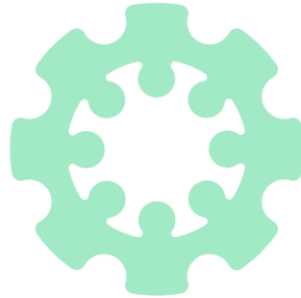


DIGITAL ACTION AT HIGHER EDUCATION INSTITUTIONS AS A
CATALYST FOR SOCIAL CHANGE IN THE COVID-19 CRISIS



HEIDI

Digital action now - University students
and staff to the service of community
needs during the pandemic

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Abstract:	This report aims to summarise the findings from the events organised for Intellectual Output 2 of the HEIDI project, which intended to create the conditions for the co-creation of Digital Action between citizens, HE staff and students.
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Partnership

	Name	Short Name	Country
1	University College London	UCL	UK
2	Citizens in Power	CIP	Cyprus
3	Web2Learn	W2L	Greece
4	University of Malta	UM	Malta
5	University Paris Cité	UP	France



**CITIZENS
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Web2Learn
Open. social learning



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**Université
Paris Cité**

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List of Abbreviations

The following table presents the acronyms used in the deliverable in alphabetical order.

Abbreviations	Description
DA	Digital Action
HE	Higher Education
HEI	Higher Education Institution
IO	Intellectual Output
SDGs	Sustainable Development Goals



Executive Summary

In the HEIDI project, Intellectual Output 2 (IO2) aimed specifically to create the conditions for citizens to voice their concerns through co-creation processes with HEI staff and students in DA projects, to seek solutions and engage them in the knowledge production and sharing cycle. It consisted of a series of activities aiming to train HEI staff and students in the design and implementation of DA and then organise DA events to provide them with hands-on experience on how to transform the relationship between HEIs and the communities by co-creating DA that addresses community needs. The results of the evaluation of these activities suggest that HEI staff and students became more interested in the design and implementation of DA that addresses community needs and more aware of the impacts of HEIs in their communities. However, more information is needed to provide specific guidelines for transforming HEIs through digital action, which we will aim to collect in Intellectual Outputs 3 to 5.



1 Introduction

1.1. Aims of the HEIDI project

The Project '*Digital Action at HEIs as a catalyst for social change in the COVID-19 crisis*' (HEIDI) is an Erasmus+ two-year project, which aspires to reposition Higher Education Institutions (HEIs) with respect to society, and enable them to become co-creators of solutions to problems that surface in crisis situations (e.g. the COVID-19 pandemic).

The main objective is to upskill Higher Education (HE) staff and students towards more resilience, adaptation to change, and agility that could enable HEIs to work together with citizens to shape better societies. The main actions examined are three forms of Digital Action (DA): Maker culture, Citizen Science, and Hacktivism.

1.2. Aims of Intellectual Output 2

In the frame of the HEIDI project, Intellectual Output 2 (IO2) aimed specifically to create the conditions for citizens to voice their concerns through co-creation processes with HEI staff and students in DA projects, to seek solutions and engage them in the knowledge production and sharing cycle.

It was subdivided into 5 main activities:

- Aim 1 (O2A1): Introduce the concept of DA in times of COVID-19 to the public and familiarise community engagement practitioners, with DA approaches, tools, methodologies;
- Aim 2 (O2A2): Offer digital training opportunities to HE staff and students as well as to citizens on how to create DA projects with citizen-generated data;
- Aim 3 (O2A3): Carry-out hands-on DAs involving HE staff, students and citizens; through this process it will build capacities for crisis response among HE students and staff (e.g. through hackathons, game creation, device making or art installation building to tackle Sustainable Development Goals -SDGs-);
- Aim 4 (O2A4): Analyse results and impact of the aforementioned activities and produce a publication on the digital transformation of HEIs through co-created DAs.

This report is a deliverable of O2A4 and will be focusing mainly on the events organised in the frame of O2A3. However, all events planned in relation to IO2 are briefly described below.

1.3. Activities planned for Intellectual Output 2

1.3.1. O2A1

The publication “Methodological guidelines for the design, implementation, and assessment of Digital Action”¹, accessible at <http://heidiproject.eu>, aimed to introduce the concept of DA and provide tools and methodologies for creating and leading DA projects.

1.3.2. O2A2

The events organised in the frame of O2A2 were considered “awareness raising and training events”, as their objective was, in general, to provide HEI staff and students - along with citizens not directly linked with HEIs - with practical knowledge on how to implement the methodologies described in O2A1.

Table 1 below presents the events planned for O2A2 at the beginning of the HEIDI project.

Table 1. Events planned for O2A2

Event name	Partner	Target group
Digital activism: scope, methodology, tools and practices	W2L	HE staff and students, community engagement practitioners, volunteers, schools, social workers, civil society stakeholders, and policy makers
Maker movement: methodology, scope, practices	CIP	HE staff and students, community engagement practitioners, volunteers, schools, social workers, civil society stakeholders, and policy makers
Citizen Science training for practitioners	UCL	Community members starting CS projects; HE students and staff with some knowledge of CS
Datathons, hackathons and digital hacktivism	UP	HE staff and students, community engagement practitioners, volunteers, schools, social workers, civil society stakeholders, and policy makers
Community engagement in achieving the Sustainable Development Goals (SDGs)	UP	HE staff and students, community engagement practitioners, volunteers, schools, social workers, civil society stakeholders, and policy makers
Communication and Feedback with Volunteers	UCL	HE staff and students interested in CS; community members carrying out some CS

Why trust citizen generated data?	UCL	HE staff and students
Achieving policy impact with Citizen Science	UCL	Community members using CS for local problems, e.g. environmental pollution
Data quality for Citizen Science	UCL	HE staff and students interested in CS; community members carrying out some CS
Citizen science for all	UCL	Community members, HE staff and students interested in learning what CS is

1.3.3. O2A3

The events organised in the frame of O2A3 were hands-on DA that engaged participating HEIs and communities in real-life DAs, tailored to address citizen needs.

Their aim was to provide HEI staff and students with hands-on experience in the implementation of DA that addresses community needs and serve as a template for future DA activities designed and implemented by the participants themselves.

Table 2 below presents the events planned for O2A3 at the beginning of the HEIDI project.

Table 2. Events planned for O2A3

Event name	Partner	Target group
Hackathon vs COVID-19	W2L	HE staff and students of at least one HEIDI HEI and at least one civil society actor
Datathon vs COVID-19	W2L	HE staff and students of at least one HEIDI HEI and at least one civil society actor
SDG Summer School	UP	Students from all training backgrounds, entrepreneurs/freelancers and high school graduates



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OpenCovid19 initiative	UP	HE staff and students, as well as people from outside HEIs
Citizen experiences during COVID-19	UP	The general public
Co-creation Covid-19 reActions	UM	Stakeholders from within and outside HEIs
Q&A Covid-19 reActions	UM	Stakeholders from within and outside HEIs
Message Relay Covid-19 reActions	UM	Stakeholders from within and outside HEIs
Maker spaces in COVID-19 crisis	CIP	Citizens, civil society participants and HE actors in Cyprus
iNaturalist Citizen Science hands-on workshop	UCL	Community groups

2. Outputs

2.1. Events organised for O2A3

All the awareness-raising events in O2A2 (listed in Table 1 above) were conducted as planned, with only minor modifications to their initially scheduled dates. They served as a starting point for the design of all O2A3 activities and influenced their implementation.

Most of the events planned for O2A3 (listed in table 2) were conducted without major setbacks, with the only exception of the OpenCovid19 initiative. Due to unforeseen circumstances that impacted the logistics of the event, the OpenCovid19 initiative couldn't be carried out as planned during the summer of 2022. In its place, the team of UP organised a winter school in the École Polytechnique de Thiès, Senegal, in collaboration with a non-profit organisation founded and run by UP staff and students called [HOME Education](#). The aim of the event was to use the Maker Space of the École Polytechnique de Thiès to design and prototype solutions to the Sustainable Development Goals (in particular related to health technologies) that help prepare the community to face public health challenges such as the Covid-19 pandemic. One month before the beginning of the winter school, in collaboration with another non-profit organisation founded and run by UP staff - called [Lecturers Without Borders](#) - UP organised a webinar on what the Sustainable Development Goals are, how they can be tackled, how open and citizen science can contribute to reach them and some main concepts on the Maker Movement. At the end of this webinar, a representative from HOME association (a PhD student from UP) presented the winter school and invited the 303 attendees to register for it. From that pool of registrants, 30 people were selected to participate, as the Makerspace does not allow for a bigger cohort.

The number of participants in the O2A3 events was, in some cases, lower than expected, and the organisers needed to modify the schedule to guarantee the participation of the relevant stakeholders. Table 3 below presents the dates of all O2A3 events (initially planned to take place before the end of the summer 2022), along with their expected and actual number of participants.

Table 3. Dates, expected and actual number of participants per O2A3 event

Event name	Date	Expected No.	Actual No.
Hackathon vs COVID-19	10 to 12/2/22	15	14
Datathon vs COVID-19	29/6 to 1/7/22	15	13
SDG Summer School	27/6 to 29/7/22	40	47
SDG Winter School (Senegal)	6/11/22 and 5 to 10/12/22	300	303
Citizen experiences during COVID-19	1/7/21 to 31/3/22	200	218
Co-creation Covid-19 reActions	27/5/22	15	15
Q&A Covid-19 reActions	22/8/22	15	12
Message Relay Covid-19 reActions	22/8/22	15	12
Maker spaces in COVID-19 crisis	13/7/22	15	23
iNaturalist Citizen Science hands-on workshop	11/7/22	20	9

3. Evaluation

3.1. Methodology for evaluation of the activities in O2A3

Within the document “Methodological guidelines for the design, implementation and assessment of Digital Action”¹, in section 4, we proposed a methodology for assessing the impact of DA that involved the use of pre- and post- event questionnaires.

These questionnaires aimed at understanding the impact and change at the individual level in the participants of the DA and identifying actions to strengthen their dynamics (motivation and roles) and performance (skills and level of engagement). The questions were based on a general approach and aimed to provide a way of comparing different Digital Action events, containing only one (final) question that could - and should - be tailored to the specific event and the upcoming ones (or simply omitted if not applicable). They were designed to take no more than 10-15 minutes to complete.

The questions included in the questionnaires were:

3.1.1. Initial Questions - distributed before the activity

Table 4. Initial questions, distributed before the DA activity

Question No	Question text	Metric
1	Have you ever participated in Digital Action that addresses community needs or aims to address a sustainable development goal? (one option)	<ol style="list-style-type: none"> 1. Not at all 2. Occasionally 3. On regular basis 4. Deeply involved
2	If yes to (1), what was your role in the Digital Action(s) you joined?	<ol style="list-style-type: none"> 1. Participant 2. Designer 3. Manager 4. Both
3	Are you familiar with the concept of the theory of change?	<ol style="list-style-type: none"> 1. Never heard of it 2. I am aware, but I haven't used it 3. I have used sometimes

		4. I use it most of the time
4	What are your expectations for this activity?	Open question

3.1.2. Final Questions - distributed after the activity

Table 5. Final questions, distributed after the DA activity

Question No	Question text	Metric
1	Has the activity you just participated in met your expectations?	<ol style="list-style-type: none"> 1. Not at all 2. I am not sure 3. I am sure 4. Why?
2	How likely are you to participate in a Digital Action that tackles community needs or sustainable development goals in the future?	<ol style="list-style-type: none"> 1. Very Unlikely 2. Somewhat Unlikely 3. Not sure 4. Somewhat likely 5. Very likely
3	Digital Action can address the needs of different stakeholders. Which targets do you prefer? (circle all that apply)	<ol style="list-style-type: none"> 1. Companies 2. Researchers 3. Community 4. Government
4	What skills do you think you would need to have in order to participate successfully in a Digital Action?	Open question
5	Do you think the activity has increased your motivation or interest in participating in Digital Action that addresses community needs?	<ol style="list-style-type: none"> 1. Not at all 2. Slightly 3. Very much



		4. I am not sure
6	What are your motivations or interests to be engaged with a Digital Action that addresses the community needs?	Open question
7	In the context of participating in Digital Action, what do you think you will do differently in the future, as a result of what you learned today?	Open question
8	Would you recommend participating in Digital Action that addresses community needs to a friend or associate?	<ol style="list-style-type: none"> 1. Definitely Not 2. Probably Not 3. Not sure 4. Probably 5. Definitely
9	On a scale from 1 to 10, rate your satisfaction with this event	Scale 1-10

3.2. Reach of the questionnaires

At the beginning and the end of each O2A3 event, the organisers requested the participants to fill out the corresponding questionnaire. However - and as expected - not all participants filled out both questionnaires. On average, only 15.2% of the participants in each event replied to the pre-event survey, and 12.5% of them completed the post-event survey.

3.3. Responses to the pre-event questionnaires

Since the questionnaire distributed at the beginning of each event aimed solely at understanding the level of experience of participants in Digital Action and their general knowledge of the Theory of Change, we grouped the responses obtained to give a general overview of the population reached by our DA events.

3.3.1. Questions 1 and 2 - Previous involvement in DA

To the question “Have you ever participated in Digital Action that addresses community needs or aims to address a sustainable development goal?”, 32.1% of the respondents said they had never been involved, 46.9% declared having participated at least occasionally on some DAs, and 21% said they were very experienced in DA, either having participated “on a regular basis” or being “very involved”.

Of those who declared having participated in DA in the past (63.1% of the total), 26.8% said that their role had been either designer, manager or both, with the other 73.2% being participants.

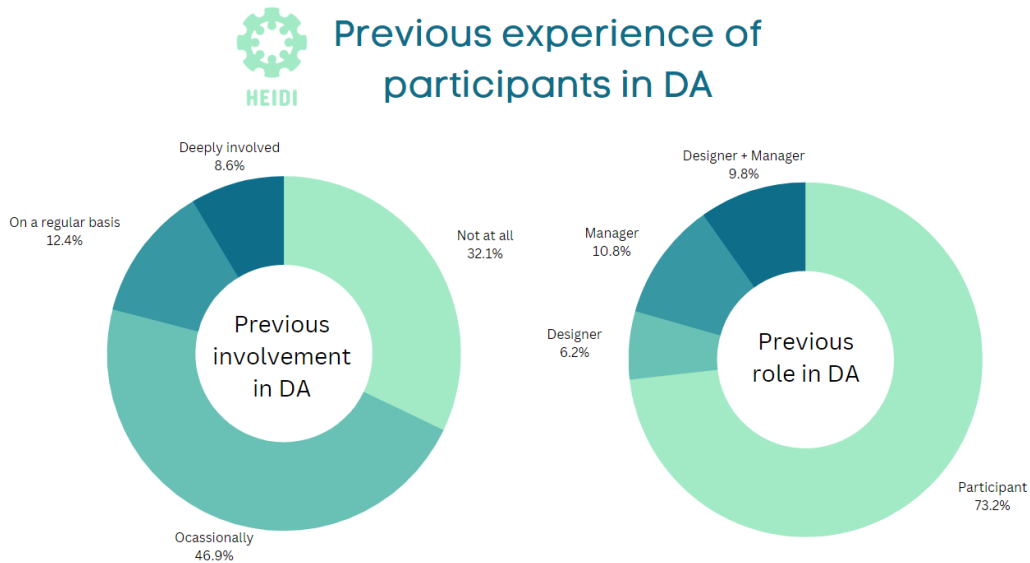


Figure 1. Previous experience of participants of O2A3 events in Digital Action

3.3.2. Question 3 - Familiarity with Theory of Change

To the question of whether they were familiar with the concept of Theory of Change, most participants (73.7%) declared that they were familiar with it and used it sometimes, 10% responded that they were aware of it but haven't used it and 16.3% responded that they had never heard of it.



Familiarity of participants with Theory of Change

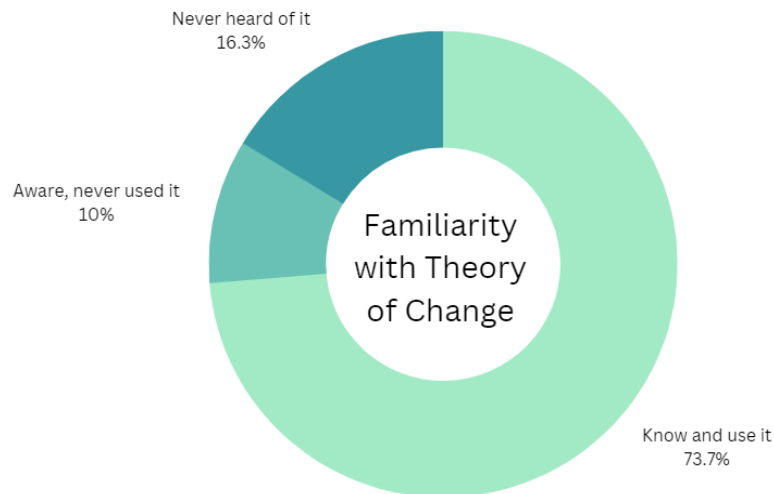


Figure 2. Familiarity of participants with Theory of Change

3.3.3. Question 4 - Expectations for the activity

Although “What are your expectations for this activity?” was an open question and therefore offered the possibility of a completely free answer, the responses can be grouped around certain recurring keywords.

48.4% of participants answered something along the lines of “learn something new” or “develop new skills”, 16.2% of participants used the words “discover”, “ideas” or “insights” to describe their expectations and 11.9% of them mentioned the word “discuss” or “discussion” as their expectation.

Finally, 23.5% of the respondents left this question blank.



Expectations of participants for the O2A3 activities

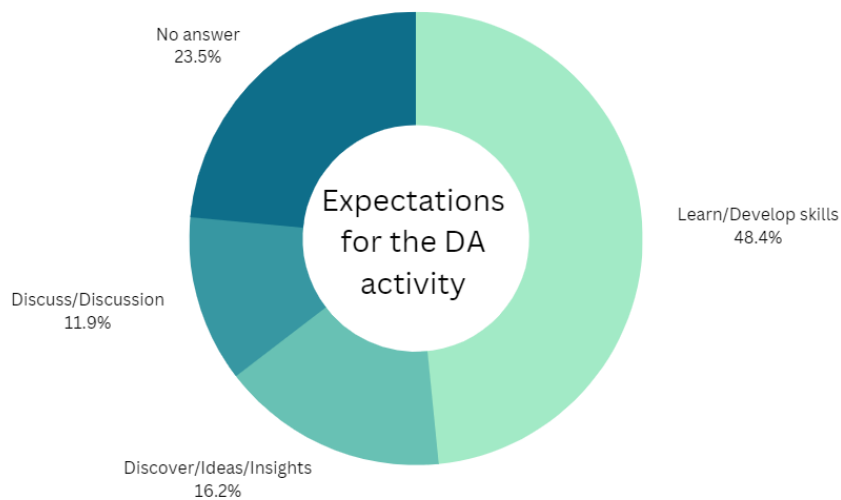


Figure 3. Expectations of participants for the O2A3 activities

3.4. Responses to the post-event questionnaires

Although the responses to the post-event questionnaire were very event-specific, some generalisations can be made with respect to the results of the surveys.

3.4.1. Questions 1, 8 and 9 - Satisfaction with the event

Only one respondent to the post-event questionnaire declared being unsatisfied with the event they attended, saying it didn't meet their expectations and rating their satisfaction with a 2/10. Every other respondent declared that the activities they participated in fully met their expectations, and the average rating was 9.3/10.

To the question of whether they would recommend participating in DA to a friend or associate, only one respondent answered with "Probably not". Most people (61.4% of respondents) declared that they would "Definitely" recommend it, and the rest (38.6%) answered they would "Probably" do it.

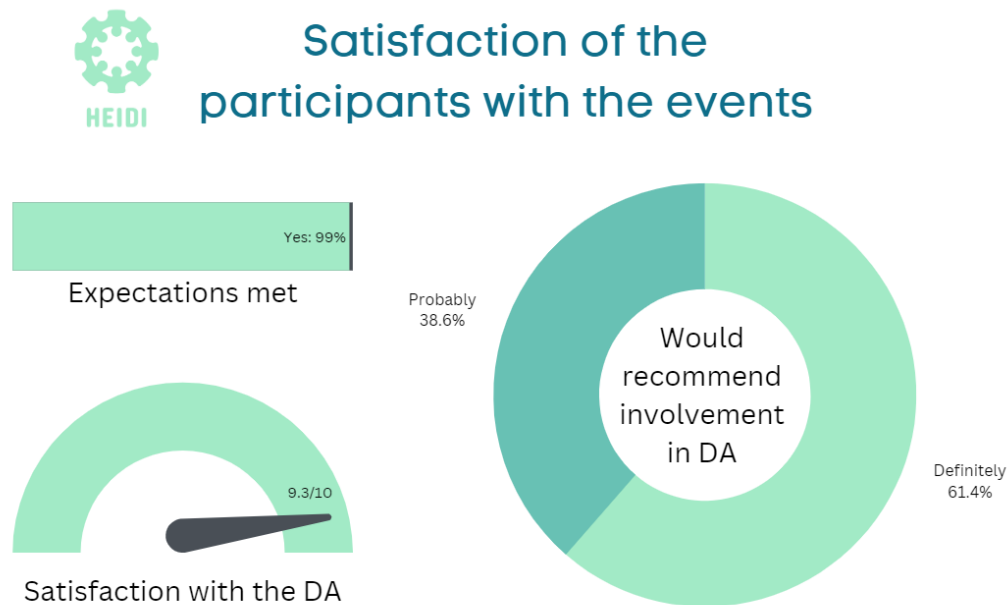


Figure 4. Satisfaction of the participants with the events they attended

3.4.2. Questions 2 to 4 - Future DA

The average response to the question of how likely the attendees were to participate in future DA was 4.55/5. When asked which stakeholders they would like to address in their future DA, 100% of the participants included “Community” in their answer, 91.1% included “Researchers”, 80% included “Government,” and 64.4 included “Companies”.

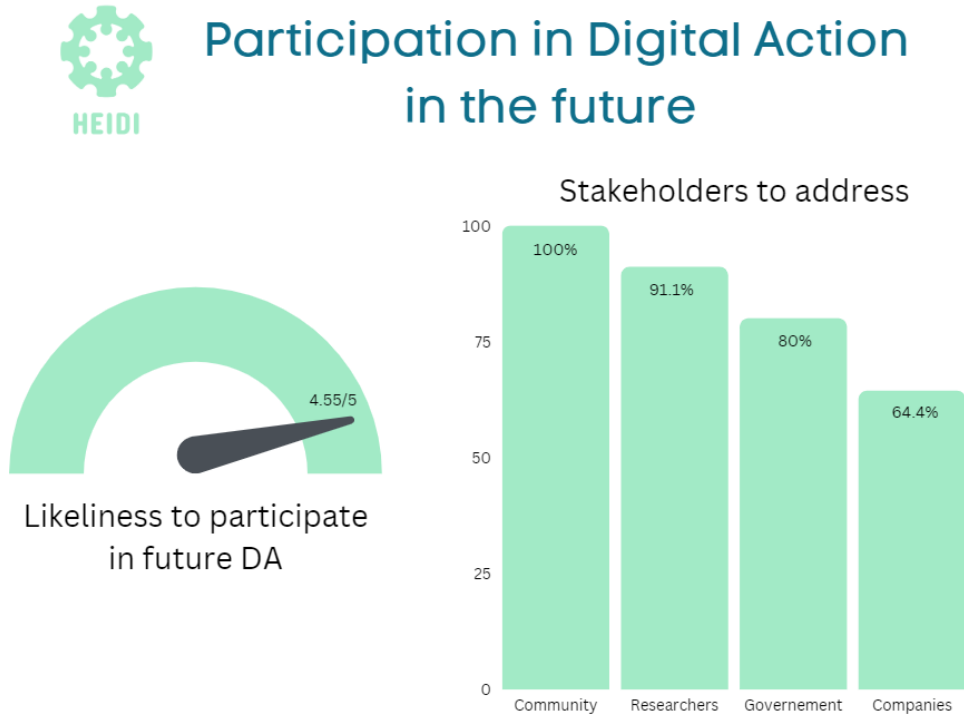


Figure 5. Participation in Digital Action in the future: likeliness and aimed stakeholders

Regarding the skills they considered necessary for future DA, the responses were very varied but could be grouped into four main categories:

- Technical skills: Many respondents referred to things like “coding knowledge”, “IT skills”, “topical knowledge”, “academic skills”.
- Managerial skills: Several respondents mentioned “teamwork”, “entrepreneurial skills,” and “organisational skills”.
- Interpersonal skills: Many people considered that it was important to be good at “public speaking”, “public engagement”, “networking” and “collaboration”.
- “Personal motivation”, “interest” and “drive” were also mentioned as necessary, although they may not be skills per se.

3.4.3. Questions 5 and 6 - Interest, motivation, and changes for future DA

When asked whether the activity had increased their motivation or interest for participating in DA that addresses community needs, approximately 80% of the respondents answered “Very much”, 10% replied “Slightly”, approximately 10% replied “I don't know” and only one participant replied “Not at all”.



Interest and motivation for future Digital Action

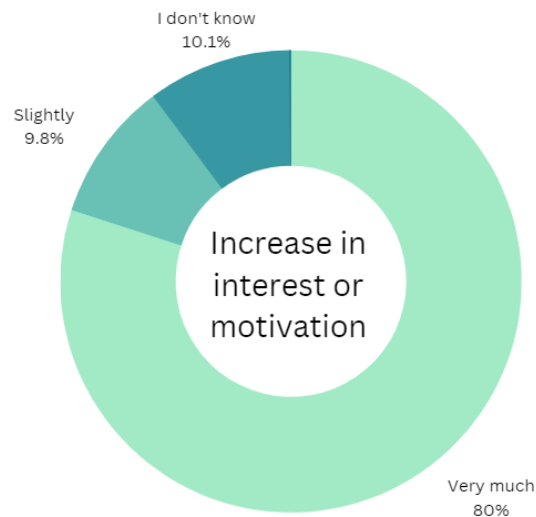


Figure 6. Increase in interest or motivation of the participants for participating in DA.

Regarding the motivations for participating in future DA, only 48% of respondents answered, and in most cases, the answers referred to “sharing knowledge”, “building a better tomorrow” and believing that bottom-up approaches can have a significant impact on policymakers.

And finally, when asked what they would do differently based on what they had learned during the HEIDI activities, the responses were very varied and reflected the impact of the discussions on the participants. Some examples of responses are:

- “Consider social and cultural contexts of communities”
- “Being more aware of the socio-political context and how supportive digital infrastructures can be designed that include these aspects”
- “Look for previous information on ethics, data sharing, data storage, and also networking.”



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- “If participating as a participant, look for more info, ahead of participating (on ethics and inclusiveness, e.g.). If participating as a designer or manager, I also would like to do things differently (allow more time for planning, communication building and pre-testing, e.g.).”
- “Research into existing digital actions to get some inspiration of what is possible”
- “Try to encourage more people participation”
- “Consider the ways I can plan events in advance to maximise engagement”
- “Time and date of the event must be specifically suited to participants”
- “Simplify the process of starting a digital action by using co-design settings for initial ideas.”
- “Think out of the box”.

4. Conclusions

4.1. Insights from the questionnaires and internal reports

Most of the participants in the O2A3 activities had either never participated in any Digital Action before or had done so only one or two times, and always as participants. The aim of these activities was to provide participants with hands-on experience on how to co-organise and/or lead Digital Action. We evaluate our activities as successful in engaging the participants and sparking their interest in DA.

The majority of participants declared being motivated to design and lead Digital Action initiatives in the future, and several of them joined our roundtable discussions in Intellectual Output 5 to give us their feedback on how HEIs could contribute to engaging more staff and students in Digital Action. They also provided valuable feedback on which stakeholders should be targeted by DA, and how DA can contribute to change in HEIs and society at large.

The O2A3 events seem to have provided participants with tools to voice their concerns and doubts when engaging in DA, a framework for designing and evaluating it, and motivation to engage in it. Therefore, the outcome of them is very positive.

4.2. Transformations of HEIs through co-created DA

Based on our experience in IO2, it seems that the biggest challenge for the co-creation of DA in HEIs is the lack of opportunities for staff and students to communicate their interests and collaborate in its design. We identified a significant interest from both sides in contributing but also a lack of awareness of the potential collaborations that could be established within each institution. We therefore consider that a first step towards transforming HEIs into hubs for DA would be to facilitate these interactions.

With respect to the engagement of people external to HEIs in the DA designed by them, many of the HEI staff and students were unaware of the complexities of public engagement, and it seems that further training of staff and students in public engagement, in general, could be beneficial for all outreach activities of HEIs.

Intellectual Outputs 3 to 5 of this project aim to provide further insights into these questions and provide a framework for the upskilling of HEIs for designing and implementing DA in close collaboration with the communities.



References

1. Hurtado JM, Covernton E, Hannibal E, Misevic D. Methodological guidelines for the design, implementation and assessment of Digital Action. 2022. HEIDI Consortium. Accessible at <http://heidiproject.eu>