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## Report for the Action Line Citizen Science

# Perception of and Experience with Citizen Science at Higher Education Institutes (HEI)

According to agreement from August 22th, 2019

*"I knew Citizen Science before I started my PhD but not with that name. My institute had a project "Videogames – Eve Online" with thousands of players. As space explorers they analysed data from a satellite for exoplanets and got rewards. We scientists used that data for our research."*

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Ein Kompetenzzentrum der
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Quotes are indicated as follows (for details see annex):

→ *"I knew Citizen Science before I started my PhD but not with that name. My institute had a project "Videogames – Eve Online" with thousands of players. As space explorers they analysed data from a satellite for exoplanets and got rewards. We scientists used that data for our research."*

# Management Summary

68 researchers in the network of the Swiss Academies of Arts and Sciences (further referred to as Academies) as well as researchers from Science et Cité's and partner's events have given information about their perception and knowledge of Citizen Science (online Survey: 62 / in depth interviews: 6). It was no precondition to have any knowledge of Citizen Science in order to participate in the survey.

Although the report is not representative in a statistical sense, the collected feedback gives useful indications for the swissuniversities' working group for the "National open science strategy; Action Line Citizen Science" and the insights can be further deepened. In addition, the yet unpublished paper by Johanna Heuveling (see page 4) could be useful as well.

In general, the participants and interviewees find Citizen Science interesting and are open-minded.

We identified three topics that should be further deepened in the working group Citizen Science and that correspond to the original questions: a) what aspects are holding Swiss researchers back from doing (more) Citizen Science projects? Respectively b) what would Swiss researchers need to do (more) Citizen Science projects?

These three topics are namely: 1. information, 2. support and 3. context (see below).

## 1. (More) information needed

The general feedback towards Citizen Science is positive, the majority of the participants as well as the interviewees are interested although not all know exactly what it is. Citizen Science is mentioned repeatedly as data collection or outreach in general. Some statements indicate that if the public is merely informed about the results of a study, this is also understood as "involvement" or "Citizen Science". Sometimes "normal" outreach practices such as e.g. open days are also considered as Citizen Science. On the other hand, some researchers also mention that they do involve non-researchers in their research process although not with the label "Citizen Science". So, Citizen Science as research approach might be nothing new to those researchers.

In general, researchers regret that they don't know more about Citizen Science as a method and about its potential. Some quotes say:

→ *"Provide inspiration, information and support."*

→ *"However, it would be exciting to receive examples. I would be very interested in that."*

In principle, there is a need for information

- and clarification about Citizen Science as a method (basics, what is Citizen Science, what is the difference to outreach),
- and inspiration about existing projects in the sense of good practice and what added value can be achieved.

## 2. Support and acknowledgement are essential

Besides their wish to know more about Citizen Science the participants of this survey also have the wish to get support (time, finances, dealing with the public, communication). This was mentioned both in the free thoughts but also in the multiple-choice questions.

→ *"Communication: Scientists are not communication experts. One would also have to involve the communication experts of the universities. Know-how and rules needed. Communication channels are also necessary."*

We got several feedback about the appreciation by the scientific system: Citizen Science is perceived as an extra effort, which is not rewarded by the academic system. One interviewee mentioned an interesting idea that would make citizen Science more attractive to researchers:

→ *"However, I have respect for the effort that has to be put into accompanying citizens. We often don't have the time. I prefer a survey that is well structured and can be outsourced. Then we only get the data record. So, if there was something similar with Citizen Science...? It would be ok to pay for these services as well!"*

## 3. Citizen Science is research in a real context (and not l'art pour l'art)

There has to be an understanding, that Citizen Science is a great opportunity for many researchers with the acknowledgement that not every researcher has to do Citizen Science and not every research is suitable.

→ *"Again: Why is there a need to realize citizen science projects?"*
→ *"Funding for sure. Also, we need to keep in mind that it is not necessarily possible to do interesting citizen science project for any kind of research, so a careful thinking of what is possible (or not) is mandatory. Help for doing such thinking could be helpful as well."*
→ *"Yes, I think it [Citizen Science] is awesome, I am fully for it. For sure there are research topics where it is more appropriate. It needs to make sense, to really matter. Results that are really useful and can be shown to the people."*

Therefore, the following three questions should be seriously considered:

- Is Citizen Science basically suitable for my research?
- Is Citizen Science an efficient method for my research?
- Does Citizen Science correspond to my individual interests or possibilities?

# 1. Introduction

This survey on the "Perception of and Experience with Citizen Science at Higher Education Institutes (HEI)" was commissioned by the swissuniversities working group for the "National open science strategy; Action Line Citizen Science" on August 22nd, 2019 with the aim to help shape a "National Plan on Open Science".

The goal was to collect information from Higher Education Institutes (HEI) researchers about their perception of and experience with Citizen Science:

- What is holding Swiss researchers back from doing (more) Citizen Science projects?
- What would Swiss researchers need to do (more) Citizen Science projects?

The survey was done under the labels of "Science et Cité / Schweiz forscht", the Swiss Citizen Science Network Office and swissuniversities. The mission of "Schweiz forscht[1]" is to contribute to a nationwide strategy to acknowledge and promote Citizen Science[2] itself. Besides operating the national platform, knowledge transfer between the projects is also at the centre of its mission. In this context we are looking forward to the scientific paper by Johanna Heuveling[3] that was recently submitted at the Technische Universität Berlin, Germany, exploring the perception of Citizen Science in Science in Germany.

In the next chapter, we briefly describe the procedure, method and milestones of our survey before we give insight in the demographics of the participants. The focus of this report lies on the results of this qualitative but not representative survey. In the annex you will find the questionnaire as well as more detailed information about the feedback received.

# 2. Procedure, Method and Milestones

The procedure, the method as well as the questionnaire have been designed mutually with representatives of the swissuniversities working group for the "National open science strategy" and Science et Cité.[4]

The approach was mainly qualitative, not quantitative in a representative sense. The idea was to get information about the perception of and experience with Citizen Science from researchers in the network of the Swiss Academies as well as researchers from Science et Cité's and partner's events.[5] The aim was receiving around 40-60 answers ideally from different target groups:

- researchers from different HEI Types (ETH, Universities, Universities of Applied Sciences, Universities of Teacher Education) in both the French and the German speaking part of Switzerland and
- different disciplines as well as different career levels (PhD, postdoc, professor), fixed-term contract / permanent contract,
- ideally also a participation of gender which reflects the overall gender (im-)balance in Swiss Higher Education (20% female / 80% male[6]) and of different age.

However, the respondents did not need to have any knowledge of Citizen Science. The dissemination of the survey was established by the different associations from the

1 www.schweiz-forscht.ch

2 Citizen Science is understood as a generic term for approaches how volunteers are involved in science. Citizen Science is genuine scientific work and knowledge.

3 Johanna Heuveling: Science and Citizen Science: Die Einstellungen der Wissenschaft zur Bürgerwissenschaft und Kommunikationskonzept zur Verbesserung der Beteiligung von Wissenschaftlern an Citizen Science (Master Thesis 15.8.2019 to be published)

4 Rosy Mondardini, Anna Jobin, Patrick Furrer, Philipp Burkard, Tiina Stämpfli

5 Public Event «Rendez-Vous. Wissenschaft im Gespräch» (6. / 7.9.19), Swiss Science Communication Conference «ScienceComm» (19. / 20.9.19).

6 Percentage according to the representatives of the swissuniversities working group

Academies network[7] and Science et Cité. Because of data protection regulations we do not know who exactly received the questionnaire.

On one hand, this method holds the danger of bias. This has been reflected upon and the problem was considered as acceptable since it is not a representative survey. On the other hand, this method increased the probability that we would receive the targeted 40-60 feedback forms in a very short time and made it more realistic to recruit interview partners.

This report is based mostly on the feedback from the online survey tool "findmind"[8] conducted in English. The interviews were conducted in German respectively in English. Some quotes are translated from German into English. We illustrate the report with quotes (details are listed in the annex) that are typical or interesting, they are indicated as follows:

→ *"I am sure people are also ready to help if it is playful / ludic and interactive. We should keep that in mind."*

The interviews and the online survey were run after the kick-off meeting from August 26th to October 5th, 2019.

62 researchers completed the online survey (mentioned in this report as "participants") and we conducted six guideline-based interviews (face-to-face or telephone; mentioned in this report as "interviewee").

35 participants and all six interviewees agreed to be contacted for a follow up at a later stage of this survey.

# 3. Demographics of participants and interviewees

## Participants from online survey

As mentioned earlier, the online survey was done in the network of the Academies with the aim of receiving around 40-60 feedback forms from the target groups mentioned above. We received 62 answers and conducted 6 interviews.

The researchers that participated in the online survey work mainly at HEI Institutions located in the German (73%) and the French (27%) speaking part of Switzerland.

Although, we have feedback from researchers representing all types of HEI, the majority works for universities:

| **HEI Type** | **%** | **Number** |
|---|---|---|
| ETH / EPFL | 8% | 5 |
| University | 74% | 46 |
| University of Applied Sciences | 11% | 7 |
| University of Teacher Education | 7% | 4 |
| **total** | **100%** | **62** |

We also have feedback from all disciplines, though the huge majority has a background in Humanities and Social Sciences and only few from the natural / technical sciences which are typical disciplines with a long history in Citizen Science (see page 30).

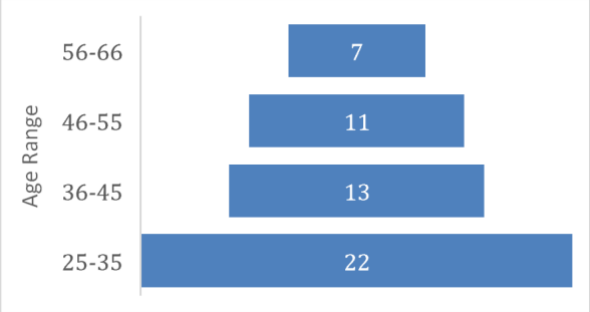
The participants characterize different career levels (27% PhD, 37% postdoc, 36% professor) and about 40% have a permanent contract whereas 60% work on a fixed-term contract.

27 male and 30 female researchers (5 no comment) conducted the survey. It is difficult to make a statement as to whether this preserves gender relations at HEI, as researchers at different career levels have taken part in the study.

[7] www.swiss-academies.ch

[8] www.findmind.ch

The participants are of different age, many between 25 and 35 years old (9 participants didn't answer this question):




### Interviewees from face to face or telephone interviews

In-depth interviews were conducted face to face respectively by telephone. The 6 researchers represent all type of HEI (2 University, 2 ETH / EPFL, 1 University of Applied Sciences, 1 University of Teachers Education), gender (3 men, 3 woman), age range (28 – 61) and disciplines (Humanities and Social Sciences as well as Natural Sciences and Teacher Education).

## 4. Results and analysis

Above all, we wanted to know if researchers have heard of "Citizen Science" before and if they had ever worked at any stage of the research on a Citizen Science Project before. After all, we wanted to know what would support them so that they would practice Citizen Science. Each chapter reflects both, the beneficial as well as hindering reasons for conducting Citizen Science Projects.

### Awareness

Although no knowledge of Citizen Science was required to participate in the survey about nearly half of the participants and all of the interviewees have heard about Citizen Science (35 yes; 33 no) before.

→ *"I have learned from the daily press, there are articles now and then. Also, I have heard about Citizen Science during the Days of Science at the University of Zurich and ETH Zurich."*

Some feedbacks indicate that researchers might have conducted Citizen Science but weren't aware of it:

→ *"I knew Citizen Science before I started my PhD but not with that name. We had a project "Videogames – Eve Online[9]" with thousands of Players. As space explorers they analysed Data from a Satellite for Exoplanets and got rewards. We Scientists used that Data for our research."*

→ *"Projects that are not declared as Citizen Science may fall under this category. At Berner Fachhochschule we work together with farmers in the area of "on farm research", and there are also forms of cooperation with non-researchers in sensor technology. We do it pragmatically, we often involve the practice and e.g. in the topic Food Waste, the population is an important actor to advance the research. Our research is not only abstract, but also often involves participation with those affected. I have the impression that we often collaborate with research laypersons in our research. However, this research is not declared a Citizen Science."*

[9] The objective of the EVE Online video game is to combine science and entertainment: by handling real scientific data, tens of thousands of players think they are conquering the galaxy, but also advance scientific research in the field of astrophysics (see: media release Université de Genève, 13.3.2017: "Michel Mayor, personnage d'un jeu video", retrieved 24.10.2019).

→ *“I know that under the term living labs. We work together with citizens, for example in workshops where we try to identify motivations why people live in housing cooperatives.”*

## Personal experience with Citizen Science Projects

However, only a minority of the participants (7 participants and 1 interviewee) has worked on a Citizen Science Project at any stage of the research and the majority has never worked on a Citizen Science Project at any stage of the research (55 participants and 5 interviewees).

From those participants who have worked on a Citizen Science Project only one participant couldn’t imagine designing another Citizen Science project starting in the next 2 years because:

→ *“I have no good idea for a citizen science project.”*

Whereas the other 7 could imagine starting another Citizen Science Project in the next 2 years. Their biggest motivation for doing Citizen Science are the following:

→ *“Quality of research outcome”*
→ *“Increasing public welfare by conducting well-grounded research.“*
→ *“Filling existing knowledge gaps within science by using citizens' knowledge”*
→ *“The fact that you can get data from thousands of people, which is not normally possible in a project relying on scientists alone”*
→ *“The interest of the large audience for my field, the potential benefit on each side: crowd sourcing can help speeding up some tasks while opening our material and research to curious web users.”*
→ *“To help others.“*
→ *“We (foa-flux.net) are working in the arts and are researching art. In order to tap and further develop the potential of art for future art and society projects, the inclusion of Citizen Science as part of the practitioner research is essential.”*

The majority of participants has never worked on a Citizen Science project before – why? The reasons are mostly not because they have actively decided against it but because they had no knowledge of it. The most cited reason was, that the participants have not heard of Citizen Science before or that they were not aware of Citizen Science (13 feedbacks). Numerous participants also mentioned, that they didn’t have had an opportunity yet (11 feedbacks).

Some also mentioned, that Citizen Science might not be suitable for their research:

→ *“I did not have the chance to or did not have an RQ [Research Question] where this was relevant”*
→ *“We are doing Projects for the broad public but so far have not yet included citizens to collect data or the like.”*
→ *“Research requires theoretical and methodological training, much of which many members of the so-called general public don‘t have. I do work ethnographically, and that entails interviewing and observing participants in their everyday life with the aim reconstructing their perspectives and experiences. This involves developing close relationships with those participating in the research, but they are not involved as researchers.”*
→ *“Research is complex and requires much knowledge. Not everyone can participate. Public is important to communicate research results. At the end of a research project, I like to inform the public.”*
→ *“Philosophy is very abstract and therefore rather unsuitable. the prerequisites are very high, you can only reach certain people. The question is, how do you reach people? Support is needed here. Show which disciplines can benefit from it. It doesn't pay off everywhere.”*
→ *“I have worked for a very long time in a very specialized field, where very specific skills are needed, for example when it comes to working with historical sources. In the social sciences and the humanities there is no clearly defined, secure knowledge base like in the natural sciences, for example. In my opinion, these disciplines are therefore less suitable.”*

## Citizen Science as a valuable possibility to reach out to pupils / schools

Only a minority of the participants have already worked on a Citizen Science Project with pupils / schools. Although the majority of participants has never worked on such a project before they consider it a good idea to conduct Citizen Science Projects with pupils / schools:

- → *"Absolutely. Especially Universities of Teachers Education would be predestined. However, the question of funding arises because these are not classical research projects."*
- → *"Basically yes, especially for research questions. But not so much in data collection I still consider this to be the task of students and researchers especially for quality reasons. From time to time we also supervise Matura theses. So why not?"*
- → *"If a good project opens the eyes of the people involved, how research works and if the project can pick up the people well. Get out of the ivory tower. Citizen Science is not yet properly integrated into research life. Guided tours are something else. Citizen Science would certainly be interesting for high school theses / internships. But if coaching takes too much time, then it is not efficient."*

What are the reasons for those who have worked on a Citizen Science Project with pupils / schools?

- → *"It is good to raise the interest in science with children / teenagers. I participated multiple times in "Tage der Genforschung", where we showed simple experiments."*
- → *"Severely understudied field; students & pupils are the decision makers of the future."*
- → *"To see the motivation of the young, and their willingness to help."*
- → *"Increase agency, inspire and get inspired, knowledge transfer, tapping and seeding curiosity."*

What are the reasons for **not** conducting Citizen Science Projects with pupils / schools?

First of all, numerous participants – as already seen above – replied that they had not heard of Citizen Science before or that they didn't have the idea or because they lacked awareness. Again, the reasons are not based on an active decision of not conducting Citizen Science Projects with pupils / schools (9 feedbacks):

- → *"I don't know how to do this + I don't see how it would benefit my research."*

Others replied that they didn't have the opportunity respectively chance yet or that it wasn't the focus of their research respectively no one asked them to do Citizen Science.

- → *"That is beyond the scope of my PhD."*

Quite a few also mentioned that pupils / schools were not their target group as seen in this selection of feedback:

- → *"I have no contact with pupils or schools that would be of an age to do that."*
- → *"The subject I teach does not exist at schools and is difficult to integrate in the typical course grid which does."*
- → *"The participants of my studies are not children. I just had a speech for children to explain my field."*
- → *"I have only been working with older participants (due to research topic)."*
- → *"I am not primarily working with kids and youth"*
- → *"Difficult to find willing schools / teachers because of the perceived "extra work""*

## Aspects that would support the realization of Citizen Science

As we have seen above, about half of the participants and all interviewees have heard about Citizen Science (35 yes; 33 no) before. Encouragingly, the majority considers it a good idea to conduct Citizen Science Projects with pupils / schools. In the following, we want to find out, what researchers would really help to do (more) Citizen Science projects.

In a first step the participants and interviewees answered a) an open question about "what would help you do (more) Citizen Science projects?" in a second step, they answered the same question but with b) a selection of possible aspects (multiple choice answers).

## a) Free thoughts (open question)

First of all, information as well as resources were mentioned as beneficial aspects but also the need of acceptance of Citizen Science for research itself.

Nevertheless, also critical voices about the relevance of Citizen Science were uttered in this section.

Information about Citizen Science but also support and guidance / assistance on how to do it or give examples of successful Citizen Science Projects would help to do (more) Citizen Science. Additionally, also funding, incentives and having time for Citizen Science are also mentioned often:

- → *"As a young scientist without a long-term perspective and on a very competitive job market, there would need to be incentives to invest so much time and effort to involve citizens in my research."*
- → *"It is important to get methodological knowledge so that one could really call it Citizen Science. So far, I have too little information about what Citizen Science is and where the boundaries are. People only as data providers? Methods have to be further developed. There are also aspects of data protection that need to be taken into account. So, there are quite a few questions that we are confronted with."*
- → *"In economics, citizens are more likely to be questioned; I am not aware of any active participation in economic research. And so far, I have not had the need. However, it would be exciting to receive examples. I would be very interested in that. However, I have respect for the effort that has to be put into accompanying citizens. We often don't have the time. I prefer a survey that is well structured and can be outsourced. Then we only get the data record. So, if there was something similar with Citizen Science...? It would be ok to pay for these services as well!"*
- → *"Time resources, cultural change at universities. There is hardly any time for creativity. What are the priorities? As a scientist, you increasingly have to carry out work that has nothing to do with actual research."*

Also mentioned by numerous participants were the need of acceptance, recognition, a national call, programme, announcement, or full recognition by academic system.

- → *"It cannot be part of my usual work, since it would not get any recognition in the academic sector, which is based on journal publications, third party money and getting students to gain their degrees. If you fund an extra project – I'm in!"*
- → *"Finances and resources are certainly important. Commitment on the part of education policy / EDK that such research is desirable. Understanding on the part of science. Practical questions also arise e.g. about the place of implementation: Where do the Citizen Science projects take place, so that those who are not involved in education can also participate? Communication: Scientists are not communication experts. One would also have to involve the communication experts of the universities. Know-how and rules needed. Communication channels are also necessary."*
- → *"Educational policy concern: there are strong players in research, especially the SNF. Citizen Science is something complementary. So, the question is what image do you have of science? How does the SNF react?"*

And not to be missed the feedback about the relevance of Citizen Science for research:

- → *"I am afraid that particle physics is not appropriate for Citizen Science."*
- → *"I do not think that it is important...?"*
- → *"I'm not sure I understand why Citizen Science is relevant. What's the benefit for us and for the pupils?"*
- → *"I work in the Humanities, so am not sure if this question applies."*

## b) Multiple choice question about "What would help you…."

After the open question, we asked for specific aspects that would help researchers do (more) Citizen Science.

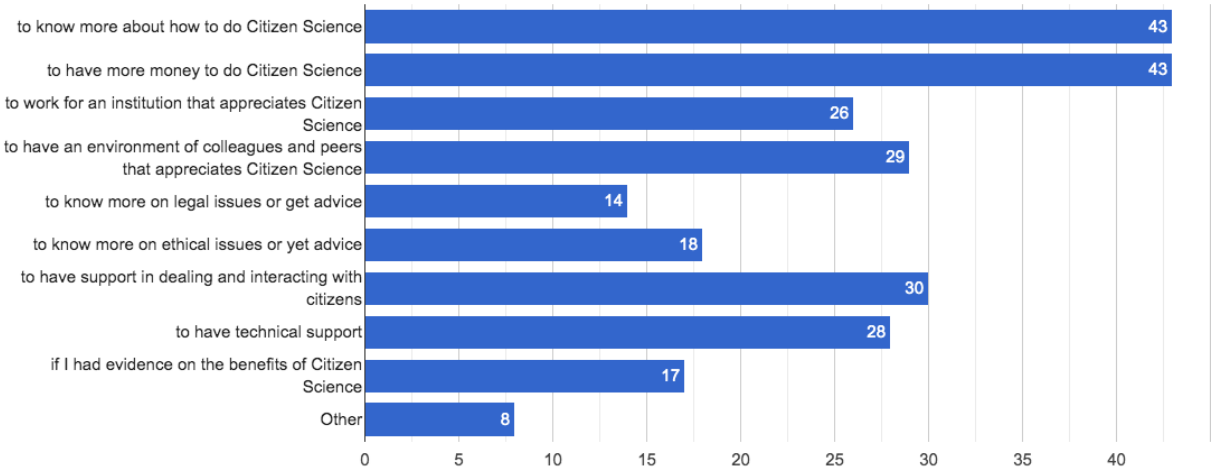



Table 1: What would help you to realise (more) Citizen Science Projects? (N = 62 / multiple answers possible)

The most important arguments are the same as asked in the previous open question namely "knowledge" and "money" but also the appreciation by institution and colleagues / peers are important as well as to have support in dealing with citizens or from a technical point of view.

In the open question no one mentioned "to know more about legal issues or get advice" respectively "to know more about ethical issues or get advice". A reliable number of participants also needs evidence on the benefits of Citizen Science.

There are no fundamental differences in the answers between the participants who have heard from Citizen Science or who haven't heard of Citizen Science.

Anything else that would encourage you to do Citizen Science?

- → *"More time..."*
- → *"To know of the projects available"*
- → *"Nevertheless, I think I am working in the wrong field of science for Citizen Science."*
- → *"Citizen science results should be published in open access journals (support with fees for these journals)"*
- → *"To have other research methods")*
- → *"The crucial issue is time and the nature of many research subjects, which are not suited for citizen science."*
- → *"Again: Why is there a need to realised citizen science projects?"*
- → *"Institution should not "only" appreciate but clearly and explicitly support by adapting e.g. promotion criteria."*
- → *"Outreach: how do you reach out? How do you proceed in general? how to notice if something is too demanding? How can you reach representative groups, not always the same ones?"*

# 5. Outlook

After all these findings, we are looking forward to a "National open science strategy; Action Line Citizen Science" that fosters Citizen Science and helps researchers to conduct their Citizen Science Projects for the benefit of understanding science and their results.

Science et Cité / Schweiz forscht would be happy to contribute as a partner to this endeavour.

# ANNEX

## 1. Interviewees

PhD at University of Berne (Humanities and Social Sciences)
PhD at University of Geneva (Natural Sciences)
Professor at University of Teachers Education
Professor at University of Applied Sciences (Natural/Engineering Sciences)
Professor at ETH/EPFL (Natural Sciences)
Professor at ETH/EPFL (Economics)

## 2. Feedback from interviews

### 1. Have you ever heard about Citizen Science?

| Option | Number |
|---|---|
| Yes | 6 |
| No | 0 |

“Learn from the daily press, there are articles now and then. Also, during the Days of Science at the University of Zurich and ETH Zurich.”

### 2. Citizen Science is, broadly speaking, science where the general public is actively involved at any stage of the research. Have you ever worked on a Citizen Science project?

| Option | Number |
|---|---|
| Yes | 0 |
| No | 6 |

“I haven’t worked on a Citizen Science Project so far. Yet, I know about current and completed projects here at the FHNW. At the Institute for Educational Sciences (Institute for Special Education), for example, research was carried out with the participation of disabled people. In my imagination, this is also Citizen Science.”

“No respectively only on the communication part for Eve Online, not in the concept. Because I didn’t have the opportunity yet.”

“Projects that are not declared as Citizen Science may fall under this category. At BFH we work together with farmers in the area of "on farm research", and there are also forms of cooperation with non-researchers in sensor technology. We do it pragmatically, we often involve the practice and e.g. in the topic Food Waste, the population is an important actor to advance the research. Our research is not only abstract, but also often involves participation with those affected. I have the impression that we often collaborate with research laypersons in our research. However, this research is not declared a Citizen Science.”

“Very time-consuming and you would have to have a good idea. I've never been asked before.”

“I know that under the term living labs. We work together with citizens, for example in workshops where we try to identify motivations why people live in housing cooperatives. Another project relates to the Paris Agreement, specifically to the question of how countries can go beyond their climate mitigation goals for the Agreement. We run large macroeconomic simulation models. In this project, too, not only researchers are involved,

though the questions are not worked out with citizens but with stakeholders, i.e. with people who have already dealt with the topic."

"I have helped evaluating grant applications for Citizen Science Projects."

## 3. What is holding you back from doing Citizen Science?

"I am currently building up the professorship with new focal points. Basically, however, I can imagine this well and am not averse to the idea. School topics in particular are actually very interesting for the general public. I have worked for a very long time in a very specialized field, where very specific skills are needed, for example when it comes to working with historical sources. In the social sciences and the humanities there is no clearly defined, secure knowledge base like in the natural sciences, for example. in my opinion, these disciplines are therefore less suitable.

"As a researcher: my specific topic is not appropriate for doing Citizen Science."

"You have to figure out exactly what you're doing. If citizens are involved, then you have to know exactly what you are doing. In my field, for example, it is not so easy; in the field of environmental pollution, for example, many standards have to be considered when it comes to interpreting data."

"That's because of the research assignment. Research is initiated by doctoral students or by the administration. Citizens may not be aware that they could propose research. In economics, citizens are more likely to be questioned; I am not aware of any active participation in economic research. And so far, I have not had the need. However, it would be exciting to receive examples. I would be very interested in that. However, I have respect for the effort that has to be put into accompanying citizens. We often don't have the time. I prefer a survey that is well structured and can be outsourced. Then we only get the data record. So, if there was something similar with Citizen Science...? It would be ok to pay for these services as well!"

"Philosophy is very abstract and therefore rather unsuitable. The prerequisites are very high, you can only reach certain people. The question is, how do you reach people? Support is needed here. Show which disciplines can benefit from it. It doesn't pay off everywhere."

## 4. Have you ever conducted such a project with pupils / schools?

| Option | Number |
|---|---|
| Yes | 0 |
| No | 6 |

"No. However, we have many development projects underway, but not specifically Citizen Science projects."

"I have been involved in outreach a lot but not in Citizen Science. It doesn't make a lot of sense for my own research project. I am in touch with another guy about a Mars terraforming game using climate models. Maybe we could expand it for Citizen Science and use the power of Citizens. But this is not directly my research."

"Not in research but we sometimes include schools / pupils in in communication projects (e.g. court tours, events for families) and not really in research. Where does research begin, where does it end?"

"Good ideas are needed. In addition, such projects are judged to be "nice and good", i.e. no time and no support is offered. I am also not measured by such projects."

## 5. Generally speaking, do you consider it a good idea to conduct Citizen Science projects with pupils / schools?

| Option | Number |
|---|---|
| Yes | 6 |

| | |
|---|---|
| No | 0 |

“Absolutely. Especially PHs would be predestined. However, the question of funding arises because these are not classical research projects.”

“Yes, I think it is awesome, I am fully for it. for sure there are research topics where it is more appropriate. It needs to make sense. to really matter. A project that really matters. Results that are really useful and can be shown to the people. Something really specific. Unfortunately, I don’t see it at the moment for my own research. But I am fully for it.”

“Basically yes, especially for research questions. But not so much in data collection I still consider this to be the task of students and researchers especially for quality reasons. From time to time we also supervise Matura theses. So why not?”

“If a good project opens the eyes of the people involved, how research works and if the project can pick up the people well. Get out of the ivory tower. Citizen Science is not yet properly integrated into research life. Guided tours are something else. Citizen Science would certainly be interesting for high school theses, internships. But if coaching takes too much time, then it is not efficient.“

“To sensitize children and young people to science in the first place, to show them how exciting science and research is. With topics that interest the young people, e.g. climate, waste, etc. This is not only instructive, but also about building understanding and questioning, looking behind the scenes. At university level there are not only lectures, but also research projects with the students.”

“Basically, I consider Citizen Science to be very suitable for building understanding for the sciences. Citizen Science can also have an integrative effect and strengthen credibility. You can have a say and participate. Biology, medicine, the humanities in general, such as history, archives in particular, would certainly be great. I imagine that good supervision would also be possible in these disciplines.”

## 6. What would help you do (more) Citizen Science projects?

“Finances and resources are certainly important. Commitment on the part of education policy / EDK that such research is desirable. Understanding on the part of science. Practical questions also arise: Place of implementation: Where do the Citizen Science projects take place, so that those who are not involved in education can also participate? Communication: Scientists are not communication experts. One would also have to involve the communication experts of the universities. Know-how and rules needed. Communication channels are also necessary.”

“It is important to get methodological knowledge so that one could really call it Citizen Science. So far, I have too little information about what Citizen Science is and where the boundaries are. People only as data providers? Methods have to be further developed. There are also aspects of data protection that need to be taken into account. So, there are quite a few questions that we are confronted with.”

“Resources (money and time) already available for idea generation. Also, not so easy to get in touch with the schools. You also need interested teachers.”

## 7. What would help you to realise (more) Citizen Science projects?

*multiple answers possible*

| Option | Number |
|---|---|
| to know more about how to do Citizen Science | 3 |
| to have more money to do Citizen Science | 1 (2) |
| to work for an institution that appreciates Citizen Science | 3 |
| to have an environment of colleagues and peers that appreciates Citizen Science | 3 |
| to know more on legal issues or get advice | 4 |
| to know more on ethical issues or yet advice | 2 |
| to have support in dealing and interacting with citizens | 4 |
| to have technical support | 3 (4) |
| if I had evidence on the benefits of Citizen Science | 1 |
| Other | 2 |

Quotes:

☐ to know more on ethical issues or yet advice: less important, if you work in the pedagogical field, then you are already very sensitized.

☐ if I had evidence on the benefits of Citizen Science: I reject this question. If you make Citizen Science, then the immediate benefit is not the main focus.

Quotes:

x to work for an institution that appreciates Citizen Science: Citizen Science is not controversial at the BFH; no problem.

x other: Outreach: how do you reach out? How do you proceed in general? how to notice if something is too demanding? How can you reach representative groups, not always the same ones?

Quotes:

x other: Time resources: Cultural change at universities. There is hardly any time for creativity. What are the priorities? As a scientist, you increasingly have to carry out work that has nothing to do with actual research.

Quotes

☐ to work for an institution that appreciates Citizen Science: In my institution Citizen Science is not controversial; my institution is neutral

☐ to know more on legal issues or get advice: legal issues and ethical issues: very complex, enormous hurdle, very complex. Data protection, personal rights, etc.

## 8. Anything else that would encourage you to do Citizen Science?

“Educational policy concern: there are strong players in research, especially the SNF. Citizen Science is something complementary. So, the question is what image do you have of science? How does the SNF react?”

“Citizens are ready to help. There is an interest to help. I do an outreach event on science fiction and they are all really super interested. I am sure people are also ready to help if it is

playful / ludic and interactive. We should keep that in mind. Humans are better than AI! AI gives you correlations but not causalities e.g. cats / dogs recognition: humans are more perfect, especially to see stuff even if it is not intended. New discoveries are done this way. Advantage of Citizens. The two (AI and researchers) are complementary."

"More information about Citizen Science at the institutes. We have never been informed before. Many are not aware of this. So far rather coincidentally. Information would be possible e.g. also over a research topic. Science et Cité could inform times e.g. also times projects at colloquiums present. Provide inspiration information and support."

"How do you get representative samples?"

"I think there are very basic obstacles for researchers to not conduct Citizen Science projects:

1. Fears of contact. How do we communicate with people who do not speak the language of science? Scientists also have to practice expressing themselves comprehensibly.
2. I know of a project in the field of nursing in which the scientists of the University of Applied Sciences work closely with the nursing staff and whose precise documentation is an important part of the research. The question of money or workload is an important one in such a setting.
3. Citizen Science is also suitable for raising the awareness of researchers (sensitizing scientists). Scientists are sensitized to the fact that they also have a position of power (positive / negative). Can also be intimidating. How do you present yourself in an environment different from an academic setting."

## 9. Demographics

### 9.1. What institution do you work for?

*Please refer to your main employer.*

| HEI Institution | Number |
|---|---|
| ETH | 2 |
| University | 2 |
| University of Applied Sciences | 1 |
| University of Teacher Education | 1 |

### 9.2. In which part of Switzerland is your institution located?

| Option | Number |
|---|---|
| French speaking part | 2 |
| German speaking part | 4 |

### 21 - 13. What is your employment contract status?

| Option | Number |
|---|---|
| fixed-term contract | 2 |
| permanent contract | 4 |

### 9.3. How old are you?

Age range (28 – 61).

### 9.4. Would it be ok to contact you again to follow up at a later stage of this survey?

| Option | Number |
|---|---|
| Yes | 6 |
| No | 0 |

## 3. Feedback from online survey


Welcome!

We have been mandated by swissuniversities to collect information on Citizen Science to help shape a National Plan on Open Science.

If you can spare 5 minutes, we would like to know your opinion on Citizen Science. Your answers and your identity are confidential by default. The questions with * are mandatory.

This online survey is conducted by the foundation Science et Cité, as "Swiss Citizen Science Network Office" and its Citizen Science Network "Schweiz forscht".

### 2 - 1. Have you ever heard about Citizen Science?

| Option | Percentage | Number |
|---|---|---|
| Yes | 46.77 | 29 |
| No | 53.23 | 33 |

### 3 - 2. Citizen Science is, broadly speaking, science where the general public is actively involved at any stage of the research. Have you ever worked on a Citizen Science project?

| Option | Percentage | Number |
|---|---|---|
| Yes | 12.90 | 8 |
| No | 87.10 | 54 |

### 4 - Could you imagine starting another Citizen Science project starting in the next 2 years?

| Option | Percentage | Number |
|---|---|---|
| Yes | 87.50 | 7 |
| No | 12.50 | 1 |

### 5 - Great! What is your biggest motivation for doing Citizen Science?

| Feedback |
|---|
| Increasing public welfare by conducting well-grounded research |

| |
|---|
| quality of research outcome |
| filling existing knowledge gaps within science by using citizens' knowledge |
| The interest of the large audience for my field, the potential benefit on each side: crowd sourcing can help speeding up some tasks while opening our material and research to curious web users. |
| The fact that you can get data from thousands of people, which is not normally possible in a project relying on scientists alone |
| to help others |
| We (foa-flux.net) are working in the arts and are researching art. In order to tap and further develop the potential of art for future art and society projects, the inclusion of Citizen Science as part of the practitioner research is essential. |

## 6 - Why not?

| **Feedback** |
|---|
| I have no good idea for a citizen science project |

## 7 – Follow up: Have you ever worked on a Citizen Science project? No: Why not?

| **Feedback** |
|---|
| There was no justified opportunity to do it for the kind of work I have been doing. I explicitly do not consider the work I do at the Academy, as it is not research. |
| No opportunity so far |
| I am working on research myself and didn't consider joining for some other research area, probably because I was not prompted to do so. |
| time required |
| I was up to now not aware of Citizen Science. |
| Did not really know about it and might not apply to veterinary research or in vivo research |
| I have not heard from citizen science before |
| I did not know about it up until this point in time. |
| In my previous research projects, the focus was on primary care physicians and their everyday practice |
| I did not have the opportunity. |
| Lack of time |
| Not heard before |
| Several reason: - lack of knowledge - procedures of scientific projects are constrained by research plans accepted by funding agencies |
| No opportunity so far |
| I didn't have the chance yet, but I'm definitely seeking a possibility or project. |
| I haven't had the opportunity yet. |
| Has not been part of previous research project aims. |
| Never heard of it but it sounds interesting. |

| |
|---|
| Did not had the idea to do; very new concept that I haven't known well until now |
| I did not know about it... |
| I had not heard of it until now |
| little knowledge, no incentive |
| I am independent researcher and no one asked me this |
| I did not know about it. I also don't know what to think about it as a researcher. Catering to the interests and requirements of several parties, interest groups, supervisors..., is already a problem in conducting research, analysing data, writing up findings, so why bring even more people in? |
| It was never part of a project I worked in. |
| Because I never heard of it before |
| As a social scientist I actively involve the 'general public' into my research, but we don't call it 'citizen science'. |
| Never heard of it and I don't know how my work could benefit from actively involving "the general public" (whatever that means) in any stage of my research, since my research is mostly in tabooed areas where you cannot bring a large public with you when you want to get access or useable results |
| too much effort, not enough time |
| No opportunities so far |
| Too little time to be involved as a citizen; unsuitable research topics as a scientist. |
| I was not asked to do so |
| I was not aware of it |
| Research requires theoretical and methodological training, much of which many members of the so-called general public don‘t have. I do work ethnographically, and that entails interviewing and observing participants in their everyday life with the aim reconstructing their perspectives and experiences. This involves developing close relationships with those participating in the research, but they are not involved as researchers. |
| We are doing Projects for the broad public but so far have not yet included citizens to collect data or the like |
| I did not have the opportunity to do so, I'm only finishing my PhD thesis. |
| did not know it existed |
| Only as a participant. Not yet got the opportunity to work on such a project as a researcher. Would be interesting though. |
| no opportunity |
| No opportunity. |
| no opportunity |
| I did not have the chance too or did not have an RQ where this was relevant |
| Research is complex and requires much knowledge. Not everyone can participate. Public is important to communicate research results. At the end of a research project, I like to inform the public. |
| L'occasion ne s'est jamais présentée |

## 8 - 3. Have you ever conducted such a project with pupils / schools?

| Option | Percentage | Number |
|---|---|---|
| Yes | 6.45 | 4 |
| No | 93.55 | 58 |

## 9 - What is your biggest motivation for doing Citizen Science with pupils / schools?

| Feedback |
|---|
| It is good to raise the interest in science with children / teenagers. I participated multiple times in "Tage der Genforschung", where we showed simple experiments. |
| Severely understudied field; students & pupils are the decision makers of the future. |
| To see the motivation of the young, and their willingness to help |
| Increase agency, inspire and get inspired, knowledge transfer, tapping and seeding curiosity. |

## 10 – Follow up: Have you ever conducted such a project with pupils / schools? No: Why not?

| Feedback |
|---|
| Same as before |
| No opportunity so far |
| I have no contact with pupils or schools that would be of an age to do that. |
| not teaching |
| Not seen appropriate project |
| I was up to now not aware of Citizen Science. |
| missing awareness |
| see answer question 2 |
| In my previous research projects, the focus was on primary care physicians and their everyday practice |
| Lack of time, but I've given presentations at schools about our work in general. |
| Not heard |
| As before - I didn't have the chance yet. |
| I again haven't had the opportunity yet. |
| Not the focus of current research. |
| did not had the idea |
| I don't know how to do this + I don't see how it would benefit my research |
| The participants of my studies are not children. I just had a speech for children to explain my field. |
| Because I never heard of it before |
| Like I have said before |

| |
|---|
| No opportunities yet |
| I have only been working with older participants (due to research topic) |
| The subject I teach does not exist at schools and is difficult to integrate in the typical course grid which does. |
| Because I did not know about this |
| That is beyond the scope of my PhD |
| See previous answer: research requires research training. |
| was not our focus till now |
| I am not primarily working with kids and youth |
| same reason as before |
| Difficult to find willing schools / teachers because of the perceived "extra work" |
| it is not my research topic |
| no opportunity |
| Indirectly: we have built a crowd-sourcing project that was used also by schoolteachers in their classes. |
| not relevant for my research |
| I have another research approach (see last answer). |

## 11 - 4. Generally speaking, do you consider it a good idea to conduct Citizen Science projects with pupils / schools?

| Option | Percentage | Number |
|---|---|---|
| Yes | 88.71 | 55 |
| No | 11.29 | 7 |

## 12 - 5. What would help you do (more) Citizen Science projects?

| Feedback |
|---|
| If I had more time (this is unlikely…). If it was better appreciated by my community (this is also unlikely). |
| Funding for sure. Also, we need to keep in mind that it is not necessarily possible to do interesting citizen science project for any kind of research, so a careful thinking of what is possible (or not) is mandatory. Help for doing such thinking could be helpful as well. |
| Inform people about the possibility and the options |
| dedicated effort (and time) |
| Finding really good projects |
| I am afraid that particle physics is not appropriate for Citizen Science. |
| know more about the frames |
| maybe |
| To be informed regarding any opportunities for Involvement. |

| |
|---|
| Inform, advertise, give examples. |
| It is important that the resilience of the study participants is clarified and also communicated |
| Have more time for research in general. |
| Information about such projects |
| Not sure, no information given |
| More communication about it |
| as I said before: lack of knowledge - why should I? |
| Advertising it in universities |
| I am about to start working on one |
| More special funding and more institutions who are able and willing to support such projects. |
| Show researchers the possibilities of conducting such a project (e.g., what is needed, who can be contacted, funding opportunities). |
| Funding Project partners with experience in this area Openness of funders towards critical and reflective approaches of citizen science project (as part of the research) |
| No-frills small-scale funding opportunities. Field access |
| more information |
| I do not think that it is important...? |
| Access and agreement from schools to take part on it. We do usually plan research projects with school-aged children, and it is extremely difficult to get them to collaborate |
| Some training on how to do it, but also it would need to be valued by the scientific community |
| information and some budget as I only get a lecturer small salary |
| More information about it. |
| More time / funding to do such projects aside the "main" research projects but in the fields of neuroscience it's difficult because we just cannot measure everyone in an EEG- or MRI-lab... |
| I'm not sure I understand why Citizen Science is relevant. What's the benefit for us and for the pupils? |
| more time |
| A national call, programme, announcement |
| It cannot be part of my usual work, since it would not get any recognition in the academic sector, which is based on journal publications, third party money and getting students to gain their degrees. If you fund an extra project – I'm in! |
| I work in the Humanities, so am not sure if this question applies. |
| As a young scientist without a long-term perspective and on a very competitive job market, there would need to be incentives to invest so much time and effort to involve citizens in my research. |
| A more stimulating environment and funding |
| Founding or incentives for engaging in citizen science projects. Workshops on how to implement Citizen science Projects. |
| funding |

| |
|---|
| I am only a PhD student; I had no possibility to do it. Maybe impulses from the University would be great. |
| More information |
| Less focus of schools on applied "useful" subjects, teaching and admin reduction in exchange for citizen science projects. |
| More education on / about it |
| More information about what this category refers to and what could be done to involve in |
| Why should there be more citizen science projects? It’s difficult to answer the questions without knowing the reasoning why there should be more of these projects. |
| full recognition by academic system |
| funds! |
| More time, particular funding |
| receive information and most preferably funding |
| Schools and teachers being more open minded and better funding for such projects that are not necessarily focused on publications in science journals but more for the broader public (lower / no calculated impact factor). |
| more funding to create more attractive projects |
| Core funding for people running Fachgesellschaften at SAGW for instance -- so they can set up and run these projects. The Fachgesellschaften of SAGW operate based entirely on voluntary work. However, this is where the knowledge and the young and creative researchers come together -- as e.g. in the Schweizerische Gesellschaft Mittlerer Osten und Islamische Kulturen. |
| TIME to think about it and EXAMPLES, because it seems pioneer in my field, and not spontaneously designed. |
| Technical help to build the interfaces, more contact in Switzerland with the schoolteachers and other interested groups. |
| Relevant data or research questions; facilitated administration; knowledge about successful citizen science projects |
| Funding possibilities |
| No idea |
| more support, guidance, assistance |
| Mehr Werbung? Bessere Finanzierung? |
| A need an explanation, how the public can effectively help conduct research. Public can raise research questions and give ideas, what research questions is of importance. However, research needs high theoretical and methodological knowledge. Moreover, research should not only be guided by the public opinion, but also on discussions within the scientific communities. |
| C'est une question de compétences à développer pour utiliser une telle démarche. De plus ce n'est pas souvent adapté dans les HE |

| |
|---|
| We (foa-flux.net) are an NPO. Even though, we, the co-directors are also a professor and senior lecturer at the Zurich University of the Arts, the institutional and formal setting is too slow and still to entangled with already well-problematised assumptions about how art and society could or should interlink. We, therefore, run the research independently and in close exchange ties with other groups working on similar topics in Indonesia, India, Malawi, Hong Kong, Bhutan ... What would help us to do more Citizen Science: recognition (for example analogous to the Swiss Commission for UNESCO recognitions), funding possibilities for practice-based research and for practitioner research working with real-live orientation (in contrast to academically pre-established, problematized and limited art notions that are often criticized as too elitist and out of touch with reality). |

## 13 - 6. What would help you to realise (more) Citizen Science projects?

*multiple answers possible*

| Option | Percentage | Number |
|---|---|---|
| to know more about how to do Citizen Science | 16.59 | 38 |
| to have more money to do Citizen Science | 17.03 | 39 |
| to work for an institution that appreciates Citizen Science | 10.04 | 23 |
| to have an environment of colleagues and peers that appreciates Citizen Science | 11.35 | 26 |
| to know more on legal issues or get advice | 4.80 | 11 |
| to know more on ethical issues or yet advice | 6.11 | 14 |
| to have support in dealing and interacting with citizens | 11.79 | 27 |
| to have technical support | 11.35 | 26 |
| if I had evidence on the benefits of Citizen Science | 7.42 | 17 |
| Other | 3.49 | 8 |

| Anything else that would encourage you to do Citizen Science? |
|---|
| more time... |
| to know of the projects available |
| Nevertheless, I think I am working in the wrong field of science for Citizen Science. |
| Citizen science results should be published in open access journals (support with fees for these journals) |
| to have other research methods |
| cf. above: the crucial issue is time and the nature of many research subjects, which are not suited for citizen science. |
| Again: Why is there a need to realised citizen science projects? |
| institution should not "only" appreciate but clearly and explicitly support by adapting e.g. promotion criteria |

## 14 - Demographics

## 15 - 7. What is your job title?

| Feedback |
|---|

| |
|---|
| Professor, Group Leader |
| Research associate |
| Associate professor |
| Scientific Adjunct |
| collaborateur scientifique 2 |
| Wissenschaftlicher Gruppenleiter |
| Head of Central Animal Facilities |
| medical doctor |
| Wissenschaftliche Mitarbeiterin |
| Group leader |
| PD Dr. med.; verantwortlich für die Lehre im Universitären Zentrum für Hausarztmedizin beider Basel |
| physician |
| staff scientist |
| PhD Candidate |
| Teaching assistant |
| Phd student, teaching assistant |
| Postdoctoral Researcher |
| Geschäftsleiterin |
| Postdoc |
| Associate Professor |
| Research Assistant & Lecturer |
| head of research |
| Research Associate |
| post-doc |
| Oberassistentin |
| external lecturer |
| PhD student |
| PhD Student |
| assistant prof. |
| Prof. Dr. |
| Wissenschaftlicher Mitarbeiter |
| Prof. |
| Postdoktorand |
| PhD student |

| |
|---|
| Research assistant |
| research assistant |
| Oberassistentin |
| Professor |
| Post-doc |
| PhD Researcher |
| senior lecturer |
| Prof. |
| academic, fully employed |
| PhD candidate / assistant |
| Wissenschaftlicher Mitarbeiter / Postdoc |
| Postdoc / wissenschaftlicher Mitarbeiter |
| Doktorassistentin |
| Assistant |
| Prof. HEP |
| Post-Doctoral Collaborator |
| Research assistant / Ph.D. |
| Full professor |
| Research and Teaching Assistant |
| Research Assistant |
| Wissenschaftlicher Mitarbeiter / Dozent |
| Directeur d'une HES genevoise |
| Prof. (FH) |

## 16 - 8. What institution do you work for?

*Please refer to your main employer.*

| Option | Percentage | Number |
|---|---|---|
| ETH | 8.06 | 5 |
| University | 74.19 | 46 |
| University of Applied Sciences | 11.29 | 7 |
| University of Teacher Education | 6.45 | 4 |
| Other | 0.00 | 0 |

## 17 - 9. In which part of Switzerland is your institution located?

| Option | Percentage | Number |
|---|---|---|
| French speaking part | 25.81 | 16 |

| | | |
|---|---|---|
| German speaking part | 74.19 | 46 |
| Italian speaking part | 0.00 | 0 |
| Romansh speaking part | 0.00 | 0 |
| Other | 0.00 | 0 |

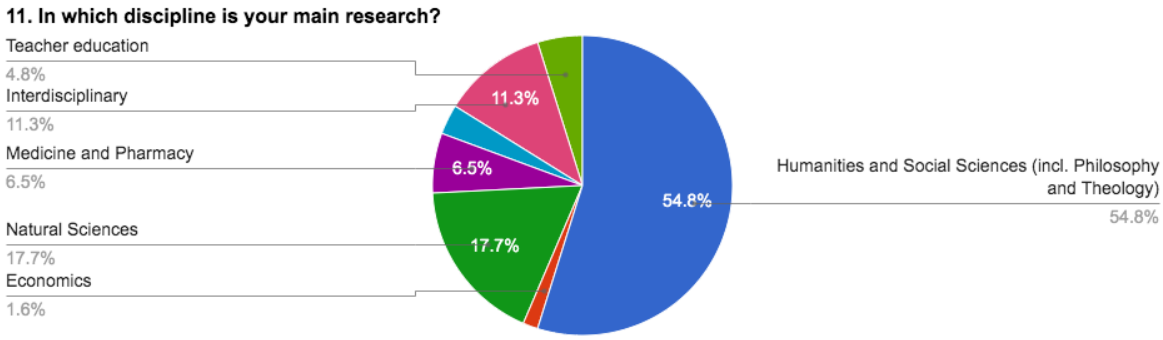
## 18 - 10. What is the name of your institute / department?

| Feedback |
|---|
| Friedrich Miescher Institute for Biomedical Research |
| Geneva observatory |
| University of Geneva |
| department of astronomy |
| observatoire astronomique unige |
| Paul Scherrer Institut, Laboratory for Particle Physics |
| DBMR |
| University of Basel |
| BFH |
| ETH |
| Universitäres Zentrum für Hausarztmedizin beider Basel |
| University Children's Hospital Zurich |
| Theory Group LTP |
| University of Bern |
| History |
| HWZ Hochschule für Wirtschaft Zürich |
| Graduate institute of international and development studies |
| Gerontopsychologie |
| Schweizerische Gesellschaft für Volkskunde (SGV) |
| Psychology |
| Universität Bern |
| Institut for multimedia production |
| Economics |
| University of Fribourg, DCM |
| College of Humanities |
| Department of Psychology |
| HSG SHSS |
| FHNW |

| |
|---|
| School of Humanities and Social Sciences |
| HSG |
| Department of Economics |
| University Zurich |
| University of St. Gallen, MCM-Institute |
| English Seminar |
| Institute of Asian and Oriental Studies |
| MTEC |
| University of Lucerne |
| Institut de géographie et durabilité |
| Wirtschaftspsychologie / Forschung |
| Computational Linguistics |
| Department de Philosophie |
| ISEK Ethnologie |
| HEP |
| Dep. Altertumswissenschaften, Universität Basel |
| Department of Communication |
| Institute for Environmental Sciences |
| University of Fribourg, Department of Communication and Media Research |
| Health Science & Health Policy |
| PH FHNW |
| FOA-FLUX (foa-flux.net) |

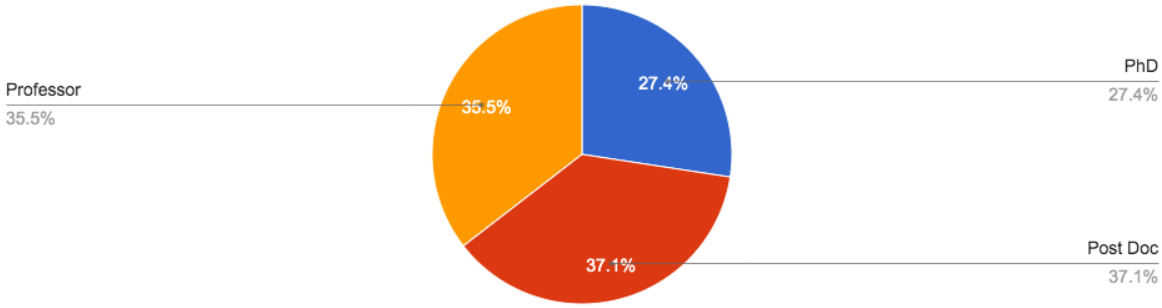
## 19 - 11. In which discipline is your main research?

*(Disciplines according Bundesamt für Statistik plus Teacher Education, own translation)*




| Option | Percentage | Number |
|---|---|---|
| Humanities and Social Sciences (incl. Philosophy and Theology) | 54.84 | 34 |
| Economics | 1.61 | 1 |
| Law | 0.00 | 0 |
| Natural Sciences | 17.74 | 11 |
| Medicine and Pharmacy | 6.45 | 4 |
| Engineering Sciences | 3.23 | 2 |
| Interdisciplinary | 11.29 | 7 |
| Teacher education | 4.84 | 3 |
| Other | 0.00 | 0 |

## 20 - 12. Career Level




| Option | Percentage | Number |
|---|---|---|
| PhD/PhD candidate | 27.42 | 17 |
| Postdoc | 37.10 | 23 |
| Professor | 35.48 | 22 |

| other |
|---|
| scientist |
| Masters |

| |
|---|
| PD Dr. med. |
| PD Dr. med. |
| Privatdozent |
| I did not yet find an opportunity for doing my Post doc! |
| assistant professor |
| senior lecturer (permanent position after postdoc) |
| Doktorand |
| Master |
| Prof (FH) |

## 21 - 13. What is your employment contract status?

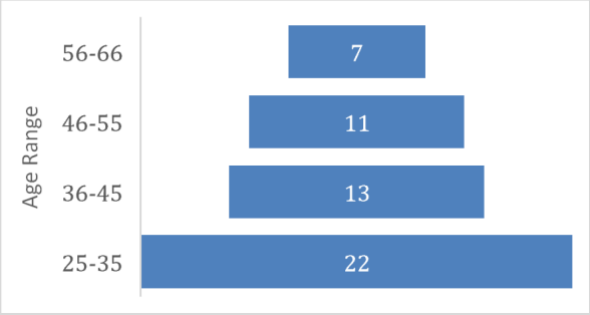
| Option | Percentage | Number |
|---|---|---|
| fixed-term contract | 59.68 | 37 |
| permanent contract | 40.32 | 25 |

## 22 - 14. What is your gender?

| Option | Percentage | Number |
|---|---|---|
| m | 43.55 | 27 |
| f | 48.39 | 30 |
| non-binary | 0.00 | 0 |
| no comment | 8.06 | 5 |

## 23 - 15. How old are you?

Age range between 25 and 35 years old (9 participants didn't answer this question).




## 24 - 16. Would it be ok to contact you again to follow up at a later stage of this survey?

| Option | Percentage | Number |
|---|---|---|
| Yes | 56.45 | 35 |
| No | 43.55 | 27 |

## 26 - 17. Your data will be used in aggregated, anonymized form for an internal report. Do you agree that we also use your data in anonymized form for other (non-commercial) purposes? [e.g. scientific OA publications, exhibitions, further surveys etc.]

| Option | Percentage | Number |
|---|---|---|
| Yes | 82.26 | 51 |
| No | 17.74 | 11 |