CO-DEVELOPING AN IMPACT MODEL FOR EVALUATING THE SOCIETAL IMPACT OF PARTICIPATORY RESEARCH

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ABSTRACT

In recent years, an increased focus on societal impact of research unfolding through productive interactions between stakeholders and participatory research processes has been seen. These complex interventions call for more flexible and participatory evaluation processes. This paper sets out to describe the co-creative development of an Impact Model and Reflection Instruments by different stakeholders that make desired and expected societal effects of participatory research visible, and enable a systematic evaluation of these expected changes.

The aim of the Impact Model and the (modular) set of Impact Reflection Instruments is first and foremost to support researchers in the planning and evaluation of societal impacts of their participatory research approaches. In addition, we share the design of the co-development phase and reflections that serve as practical guidance for evaluators who aim to apply theory-based models in participatory settings in other contexts. Finally, the Impact Model and Reflection Instruments aim to enable increased comparability across research projects with participatory research approaches.

I INTRODUCTION

Societal impact unfolds through creative interactions, relationships, and dialogue with external stakeholders (Spaapen et al. 2011, van den Akker & Spaapen 2017). Participatory approaches – the active involvement and engagement of stakeholders in research (Cargo & Mercer 2008) – can therefore serve as an important lever to increase the societal impact of research.

But how can the societal impact of participatory research be evaluated? Following a literature overview on existing evaluation approaches in the field of societal impact and participatory research, this paper presents the Impact Model and Reflection Instruments, which have been co-created bottom-up together with a diverse set of stakeholders.[1] The Impact Model supports the planning of societal impact of participatory

research activities. The Impact Reflection Instruments comprise a toolkit of evaluation instruments to assess societal impacts of participatory research.[2] We further shed light on practical experiences gained in structuring and managing the bottom-up approach. As such, we provide a contribution to the description of advantages, challenges and possible solutions of this process, as well as requirements to ensure successful results. In doing so, it is intended to support others who want to implement a similar process.

II BACKGROUND AND LITERATURE REVIEW[3]

II.1 DEFINITIONS AND CONCEPTS

II.1.1 WHAT IS SOCIETAL IMPACT?

Societal impact is often defined as "the demonstrable contribution that excellent research makes to society and economy" (UKRI website 2021). It occurs through creating and sharing new knowledge and innovation, inventing new products, companies and jobs, developing new and improving existing public services and policy or enhancing quality of life and health (Smith et al. 2020). In contrast to scientific impact (i.e. impact that is generated by research within the scientific and disciplinary community itself), societal impact of research focuses on the effects and changes that research activities unfold beyond academia in other areas of life such as society, culture, public services, health or the environment. This can include changes in practice, policy and legislation, as well as changes at the level of awareness, understanding and personal skill development (Smith et al. 2020). Definitions and types of societal impact, as well as understandings of "positive impact", vary according to disciplinary traditions and fields (Reed 2016, Oancea 2013).

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1   See: https://ois.lbg.ac.at/en/projects/impact > "Tools" > "The OIS Impact Model"
2   See: https://ois.lbg.ac.at/en/projects/impact > "Tools" > "OIS Impact Reflection Instruments"
3   For further details see: https://ois.lbg.ac.at/en/projects/impact > "About" > "Our Mission" > "What is Societal Research Impact. A Short Literature Review"

II.1.2 WHAT IS PARTICIPATORY RESEARCH?

Participatory research refers to actively involving and engaging stakeholders in the research process through various research designs, methods and frameworks (Cargo & Mercer 2008). Rather than subjects of research, stakeholders become part of the research process (Vaughn & Jacquez 2020); research is not carried out 'to', 'about' or 'for', but 'with' or 'by' them (Hayes et al. 2012). Stakeholders can participate in various stages along the research cycle (Hoekstra et al. 2020) and hold various degrees of power (Arnstein 1969).

Participatory approaches in science and research share overlaps with related concepts from different research fields and contexts, including:

- Open Innovation in Science (OIS), an umbrella term which refers to 'opening up' the scientific process through various strategies, such as applying open innovation approaches from business and industry (Beck et al. 2020). OIS is often also referred to in the context of Open Science and Open Data in Science, where the focus is specifically on the free use, re-use, distribution and publishing of scientific knowledge without legal, technological or social restrictions.
- Citizen Science, originally coined as a method to generate large amounts of data (Bonney et al. 2009), now applied more generally as an intentional engagement of the public in scientific research (Philips et al. 2018)
- Participatory Action Research, where researchers and practitioners collaborate to enable action (Baum et al. 2006)
- Transdisciplinary Research, describing efforts by researchers from different disciplines as well as external stakeholders, working jointly to create new conceptual, theoretical, methodological innovations that integrate and move beyond sectorial and discipline-specific approaches to address a common problem (Klein 2013)
- Responsible Research and Innovation (RRI), widely used in the context of the European Union, which aims to foster inclusive and sustainable research and innovation through co-creation and co-production with society (Owen & Pansera 2019)
- Patient Engagement or Public and Patient Involvement, which, although lacking a common definition, refers to the active involvement of patients in health care (Gallivan et al. 2012)

II.1.3 THE CONTRIBUTION OF PARTICIPATORY RESEARCH TO SOCIETAL IMPACT

For scientific expertise to move into practice and policy settings, where it can progress towards societal impact, it needs to be disseminated and mobilized (Phipps et al. 2016). Only when research evidence, tools and methodologies are used to inform policy or practice outside a purely academic setting, it can unfold societal impact and have an effect on the lives of beneficiaries. This concept is referred to as *Research Uptake* (Phipps et al. 2016). Implementation and practical use of research findings are thus dependent on non-academic partners and stakeholders applying and using them.

Societal impact unfolds in a non-linear way along different pathways – the *Pathways to Impact.* The process of creation is thus inherent to the societal impact produced. In order to achieve research uptake and thus ultimately achieve societal impact, *productive interactions* between researchers and non-academic actors along the research process are vital. Productive interactions refer to exchanges between researchers and stakeholders where both scientifically robust and societally relevant knowledge is produced and valued (Spaapen et al. 2011). Whenever these interactions lead to efforts by non-academic actors to use or apply research results – research is taken up into practice – they are productive. This means, productive interactions represent moments where societal stakeholders influence scientific actors and vice versa (Muhonen et al. 2019) and where both scientific and societal value is generated as a result.

The concepts of research uptake and productive interactions show that societal impact is less about a specific outcome or end product, but more about a process of relationship-building, dialogue and engagement with different research audiences throughout the research process. Therefore, co-production and collaboration between researchers and other stakeholders along the impact pathway usually accelerates the creation of societal impact of research (Phipps et al. 2016). Participatory research approaches, marked by interactive processes that aim to generate knowledge collaboratively through trust, dialogue and collaborative partnerships, can thus serve as important vehicles to achieve societal impact (Greenhalgh et al. 2016, Reed 2016).

II.2 EVALUATING SOCIETAL IMPACT AND PARTICIPATORY RESEARCH

II.2.1 EVALUATING SOCIETAL IMPACT

In recent years, there has been an increasing shift of focus on the contributions and value of science for society - a focus on societal impact of research (Bornmann 2012). However, societal impact of research proves more difficult to be attributed and evaluated than scientific impact (Smith et al. 2020). Challenges include causality and attribution due to complex environments and simultaneous developments, as well as long time spans for societal impact to unfold (Felt & Fochler 2018). Basing impact evaluation on simplistic, linear assumed relationships between research evidence and positive societal change is thus unwise (Felt & Fochler 2018, Smith et al. 2020, Rymer 2011). Evaluation approaches thus have to be considered carefully, as they can lead to unintended consequences of incentivizing, measuring and rewarding impact (Smith et al. 2020).

In the context of societal impact evaluation, evaluation methods are best understood as the process of collecting, contextualizing and interpreting data to assess significance, reach and attribution of societal impacts from research (Reed et al. 2021, Bornmann 2012). They include quantitative measurements, qualitative approaches in form of narrative accounts and case studies and approaches that emphasize interaction, communication patterns and knowledge mobilization between research and societal stakeholders.

Following a typology provided by Reed et al. (2021), three major evaluation approaches of societal impact are known:

- Systems analysis methods are usually used ex-post to examine whether a particular research activity or project was necessary to cause or make a significant contribution to societal impact. They combine a range of qualitative (e.g. interviews, questionnaires, focus groups) and quantitative (e.g. process-based mod-

els such as modelling techniques) research methods to allow a detailed understanding and mapping of causal links from research to impacts (Reed et al. 2021).

- *Indicator-based approaches* are often used for societal impact planning at the beginning of or before the start of a research activity (Reed et al. 2021). At the heart of these are *Theory of Change approaches* (e.g. logic models), linking resources and activities to outputs, outcomes and impact through causal chains and equipped with indicators (Reed et al. 2021) (see chapter 2.4). One prominent example is the Payback Framework mostly used in a health service research context (Donovan & Hanney 2011, Bornmann 2012).
- *Textual, oral and arts-based methods* build impact narratives and cases detailing in how far research activities were necessary to cause societal impact using multiple sources of evidence for attribution (Reed et al. 2021). Textual methods (e.g. qualitative data from interviews and focus groups) enable a more nuanced, subjective understanding of lived experience and values (Reed et al. 2021). Arts-based methods (e.g. participant observation, oral history and storytelling, as well as poetry, fiction, dance, theatre) are especially fruitful in situations where access to the emotional realms of life is desirable or when working with vulnerable groups (Reed et al. 2021).

II.2.2 EVALUATING PARTICIPATORY RESEARCH

With an increase in participatory research practices, evaluating such endeavors becomes increasingly important to justify the resources invested and show proof of the multitude of potential they promise (Barber et al. 2012, Kieslinger et al. 2018, Reed et al. 2018). However, due to the non-linearity and complexity of participatory research processes and pathways, evaluation is challenging or even not feasible (Reed et al. 2018, Barber et al. 2012).

The evaluation of participatory research can focus on the design and process or on the outcome and impact of participatory research (e.g. Kieslinger et al. 2018, Boivin et al. 2018, Reed et al. 2018). Impact can be separated into different domains: In a recent screening of relevant literature in the field, Wehn et al. (2021) distinguish between societal impact, economic impact, environmental impact, science and technology impact and governmental impact. Most evaluation frameworks aim to assess the field of societal impact where differentiations are made between the impact on individuals and collective impact. Drawing from practice, Barber et al. (2021) find that evaluating the impact of participatory research on individuals (e.g. researchers, members of the public) is more feasible than evaluating the overall quality, usefulness or large-scale impact of participatory research. Individual-level societal impact indicators could include indications of new knowledge or skills, challenged assumptions or deepened understanding.

While the evaluation of design and process of participatory research is not the main focus of this paper, it should be noted that evaluating the design of participatory research processes early on could allow for an adaptation, which in turn improves the delivery or outputs of them and thus increases the likelihood of impacts arising from it (Reed et al. 2018). In practice, participatory processes are evaluated more often, while outcomes, if reported, are mainly self-reported and perceived (Boivin et al. 2018, Bührer et al. 2021).

Literature largely calls for a mixed methods approach to evaluate participatory research (e.g. Kieslinger et al. 2018, Barber et al. 2012, Wehn et al. 2021). Evaluation of participatory research could thus consist of a combination between different methods such as observations, qualitative interviews, quantitative surveys, statistics, focus groups and document analyses (Kieslinger et al. 2018, Wehn et al. 2021).

Reed et al. (2018) suggest that some methodologies common in societal impact evaluation could also serve to evaluate participatory research. For example, *Theory of Change approaches* (e.g. logic models) could be used by structuring them around the goal pursued with the engagement. *Contribution analyses* could provide an account of the contribution story of participatory research for each stage of the pathway. Finally, *outcome mapping* could help to identify the changes desired in participating partners, develop strategies to achieve them and then monitor these changes to track them (Reed et al. 2018).

There are no commonly established indicators to evaluate participatory research (Kieslinger et al. 2018) and specific indicators provided in participatory research evaluation frameworks are scarce (Wehn et al. 2021).

II.2.3 PARTICIPATORY EVALUATION

Participatory evaluation refers to situations where stakeholders of a program or policy are involved in evaluation decision-making and reports together with an external evaluator (Turnbull 1999). Thus, participatory evaluation is conducted through a partnership between professional evaluators, as well as practitioners, policy decision-makers or the interested public of a program or policy (Cousin & Whitmore 1992). Participatory research approaches call for participatory evaluation. Bornmann (2012) argues that qualitative evaluation of societal impact should not be dominated exclusively by scientists, as they often have trouble discerning the societal impact of research. Instead, researchers and external stakeholders should jointly evaluate participatory research.

On the one hand, participatory evaluation increases the likelihood of the use of evaluation results and provides a voice to often unheard groups, which enriches public debate. However, poor quality evaluation through unbalanced participation or unresolved conflict decreases the likeliness of results to be used (Plottu & Plottu 2011). While evidence of benefits of participatory evaluation on learning, evaluation capacity building or the use of evaluation can be found, contradictory or unintended effects are also documented (Smits & Champagne 2008). For participatory evaluation to be effective, the process needs to be properly managed so as to ensure a balanced expression of viewpoints among participants (Plottu & Plottu 2011).

II.2.4 THEORY OF CHANGE APPROACH

To respond to the complex nature of evaluating the societal impact of participatory research, more flexible evaluative approaches, such as developmental (e.g. Patton 1994) or realist (e.g. Pawson & Tilley 1997) evaluations are required. Theory-based evaluations, which identify and test causal processes, are particularly suitable to evaluate research contributions in complex systems and thus provide potential to evaluate participatory research and research that crosses disciplinary boundaries (Belcher et al. 2020). Recommended and widely used in practice in both

societal impact evaluation and participatory research evaluation are Theory of Change approaches (Reed et al. 2018, Reed et al. 2021).

Theory of Change approaches show how different resources, inputs and activities are linked to specific outputs, outcomes and overall impact and objective. They trace causal chains from research to impact based on anticipated logical frameworks or a Theory of Change. They involve the identification of activities, impact indicators and research objectives, either through an expert-led top-down or co-creative bottom-up approach with relevant stakeholders. One advantage is their ability to standardize the collection of data in the creation of case studies that are easily comparable and thus transferrable to different disciplinary contexts (Reed et al. 2021).

Theory of Change approaches can be used as an integrative framework for the design and analysis of evaluations using multiple methods. Data from multiple methods can be analyzed and interpreted together in order to enable greater insight into a program's operations and effectiveness (Caracelli & Greene 1997).

III THE IMPACT MODEL AND REFLECTION INSTRUMENTS

This chapter explores the intention and goal as well as the approach used – based on the reviewed literature – to develop an underlying model for evaluating societal impacts. It further details the development process of the Impact Model and the Reflection Instruments.

III.1 INTENTION AND GOAL

The Ludwig Boltzmann Gesellschaft Open Innovation in Science Center (LBG OIS Center) is a Competence Center and a leading international hub for investigating and experimenting with Open Innovation research practices. Since its foundation in 2016, the LBG OIS Center has been supporting and enabling researchers in applying participatory research. In the course of our work, we wanted to know: (a) How do we know that participatory research leads to societal impact and, most importantly (b) what changes does participatory research lead to. Rather than evaluating the overall societal impact of a specific participatory research project, we wanted to find a mechanism to evaluate effects of the participatory approach used in a research project. This would allow us to draw comparison on the societal impact of participatory research projects (due to the participatory methods applied) across all fields and disciplines.

Therefore, we set out to co-creatively develop a comprehensive Impact Model for participatory research that would describe how participatory research leads to societal changes and, ultimately, societal impact. In addition, we wanted to develop an evaluation toolset (that we called Reflection Instruments) to systematically evaluate these societal changes. The resulting Impact Model should help researchers to plan their participatory research projects and to identify societal impacts. The Reflection Instruments, meanwhile, should support them in establishing simple and practicable mechanisms to receive regular feedback on whether and in how far these societal changes are being achieved through their participatory research.

III.2 ANCHORAGE IN LITERATURE

To develop the Impact Model, we focused on societal impacts, rather than scientific impacts. In line with the recommendation formed by Barber et al. (2012), we focused on societal impacts on an individual scale. As previously suggested (see chapter 1.3), we adhere to societal impact concepts suggesting that collaborative partnerships will lead to an increased relevance of research findings and an increased motivation to use and apply these findings in (institutional) practices. Therefore, we consider the pathway of societal impact through individuals a valid instrument to achieve research uptake and thus societal impact on a collective and institutional level. At the same time, the perspective of societal impact through the lenses of individuals allows for a more direct and practical implementation of the Reflection Instruments.

As Theory of Change approaches are common in both the evaluation of societal impact and of participatory research (Reed et al. 2018, Reed et al. 2021), we decided to follow the structure in the development process of the Impact Model. For the development of the Reflection Instruments, we aimed to have a mixed-methods approach represented as recommended in literature (e.g. Wehn et al. 2021, Reed et al. 2021, Staley 2015). While we were aware of the multitude of challenges in evaluating societal impact, such as the time lag between the participatory research conducted and the societal impact unfolded (see chapter 2.1), we wanted to focus on practicability and usability of the Impact Model and Reflection Instruments for researchers. Therefore, we decided to rely on Reed et al.'s (2018) suggestion that the evaluation of the design and process of the participatory research project can ultimately increase the likelihood of impacts arising from them, as interventions throughout the process are made possible. The development of Reflection Instruments was thus aimed to enable a use during the process of a participatory research project. This is where collecting data is most feasible for researchers and the information the data provides serve as important anchors for societal impact.

Many frameworks are developed top-down rather than co-created beyond the piloting phase (e.g. Boivin et al. 2018). While the last step – refining and sharpening the indicators of the Reflection Instruments – was not conducted collaboratively, we tried to go a step further than merely piloting the Impact Model and Reflection Instruments collaboratively and also involved our stakeholders in identifying and defining methods and indicators. This step was particularly new, as non-evaluation experts were invited to develop evaluation tools.

III.3 THE DEVELOPMENT PROCESS

To develop the Impact Model, as well as instruments and methodologies to reflect on the impact elements, we worked together with *Measury*[4], a social research organization, who supported us in the design and implementation of the co-creative process.

III.3.1 DEVELOPING THE IMPACT MODEL

Based on the theoretical concept of the Theory of Change and a stakeholder mapping process, two co-creative workshops were designed around the question "What effects should participatory research approaches have". To reflect on this question, four initiatives of the Ludwig Boltzmann Gesellschaft (the initiative *Crowdsourcing Research Questions in Science,* the interactive workshop design *Ideas Lab*, two capacity building programs, open governance structures[5]) were chosen as examples to guide the process.

The first workshop was held in November 2018 and brought three stakeholder groups from within and outside the LBG to the table: researchers, who work with or are affected by participatory research approaches, practitioners, who are affected by participatory research approaches (e.g. professionals who apply research results in practice) and the community, such as patients or the public affected by participatory research approaches (e.g. by providing expert knowledge). To enable the application process of a complex topic, the activities of the mental health research groups *D.O.T. – The Open Door[6]* and *Village[7]* were used as a basis for application during the workshop. All workshop participants had had previous experience with participatory research in different roles and could therefore speak from personal experience of changes arising due to participation.

The second co-creative workshop in February 2019 brought three stakeholder groups from within and outside the Austrian research context to the table: policy-makers, government actors who formulate policies and thus influence the use of participatory research approaches (e.g. by passing laws), funders, who provide funding and thus influence the use of participatory research approaches (e.g. by defining funding criteria), and the media and thought leaders, non-governmental organizations, journalists or other activists representing civil society at large and thus influence the use of participatory research approaches (e.g. by promoting their value). Due to the macro-perspective of these stakeholder groups, no specific research project was used as a basis for application; rather, participatory research and its long-term effects on the political and societal landscape in general were considered.

In the workshops, participants brainstormed desired changes from participatory research in small groups. Then, they structured and developed pathways together. The effects identified in both workshops were then synthesized and laid out in a unified Impact Model, which underwent several feedback cycles and was continuously refined and sharpened. The Impact Model was then transferred to a playful illustration with symbols for each element, corresponding definitions and affected stakeholders.[8] It encourages a deepened discourse with the different pathways to impact of research involvement methods.

Figure 1 The Impact Model (see footnote 7 for higher resolution picture)

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5   See: https://ois.lbg.ac.at/en
6   See: https://dot.lbg.ac.at/
7   See: https://village.lbg.ac.at/
8   See: https://ois.lbg.ac.at/en/projects/impact > "Tools" > "The OIS Impact Model"

The Impact Model consists of different elements: first, it demonstrates what quality criteria participatory research approaches should fulfill (Output / Level 2) to allow effective participation. Once involvement takes place (Output / Level 3), it shows how this involvement will lead to a change in awareness, knowledge, attitude, motivation, skills (Outcome / Level 4), change in actions and behavior (Outcome / Level 5), and, finally, change in the life circumstances (Outcome / Level 6) of all participants involved in a participatory research process. Together, these effects foster more societally relevant research and lead to a higher probability of societal uptake of research results (Impact / Level 7).

To test the Impact Model, we invited the LBG research group Village to apply the model to their research approaches. The research group Village aims to support children of mentally ill parents through building networks of formal and informal support systems in Tyrol. In the co-development phase of the research group, the research team involved practitioners in designing these practice approaches and tools in order to identify support structures for children with mentally ill parents. The application of the Impact Model to practice introduced an additional impact element and allowed to refine existing definitions in the Impact Model.

III.3.2 DEVELOPING THE REFLECTION INSTRUMENTS

To derive useful methodologies and instruments to evaluate and reflect on the impact elements of the Impact Model, we worked together with an ongoing participatory research project: the mental health research group *Village* and participants of their co-development process. In a co-creative workshop with participants of the involvement process in November 2019, we worked with researchers – who set up and were involved in the co-development process of the LBG research group Village and practitioners –, experts of practice (e.g. social workers, psychologists) – who were involved in the co-development process of the research group Village –, as well as community members (i.e. patients and the public). The challenge we faced was to co-develop evaluation approaches together with non-evaluation experts. In order to do this, we asked participants of the workshop to consider each change element individually and ask themselves how they saw this change unfolding in their own experience in the participatory process. After collecting examples from their own experience, they then brainstormed ways and methods how this change could be seen and thus evaluated. In addition, they were specifically asked to raise expectations on the kind of information that is meaningful to them. Then, participants selected a change element and built and pre-tested prototypes of Reflection Instruments.

Based on the input received from participants of the participatory research process at the research group Village and in line with the literature (e.g. Reed et al. 2018), we used a mixed-methods-approach to evaluate the different change elements of the Impact Model. These change elements serve as a basis for the Impact Reflection Instruments: a set of different instruments to be used at different time points along a research project applying participatory research approaches.[9] Together, the Reflection Instruments provide a comprehensive picture of the extent to which these methods lead to changes in awareness and competencies, behavior and life circumstances of all stakeholders and, ultimately, societal uptake and impact. They include:

- **Participation Check:** A template for a short questionnaire that provides instant feedback after all participatory research activities (e.g. workshops, meetings) on the design of these participatory research approaches based on quality criteria defined in the Impact Model.
- **Desk Research**: A guideline with suggestions for data to be collected in low-effort desk research (e.g. social media or website analysis, participant lists) as a basis for regular analyses.
- **Qualitative Interviews with Experts of Practice and Researchers:** Two templates for qualitative interviews with both Experts of Practice (i.e. all practitioners, members of the public or policy makers involved in the research project) and researchers to be applied mid-way through the project. These interviews provide valuable insights to adapt and improve the project design.
- **Guided Team Reflection:** A guideline for discussion items for an internal reflection meeting of the research team responsible for designing the research process at later stages of the process. The aim is to reflect on the involvement process and identify late-stage interventions and implications for future research projects.
- **Quantitative Surveys with Experts of Practice and Researchers:** Two questionnaire templates for both Experts of Practice (i.e. all practitioners, members of the public or policy makers involved in the research project) and researchers to be applied at the end of the project. The aim is to provide insights into the experience of the entire involvement process, as well as to uncover short-term effects and impacts.
- **Focus Group:** A guideline and question template for a focus group reflection meeting with a selected group of stakeholders to be applied a year after the project has ended. The aim is to uncover medium- and long-term effects and impacts of the involvement process.

The Reflection Instruments can be used as a complete evaluation of the participatory research approach applied in a research project. However, they are flexibly designed and can also be used interdependently (e.g. one instrument only). In addition, each element (e.g. each question of the qualitative interview guideline or the quantitative survey) of the Reflection Instruments is specifically coded in line with the change elements of the Impact Model. This means, questions can be selected in line with what changes the organizers of the participatory research activity are primarily intending to address. To make planning an evaluation of participatory research easier for research teams, on the interactive website each change element of the Impact Model can be selected and possibilities for its evaluation with different methodologies of the Reflection Instruments will be displayed.

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9   See: https://ois.lbg.ac.at/en/projects/impact > "Tools" > "OIS Impact Reflection Instruments"

Figure 2 Timeline of Reflection Instruments
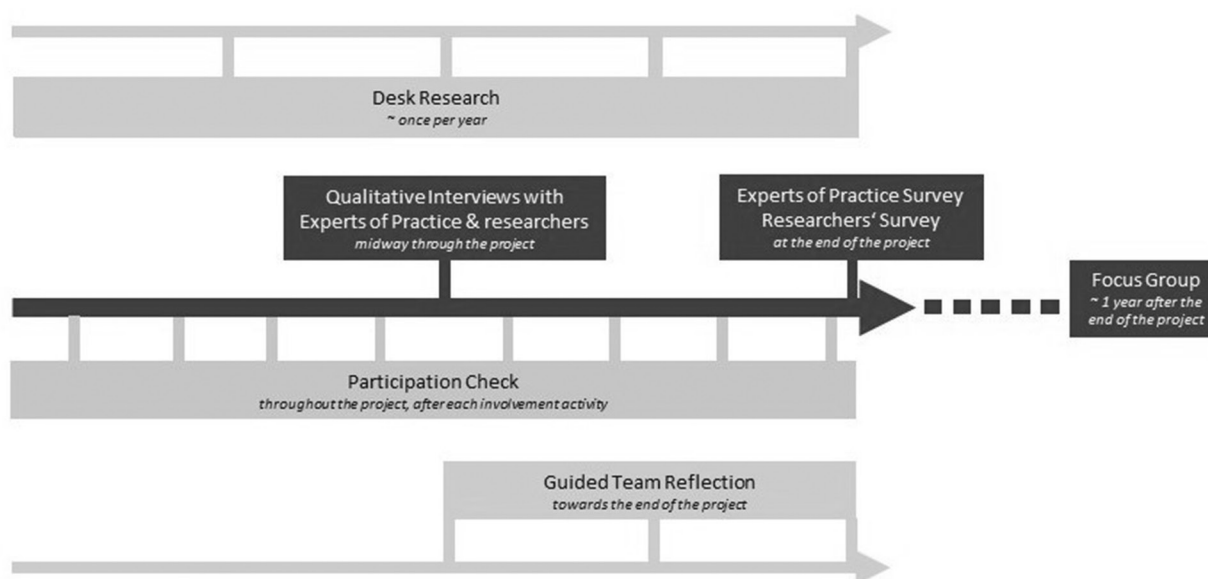
III.4 REFLECTION AND LEARNINGS

In this paragraph, we aim to provide our reflections on two aspects: first, we want to shed light on the advantages and challenges we faced in the process of applying the Theory of Change. Evaluators who aim to use this approach should gain insights into our experiences to better manage change processes in the future. Second, we want to highlight what the outcome of our process – the Impact Model and Reflection Instruments – can be used for in participatory research practice and where limitations apply.

III.4.1 REFLECTIONS ON MANAGING THE LBG IMPACT MODEL BASED ON A THEORY OF CHANGE PROCESS

Developing the Impact Model and Reflection Instruments using the Theory of Change approach had several advantages: first, the use of the Theory of Change structure enabled a co-creative development which represented diverse views. Perceptions on the (desired) changes and societal impact of participatory research can differ across stakeholder groups (researchers, for example, can wish for different societal changes than relevant for the involved public). The Theory of Change approach made it possible for all voices to be heard and considered. Enriching discussions and feedback loops fostered through the diverse representation of stakeholder groups, particularly refining wording and definitions, led to in-depth reflections and ultimately deeper understanding of the topic. Overall, this led to a more comprehensive model. Second, the Theory of Change approach allowed for a non-biased and bottom-up approach: Rather than top-down suggesting how participatory research leads to societal change and the subsequent risk of bias, we were able to develop expected pathways to impact from the beginning. Third, the Theory of

Change approach, which has been tried and tested in different contexts, provided a lose structure for orientation, but still allowed for a highly individualized development of the contents: The input-output-outcome-impact structure enabled stakeholders with very different backgrounds (some had more, some less contact with the topic) to think about the pathways to impact in a structured way, but gave flexibility in determining what these changes may be.

Along the development process, we experienced some challenges: first, we needed to enable diverse stakeholder groups with different ties to the topic to speak the same language. We decided to split up the co-development process of the Impact Model into two workshops to allow us to keep a certain level of depth by grouping our stakeholders in (somewhat) similar groups (see chapter III.3.1). This stakeholder differentiation approach worked well: though the two workshops to develop the Impact Model were structured differently due to different target groups and their different experiences and touchpoints, their results – i.e. the change elements developed - complemented each other after some language and wording adaptations. A second challenge we experienced was inviting non-evaluation experts to contribute to developing evaluation methods in the third workshop. We solved it by asking participants for personal examples for each change level, so as to deduce ways and methods of evaluating these experienced changes without participants needing expertise in the field of evaluation. This strategy was successful and shows that involving non-experts of evaluation in developing evaluation methods can work with the right translation strategies. The added benefit of this approach was that we simultaneous uncovered several effects of the participatory research on participants in their practice example that had not yet been known to the research group Village.

In applying the Theory of Change to practice in the co-creative development of the Impact Model, we identified several success factors: first,

the mindset behind such a process is key. Unless organizers consciously decide to let go of power and control and transfer it to participants, they are likely to remain dominant of the agenda and will not benefit from the different perspectives involved. This requires a true understanding of the aims and the process, buy-in from all team members and challenges traditional leadership roles. Second, excellent facilitation skills are required. Our aim was complex and needed a careful translation to the context of our stakeholders, clear processes and structures and well-defined tasks so as to enable high-quality input of participants. We recommend using an external (expert) facilitator so as to enable the different stakeholders to speak at eye-level (in line with Plottu & Plottu 2011), while allowing the organizers of the process to step back. In our case, we highly benefitted from an external facilitator guiding the process with extensive knowledge on the Theory of Change, but from a different field and context. As the facilitator was not affiliated to any of the stakeholder groups present, they provided an outsider view, which prevented bias and conflict. Third, a proper Theory of Change process requires resources and dedication. In our case we had to pay meticulous attention to detail in the use and connotation of certain words when naming and defining each impact element. This reflection process required us to regularly step back, review and revisit the Impact Model at a later stage to ensure a balanced view. This took more time than anticipated. These implementation costs should be considered in advance. Finally, we used the Theory of Change approach to develop an Impact Model and Reflection Instruments that would allow a comparison between different participatory research projects on the basis of the participatory research approaches applied. Applying the framework to a specific research project, however, would mean that a direct comparison of evaluation results across different research projects is made more difficult, meaning comparability and transferability can be impaired. This tailored approach makes sense, as the Theory of Change approach particularly enables an impact orientation of a research project, which can differ strongly even within a specific field. Yet, being aware of this downside should allow a proper consideration if the purpose of the Theory of Change approach fits the aim. To enable an impact-oriented view, a project could also apply certain principles of a Theory of Change structure, rather than fully embracing the whole process.

III.4.2 PRACTICAL USE

Researchers can use the Impact Model to plan the societal impact of their participatory research activities. The model allows to explore different change levels in participants, which ultimately lead to research uptake and societal impact of participatory research. The Reflection Instruments, at the same time, provide a set of different methods and tools to evaluate these societal changes. They can be used as a complete set or selectively (e.g. by merely integrating specific question items into existing evaluation instruments). Moreover, the planning tool – the interactive Impact Model – allows to explore how each of these changes could be evaluated individually. Therefore, researchers can select the anticipated changes most important to them. Each change is backed with various evaluation suggestions using different methodologies. Researchers can thus easily integrate individual evaluation items into existing evaluation instruments and structures (e.g. mandatory evaluations), making use of them for their own purpose. As they are deduced from real-life practice examples, they are easy to implement into practice. Finally, the Impact

Model and Impact Reflection Instruments offer a new angle on theory-based evaluation: rather than focused on a specific research project or a research discipline, the Impact Model and Impact Reflection Instruments systematically uncover societal changes due to the participatory research approach applied. They therefore provide increased comparability to participatory research across different disciplines and fields.

The Impact Model and Reflection Instruments are designed for researchers and research teams as a useful tool to plan and establish feedback mechanisms in a simple and practical way. Reflection Instruments do not replace a thorough and academically rigid external evaluation, but should rather provide immediate feedback through monitoring throughout and after the participatory research activities. Researchers should be enabled to strategically plan for the societal impact of their participatory research activities, as well as to autonomously receive feedback. This should empower them to continuously strive for and improve the societal impact orientation of their participatory research so as to increase the chances of research uptake and societal impact.

III.4.3 LIMITATION AND NEXT STEPS

The strong orientation towards practicability and usability of the Impact Model and the Reflection Instruments explains why their development relied largely on a bottom-up approach based on practical experience and examples. While the Theory of Change approach provided a strong structure, we purposefully did not rely on existing measurement frameworks in literature, but deliberately decided on a purely bottom-up approach to develop Reflection Instruments and its indicators. Although the literature is inconsistent, this approach could create tension with existing frameworks. What is more, while the input of stakeholders involved in the development of the Impact Model largely overlapped, the quantity of stakeholders involved was limited. Finally, the practice orientation towards a specific project in the development of the Impact Model and Reflection Instruments facilitated the process, but this close practice-oriented view may have led to blind spots in fields not represented in the co-development process. The Impact Reflection Instruments were initially set out to be applied and tested in a pilot run in cooperation with the LBG mental health research group Village. However, due to the developments of the Covid-19-pandemic, these plans had to be put on hold. Thus, it remains to be seen whether the Reflection Instruments can be useful and applicable to different participatory research projects in different contexts.

To validate the applicability of the Impact Model and Reflection Instruments in other contexts, we therefore aim to test them in different participatory research projects across various fields and disciplines, contexts and operating under different scopes and time spans. The aim is to identify whether the Reflection Instruments provide valuable feedback for a variety of application contexts and to refine them further to respond to varying demands that may arise in the application process.

IV CONCLUSION

Societal impact of research receives increasing attention across different national research landscapes as the wider benefits and impacts of research activities for societies at large come into scope. Despite disciplinary differences in impact definitions and evaluations, there is a general

and increased understanding across basic, theoretical and more practically, applied research fields that societal relevance of research activities should be strived for without compromising research autonomy. In fact, finding a balance between the autonomy of science and its aspiration to be societally relevant lies at the heart of most impact debates. Also, collaborative and participatory research work and involvement activities are increasingly considered central for leveraging societal research impact and the significance of building and facilitating sustainable relationships between researchers and other non-academic stakeholders is being more and more acknowledged.

To make societal impact reflections and evaluation processes an integral part of participatory research processes, different incentives have to be set that consider the time, costs and expertise needed. Instead of rewarding individual researchers and projects for achieving impact based on narrow indicators, funding schemes should be directed towards creating research environments and organizational structures that foster participatory endeavors, relationships building and regular exchange with different stakeholder groups. On a more individual level, researchers should receive training and methodological tools and expertise in order to build capabilities for participatory research processes, including impact evaluation and reflection.

The Impact Model and Reflection Instruments were designed and co-created as easy to use and adaptable tools to support researchers navigate through their participatory research projects, to reflect and anticipate some of the impacts arising from them and to check and evaluate the feedback from both co-researchers and other stakeholders involved in the project. While the focus here is on participatory research projects, we also strongly encourage researchers in different research contexts, projects and across disciplinary fields to use the Impact Model and Reflections Instruments in order to see how it can be utilized and adapted differently and also to derive more generalizable information and recommendations for further enhancements.

While there are different evaluation approaches to uncover the societal impact of participatory research, no standardized framework has been defined as of yet. The Theory of Change approach, however, is commonly used for societal impact evaluation and participatory research. We introduced a co-creative and bottom-up development of an Impact Model based on the Theory of Change approach to complement existing literature from a practice- and stakeholder-based perspective. In addition, we shed light on the application of a Theory of Change approach in practice. We shared advantages of the process, challenges we faced and how we addressed them, as well as essential factors for successful use of the Theory of Change approach. These reflections should help evaluators who aim to make use of the Theory of Change in contexts relevant to their work guide their application process.

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