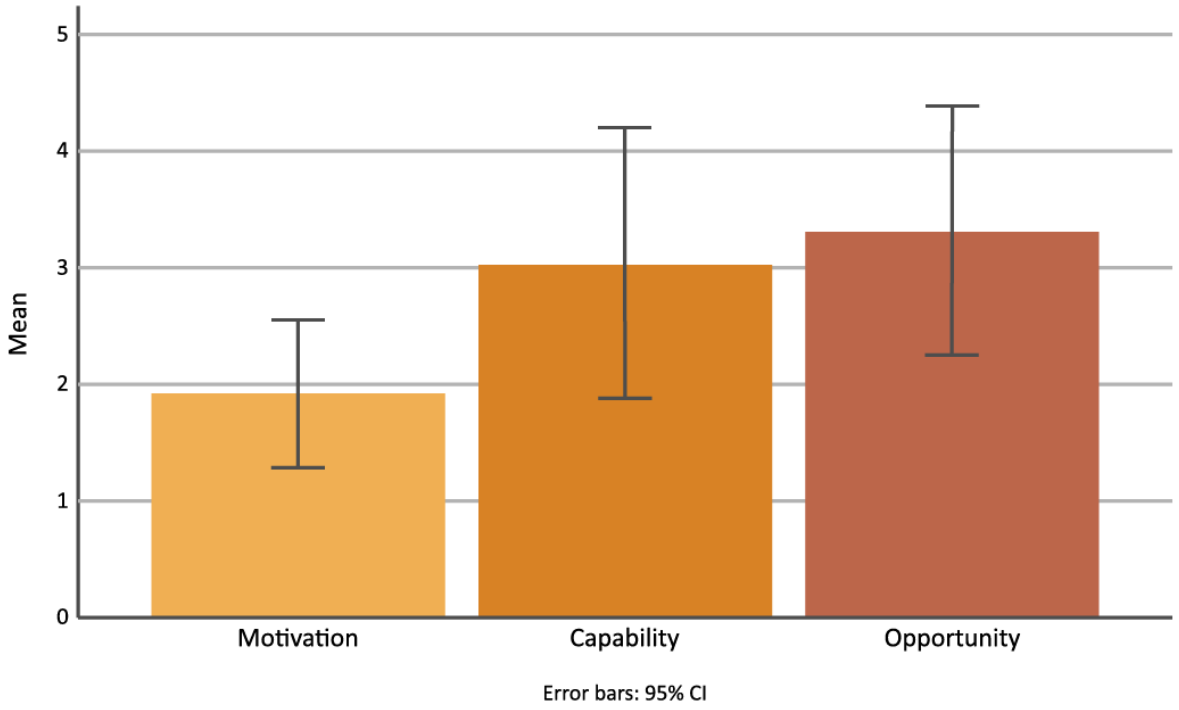
Finally, we asked about personal characteristics (i.e., age and gender) and professional characteristics (i.e., years of experience and content they usually teach).

WHAT OUR COLLEAGUES TOLD US

Almost every participant, 20 out of 21, reported using their university's online platform, which was either Moodle or Blackboard. When asked about using online tools other than the university digital platform, 61.90% (*n* = 13) reported using at least one online tool, being Mentimeter the most commonly used. However, when asked about ready to use digital education material, only 38.10% (*n* = 8) reported using any. Furthermore, when asked about which specific already-prepared digital education material they were using, most of the participants referred to videos available online or to previous presentations from themselves or colleagues. This indicates that a small number of our target population might be taking advantage of developed digital education material about climate change and human behavior and even less so when clarifying which of those digital resources they were using. In fact, participants that reported not using already-prepared digital education material informed about their reasons and the most agreed with answers were related with their personal capability and organizational opportunities to use these types of resources, whereas lack of motivation was marginally less agreed with. This result suggests a more structural issue than a motivational one, which is in line with what a ready to use digital education material could help improving.



In an open-answer section of the questionnaire about the specific advantages that this type of already-prepared digital education material had, most participants reported the time savings and consequential increase in efficiency at work. This idea was summarized by the expression of trying to avoid reinventing the wheel. Additionally, participants reported that ready to use digital education material helped standardizing the content and the demands across groups and across years. Furthermore, some pointed out the fact that ready to use digital education material can facilitate achieving the learning outcomes by offering another resource.



Despite the perceived advantages that ready to use digital education resources offer, they also involve challenges. Several participants pointed to the fact that ready to use digital education material may only overlap partially with the rest of the course or the rest of the program, which renders these resources suitable but not optimal. In line with this view, some material may not fit the scope of the course or program and even if they do fit, the style of the material might not be adequate for the style of the rest of the course or program. Additionally, participants reported instances in which they were not sure whether the material was open to be used in the way the lecturers were intending to use it, whether they were actually free, or what the inception of the material was. Another limitation is that in some cases editing the material (e.g., creating and editing subtitles) is needed.

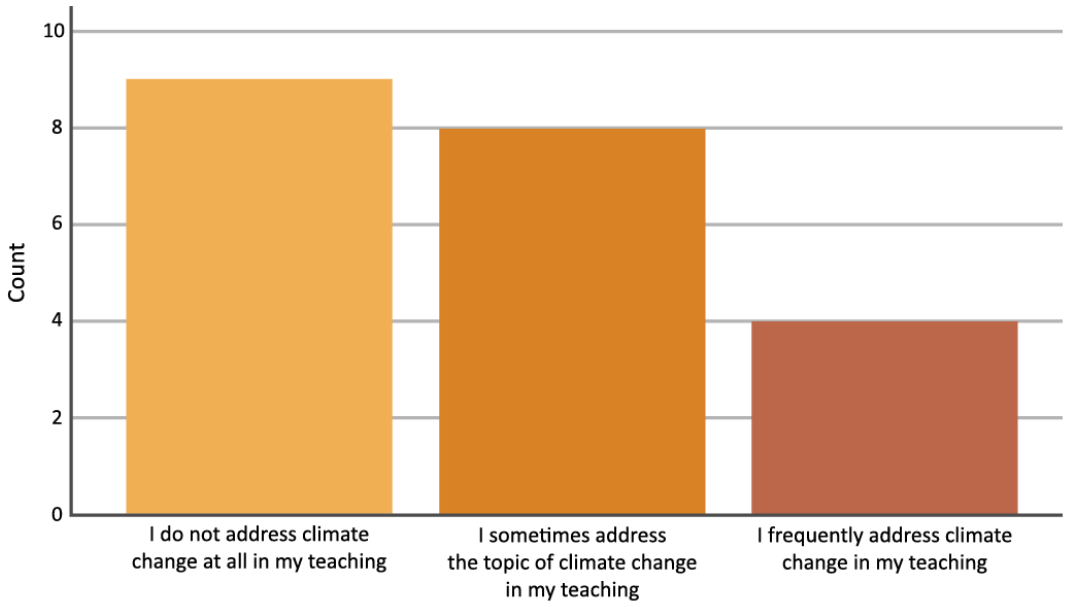
We did not find any statistical association between using already-prepared digital education material and other personal or professional characteristics. This lack of result could be indicating that

the factors motivating (or discouraging) the use of this type of resources are stable across different profiles of lecturers and scholars.

PSYCLIC offers a ready to use climate change and human behavior digital education package, which involves at least two core elements; the digital education and the education about climate change.

When asking about whether each participant teaches content that includes climate change, 57.14% (*n* = 12) reported addressing climate change either sometimes or frequently. When asked the main reasons why they included the topic, most indicated that climate change is among the core topics of their research expertise and of their teaching responsibilities. Some indicated that climate change has a direct impact on their core topic.

The rest of the participants, a 42.86% (*n* = 9) reported not addressing climate change in their teaching at all. We asked about the main reasons for not including the topic and observed again that the options with which participants agreed the most were with issues related with their individual capability to include the topic or with lack of opportunities. Lack of motivation was marginally less agreed with compared with the other options. When we offered the possibility of an open-answer section where the participants could indicate the reasons for not addressing climate change in their teaching, we observed that every participant indicated either not being organizationally allowed to change the content of their teaching or the fact that they perceived climate change as a topic not related with their core expertise.



WHAT WE LEARNED AND HOW WE WILL APPLY

There are several critical take aways that this survey allowed us to conclude. Even when virtually every participant uses some type of digital tool, most were not including ready to use digital education material. On its own, this would not necessarily indicate the need for what our project will contribute to. However, when observing the reason of people for not using already-prepared digital material, we observed that these are more related to not being able to include it than to not being motivated.

Furthermore, among the participants that use some type of already-prepared digital education material, we observed that the perceived positive features were about the resource itself (e.g., improving efficiency and increasing standardization), whereas the perceived negative features that participants reported were not about the resources themselves but about the difficulties linked with implementing them.

We found a very similar pattern of results when asking about climate change instead. We observed that lacking motivation is the least agreed with factor when it comes to the reasons not to address climate change in their teaching, whereas lack of personal capability or opportunity were marginally more agreed upon.

Because of the convergence of results pointing towards some participants using already-prepared digital education material and considering it a positive resource; while other participants not using them due to lack of capability or opportunity, we consider that a digital education resource about climate change and human behavior can be crucial to improve education about climate change.

Additionally, following the indications about the difficulties with already-prepared digital education material that the participants reported, we learned that our material needs to be flexible in a way that can be adapted easily to the specific conditions of the course or program. Furthermore, we will develop material with an engaging but neutral tone that can be used in multiple contexts. Equally important is how the information about our material needs to be clear, including when and by whom was developed, and under which conditions it can be used.

We observed positive indications about the ready to use digital material and how the negative elements are related with the implementation but not with the resource itself. We observed that participants not using these types of resources attribute this more to a lack of capability and opportunity, than motivation. Furthermore, we observed the same attribution about climate change. Therefore, we consider that a project like PSYCLIC, which offers ready to use digital education about

climate change and human behavior, can play a central role in improving and expanding education about climate change. Allowing more students to be familiar with the topic and be more prepared to implement one of the jobs that will have the strongest impact for humanity in the upcoming decades, encouraging behavior change to mitigate the worst consequences of climate change while helping people adapt to it.

Key take-away:

- The rapid development of the man-made climate change creates a pressing need for specialized training programs educating students in the field of human behavior and climate change.
- While teachers report no motivational problem of implementing these contents, there seems to be a lack of capability and opportunity for doing so.
- A digital course would be generally accepted but bears the challenge of an easy integration into existing core teaching.
- Ready to use digital material developed by PSYCLIC could therefore facilitate the process of implementing a self-guided learning course that is modularly structured and has a low threshold for use by teachers and universities.