Research Article

Knowledge Equity and Open Science in qualitative research – Practical research considerations

Isabel Steinhardt[‡], Felicitas Kruschick[§]

‡ University of Paderborn, Paderborn, Germany
§ Leibniz University Hannover, Hannover, Germany

Abstract

How can Knowledge In/Equity be addressed in qualitative research by taking the idea of Open Science into account? Two projects from the Open Science Fellows Programme by Wikimedia Deutschland will be used to illustrate how Open Science practices can succeed in qualitative research, thereby reducing In/Equity. In this context, In/Equity is considered as a fair and equal representation of people, their knowledge and insights and comprehends questions about how epistemic, structural, institutional and personal biases generate and shape knowledge as guidance. Three questions guide this approach: firstly, what do we understand by In/Equity in the context of knowledge production in these projects? Secondly, who will be involved in knowledge generation and to what extent will they be valued or unvalued? Thirdly, how can data be made accessible for re-use to enable true participation and sharing?

Keywords

Open Science, Knowledge Equity, Qualitative Methods

1. Open Science: a way to generate access to knowledge, but also to create Knowledge Equity?

Transparency and intersubjective comprehensibility as well as reflexivity are central quality characteristics of qualitative research (Flick 2019). This requires both a fundamental openness and insight into the research process and a comprehensive engagement with research ethics issues. This is of particular importance with regard to vulnerable groups and participation in research (Von Unger 2014). Therefore, as Marta Bivand Erdal (2019) indicates in a blog post, Open Science and qualitative research would be well suited:

"Yet, 'open science' has a long history, and is arguably a good match for many of the principles that are central to qualitative research methodologies, e.g. the co-production and thus also co-ownership of data, and the need to reflect on power hierarchies and equality in access to science, not least to be able to quality assure the robustness and validity of scientific findings." (Bivand Erdal 2019).

In Germany, however, Open Science Practices are rarely common in qualitative educational and social sciences research (Bayer et al. 2022, Steinhardt et al. 2022). Rather, the impression arises that qualitative educational and social science research is not familiar with the principles of Open Science. Various fears, for example, regarding anonymisation, data protection and, thus, the re-usability of data, give rise to this impression (Steinhardt et al. 2022). Accordingly, there is much discussion about the non-possibilities of participating in Open Science and little about the development possibilities and associated options for action that Open Science offers for qualitative educational and social science research.

Open Science is a movement calling for the democratisation and decolonisation of research by interacting openly, collaboratively and inclusively (Chan et al. 2019). Vicente-Saez and Martinez-Fuentes (2018) (p. 7) describe their understanding of Open Science as following: "Open Science is transparent and accessible knowledge that is shared and developed through collaborative networks". Knowledge is understood as a central aspect of Open Science, which also puts the focus on the development and distribution of knowledge. Accordingly, Chan et al. (2019) state:

"At its heart, Open Science seeks to bring about a re-evaluation of the role of science in our rapidly changing world. It critiques the status quo of knowledge production by asserting the importance of democratising knowledge, by reassessing the power relations in our knowledge infrastructure, and by arguing that scientific knowledge needs to be managed in collaboration with those who help generate it and will benefit from it."

In this context, the development of qualitative methods under the heading of research ethics has long been concerned with questions such as: "How do researchers perceive their responsibility as scientists? How do they shape their relationships with the people and institutions they study? How do they handle the data they collect? What information do they disclose about themselves and their research?" (Von Unger 2014). These questions always resonate in qualitative educational and social science research, but are rarely

brought into focus. Here, qualitative research could benefit from the Open Science Movement, which is currently focusing on these questions under the heading of Knowledge Equity.

A Pioneer in this field is Wikimedia as they write about Knowledge Equity in their 2017 movement strategy (see also Schoch & Kruschick in this volume):

> "We will create a culture of hospitality where contributing is enjoyable and rewarding. We will support anyone who wants to contribute in good faith. We will practice respectful collaboration and healthy debate. We will welcome people into our movement from a wide variety of backgrounds, across language, geography, ethnicity, income, education, gender identity, sexual orientation, religion, age, and more. The definition of community will include the many roles we play to advance free and open knowledge, from editors to donors, to organizers, and beyond." (Wikimedia 2017).

Taking these aspects of Knowledge Equity seriously, three central questions arise. Firstly, what do we understand by In/Equity in the context of knowledge production? For us, equity is, first and foremost, a principle of order and distribution which, due to its highly normative character, is to be seen as a dynamic, never-ending process. Political, social or economical equity, as well as intergenerational and international equity and equity for marginalised groups or between genders, must constantly deal with the question of what constitutes In/Equity and what it requires and adapt the ordering and distribution mechanisms (Horn and Scarano 2013). We, therefore, understand Knowledge In/Equity as a fair and equal representation of people, their knowledge and insights and see questions about how epistemic, structural, institutional and personal biases generate and shape knowledge as guidance (Wikimedia Deutschland n. d.).

Secondly, who will be involved in knowledge generation and to what extent will they be valued or not? For example, Rochmyaningsih (2018) highlights that researchers from Indonesia have not been mentioned in publications or their participation has not been adequately acknowledged despite research participation. Chan et al. 2019) elaborate:

"Collaboration in scientific knowledge production has been historically dominated and driven by hegemonic (Northern) countries, while non-hegemonic countries tend to take on secondary roles. Nonetheless, the growing discourse on Open Science provides the opportunity to reflect critically on the roles and outcomes of collaborative knowledge creation in Global South contexts." (Chan et al. 2019).

Knowledge In/Equity thus ties in with the same idesas that Bivand Erdal 2019 considers important in the context of Open Science: "the need to reflect on power hierarchies and equality in access to science".

Thirdly, how data can be made accessible for re-use with the aim: "An equitable global knowledge commons strives to go beyond the access barrier and enables true participation and sharing" (Morrison and Rahman 2020). In this way, participants not only gain access to the insights gained, but also have the opportunity to work with the data themselves.

If Knowledge In/Equity is to be considered in qualitative educational and social science research, equity in the research process, access to knowledge and the transfer of knowledge and data back to society and research participants must be considered accordingly.

How this could be possible is illustrated by two examples from the Open Science Fellows Programme by Wikimedia Deutschland (https://en.wikiversity.org/wiki/Wikimedia_Deutschland/Open_Science_Fellows_Program, see also the editorial of this volume). The first example is about how hermeneutic interpretation can be designed in an open way and how the participants, in this case interviewees, can be involved in the process. The second example is about research on inclusive education in North-South relations and focuses on epistemic, structural and institutional biases, which further leads to the need of reflecting power relationships and equity in the research process. Both projects are dealing with the question of Knowledge In/Equity, but while the first project will give insights into practical considerations during the process of data interpretation, the second project will analyse the contextual factors, in which knowledge is produced.

The two examples are first presented separately, then in relationship to each other and finally concluded with practical research considerations.

2. Two examples of the Open Science Fellows Programme

The projects presented are both situated in the field of qualitative social and educational research and deal, amongst other things, with the question of how knowledge production and transfer to the respective communities can be made more open and equitable. The focus on power imbalances was particularly guiding for the research.

2.1 Collaborative online interpretation (KolloIn)

The first project was conducted by Isabel Steinhardt in the 2017/2018 cohort of the Open Science Fellows Programme. The aim of the project was to test whether it is possible to interpret interviews online collaboratively with the method habitus-hermeneutic (Bremer and Teiwes-Kügler 2013a). The online interpretation was made possible by a wiki. The interviews were narrative interviews (Schütze 1977), focusing on the use of digital technologies in students' biographies. These interviews were collected especially for this purpose and were part of the research project "Digital Educational Practices of Students" (Steinhardt and İkiz-Akıncı 2020). For analysing the interviews, the habitus-hermeneutic method (Bremer and Teiwes-Kügler 2013a, Bremer and Teiwes-Kügler 2013b, Lange-Vester and Teiwes-Kügler 2013) was used. The habitus-hermeneutic method aims to reconstruct habitus patterns and related practices of individuals through rule-based interpretation. In this case, the goal was to reconstruct students' practices in using digital technologies. Bourdieu (1977) understands habitus as the following:

"... systems of *durable, transposable dispositions, structured structures* predisposed to function as *structuring structures*, that is as principles of generation and structuring of practices and representations which can be objectively 'regulated' and 'regular' without in any way being the product of obedience to rules, objectively adapted to their goals without presupposing a conscious aiming at ends or an express mastery of the operations necessary to attain them and, being all this, collectively orchestrated without being the product of the orchestrating action of a conductor."

Habitus-hermeneutic is conducted as sequence analysis, i.e. individual text passages are analysed one after the other without knowing the entire material. The sequence analysis serves to open up the data, to generate ad-hoc hypotheses and to find first traces of habitus patterns of the interviewee. The ad hoc-hypotheses and traces are validated in the further analysis of the material (Bremer and Teiwes-Kügler 2013a). The description of the project is kept very short, as the focus lies on three aspects of Knowledge Equity.

2.1.1 In/Equity in the research process

In the KolloIn-project, Isabel Steinhardt conducted narrative interviews (Schütze 1977). Narrative interviews focus on the biography of the interviewee and aim to be as detailed as possible. For this purpose, an introductory question is chosen that addresses the topic of the interview (in this case, the use of digital technologies in students' biographies), but is open enough for interviewees to determine where they begin in their narrative and how it is structured by them. Accordingly, interviewers should intervene as little as possible during the narrative interview. The interviewer should be empathetic, but not influence the interviewee. German method books also advise revealing as little as possible about the research project in advance (Küsters 2009). This assumes that the interviewees orientate themselves very strongly to the interviewer's explanations and, thus, could leave their own narration. This assumption and the method as such create an imbalance of power between the interviewee and the interviewer.

So how was this imbalance dealt with in the KolloIn-project? Firstly, she reflected on the research situation concerning ascribed (power) positions. Since students were interviewed and she already held a doctoral degree at that time, there was a power imbalance, solely from the attribution of symbolic capital. As Bourdieu (1977) states, social positions are attributed, based on titles, amongst other capital forms. Since both interviewees and interviewer are located in the field of academia and, in this field, as a doctorate suggests a higher position, a power imbalance automatically existed.

Secondly, she reflected on her own pre-concepts (Breuer et al. 2019) concerning the research focus. The focus of the research project was to uncover social inequality in relation to digital technologies. Thus, she already had assumptions that could impact the research process, for example, by unintentionally implicitly influencing the interviewees. Since interviews are social interactions, unconscious, non-verbal communication cannot be avoided. Interviewers do not become neutral, objective beings (for this, robots would have to conduct the interviews). Therefore, the assumption in the KolloIn-project was that the

interviewed students should be informed about the pre-concepts in advance, so that there is the possibility to reflect on them.

In order to reduce the power and information gap, she wrote blog posts in which the method was explained and the research project including the pre-concepts were described. Contrary to common methodological recommendations, she disclosed the goal of the study and the research questions. This was also accompanied by letting the interviewees consciously decide how they wanted to deal with a possible taboo topic and, thus, decide for themselves in which context they placed their own social positioning. Especially research on social inequality has to be openly addressed to avoid unconsciously transporting stereotypes.

In the research process, it became apparent that the disclosure of pre-concepts led to an intensive pre-occupation with the topic and, thus, made very in-depth interviews possible. The interviewees repeatedly referred to the blog posts as references. This could be seen as influencing. However, the analysis showed that this rather led to a clear positioning about values, norms and action patterns. In summary, the interviews were more dense and more meaningful as a result.

As positive as the disclosure was for the density of the interviews, the power imbalance in terms of positioning within the field of higher education became even more apparent. Therefore, she decided to have students conducting further interviews in the research project. The students were part of a project-based seminar and were trained by Isabel Steinhardt in how to conduct interviews (for a detailed description of the seminar, see Steinhardt 2020). This achieved an equity between interviewers and interviewees in terms of positioning in the field. This does not eliminate the unnatural situation of an interview, but it does reduce the power imbalance somewhat.

In addition to the interview situation, she also had to reflect on the analysis situation. The aim of the project was to develop a simple tool to make hermeneutic interpretation possible online. For this purpose, the tool Semantic CorA, based on the open-source software MediaWiki, was made usable for interpreting transcripts with objective hermeneutic (Schindler et al. 2017). The tool KolloIn includes a function to interpret and to discuss other interpretations. A discussion of other interpretations is only possible after an interpretation has been given, so that others do not influence one's own interpretation.

The tool was advertised via Twitter, a mailing list on qualitative methods, a qualitative social science research network and via personal contacts. A total of 26 people logged into the tool, eight of whom also provided an interpretation on one of the eight sequences posted. Five of the eight participating people described themselves as female, two as male and one person did not provide any information. All participants were researchers working on their PhDs, with only one person having already completed his/her PhD. The participants were between 29 and 51 years old.

The development and use of the KolloIn tool were a trial to see if knowledge generation, i.e. hermeneutic interpretation, is possible online. It was a short trial over a few weeks that

showed that it is possible to interpret online as the interpretations were dense and helpful. However, it also became apparent that mainly people who are researchers themselves participated, since a previous understanding was needed in order to understand the hermeneutic procedure that was depicted in KolloIn. Here, the aspect of equity was not redeemed, since it was not possible for everyone to contribute to the production of knowledge. This would require a different experimental design.

2.1.2 Access to knowledge

Access to the generated knowledge was made possible in the KolloIn-project in two ways: Firstly, in the sense of "participant feedback" (Johnson 1997), the interviewees were given the opportunity to participate in the interpretations themselves and to comment on the transcribed data as well as the results. Participant feedback means:

> "By sharing your interpretations of participants' viewpoints with the participants and other members of the group, you may clear up areas of miscommunication. Do the people being studied agree with what you have said about them? While this strategy is not perfect because some participants may attempt to put on a good face, useful information is frequently obtained and inaccuracies are often identified." (Johnson 1997).

In the KolloIn-project, the interviewees were invited to review and comment on the interpretations. However, they did not take this opportunity. Isabel Steinhardt also sent the interpretations by e-mail but got no feedback. Her explanation for why participant feedback did not work has been that participant feedback was formulated as an offer, but not as part of the interview process. In order to receive participant feedback, she assumed, it must already be formulated as part of the invitation to participate in the interview.

Secondly, the results were published as open access publications (Steinhardt 2018, Steinhardt 2020, Steinhardt 2021), as well as in various blogposts (https://sozme thode.hypotheses.org). This ensures that everyone (who has the technical equipment) has access to the results.

2.1.3 Re-use of data

The KolloIn-project was designed to make the conducted data and the developed tool available for re-use. The tool is, as described, a wiki and is based on open source software. Since the version of the wiki is now outdated, the instruction for rebuilding has been deleted. Unfortunately, Isabel Steinhardt currently has no capacity to update the wiki.

To enable the re-use of the data, the aim of re-use was already pointed out when the interviewees were recruited. None of the interviewees cancelled the interview after being informed about the aim of data re-use. On the contrary, there was a very high level of acceptance for re-use. In order to make the re-use possible, a declaration of consent was obtained that complied with the provisions of General Data Protection Regulation (GDPR)

and contained the passage that the interviews could be made accessible via a research data repository. For this purpose, the transcripts were anonymised, contextualised in a comprehensive data report and made available under a CC-BY licence (Steinhardt and İkiz-Akıncı 2020). Since these are narrative interviews that contain a lot of biographical data and are, therefore, sensitive data, she had decided to choose a repository that allows restricted access. By restricted access, it has meant that the re-use of the data must be requested with an application. The application regulates the conditions for the re-use of the data, such as data protection and anonymisation. As a consequence, there is a hurdle to the re-use the data. For example, only persons with university's affiliation can get access to it. Citizen Science research without researchers from a university is, therefore, not possible. In addition, the application process can also be a hurdle. With regard to the re-use of data, a balance must be struck between data security and access to the data.

2.2 "From West to the Rest"? : Knowledge In/Equity in the context of research on inclusion in the North-South divide

The second project we are presenting in this paper is based on the dissertation project of Felicitas Kruschick. Within the dissertation project, she is researching the understanding(s) of inclusive education in a rural area in Ghana using the ethnographic research paradigm (Kruschick 2021). This means that she was 'in the field' (Atkinson et al. 2007) for two months, observing and experiencing the daily lives of families with children with disabilities, students and teachers in different places such as school, family and community. The self-observations and observations of others were recorded in 'fieldnotes' (Atkinson et al. 2007), partly during the observations, but mostly written subsequently. The data basis of the project is, therefore, a large number of observation protocols, notes, as well as photographic material. The dissertation project becomes important in the context of Open Science relevant questions, because Felicitas Kruschick, in the role of an ethnographic researcher, is socialised within specific epistemologies and understandings of inclusion, education and disability that are inscribed in the research process and, above all, in the data material. By discussing epistemic and structural biases in this context of research on inclusive education in North-South relations, we will make clear that conducting (closed) research on this subject will reproduce inequity and power dynamics.

As we will explain in the following chapter (2.2.1.), the theoretical concepts of inclusion and inclusive education are highly problematic on an international level, because of hierarchical dynamics and the geopolitical location of accumulated knowledge. On behalf of the idea of Open Science, we, therefore, understand the research basis of this project as problematic and state, that doing research on inclusive education in North-South relations is complex and exclusionary. After deriving the theoretical concepts in an international context, two different aspects are highlighted that are of interest for the question of what makes research inclusive or exclusive (2.2.2.): Access to knowledge and science communication.

Felicitas Kruschick carried out the project 'From West to the Rest? Knowledge In/Equity in the Context of International Inclusion Research' in the Fellows Programme Year 2020/2021

and analysed to what extent those issues - Knowledge In/Equity and power - can be dealt with using the principles of Open Science.

2.2.1. Research on inclusion in North-South relations

The concept of inclusive education is raised nationally and internationally as a panacea that reveals new possibilities for participation, involvement and raising awareness while seeking to minimise exclusion, stigmatisation and discrimination. Based on international adoptions, such as the UN-Convention on the Rights of Persons with Disabilities, adopted in 2006 (UNDESA (United Nations Department of Economic and Social Affairs) n. d.) and Agenda 2030, adopted in 2015 (UNSDG (United Nations Sustainable Development Group) n. d.), the concept of inclusive education is gaining popularity on different levels and is, thus, emerging as a global paradigm (Köpfer et al. 2021).

At the same time, the global relevance of the concept of inclusive education, according to Artiles and Dyson (2005), is due to globalisation dynamics. Inclusive education is, thus, both an "outcome of global economic trends and itself an instrument of the globalisation of educational policy and ideology" (Artiles and Dyson 2005). Furthermore, the concept does not contain a universal idea that applies equally to different contexts. Rather, the understanding of disability and inclusion varies from context to context and, depending on the historical, socio-economic and cultural contexts, different approaches to understanding emerge (Dyson 2013, Singal 2014, Singal and Muthukrishna 2014, Werning et al. 2016, Mitchell 2005). The negotiation of a 'global' concept thus appears too undifferentiated and inadmissible. Inclusion is, thus, negotiated as a "slippery concept" (Artiles and Dyson 2005) which, when used independently of context, has only limited significance.

The concept of inclusion and related developments and discourses continue to be rooted in "resource-rich model[s] of support provision in high income countries for learners" (Muthukrishna and Engelbrecht 2018). The transfer of inclusive principles from 'high income countries' (Muthukrishna and Engelbrecht 2018) to contexts that do not show any connectivity to these contextual parameters thus transpires to be problematic and bears the danger of reproducing historically justifiable (colonial) power and domination relationships (Haskell, S. H. 1998, Eberth and Röll 2021). The concept of inclusion and inclusive education must, therefore, be understood as a '(de-)colonisation project' and analysed within the framework of post-colonial and power-theoretical approaches. On the basis of the preceding presentation, a 'one-size-fits-all solution' (Engelbrecht and Green 2018) seems inadmissible, as this would perpetuate a 'From West to the Rest' (Grech 2011) attitude of inclusive education.

The negotiation of inclusive education in North-South relations is based on an exclusive understanding and an exclusionary attitude that works in favour of 'high income countries' (Muthukrishna and Engelbrecht 2018) and at the expense of a diverse understanding of disability and inclusion. The inclusive self-claim in the context of research thus runs the risk of not being able to be fulfilled and, thus, opens up a desideratum in research practice. These will be made explicit in the following chapter.

2.2.2. Exclusion dynamics in the context of inclusion research in North-South relations

Equity in the research process

According to Muthukrishna and Engelbrecht (2018), the concepts of inclusion and inclusive education were shaped by the hegemony of 'Western' philosophies, which can be traced back to a specific understanding of cognition and knowledge. The "Western [...] forms of knowledge and discourses" (Muthukrishna and Engelbrecht 2018) behave in the same way as the construct of inclusion: we assume that there are co-existing, but not equal perspectives on knowledge and forms of knowledge, which, based on post-colonial and power-theoretical perspectives, reveal a hierarchisation that we problematise. In this way, the discourse on inclusion and inclusive education is homogenised and reproduced in favour of a monopoly position of Eurocentric perspectives of knowledge and forms of knowledge (Eberth and Röll 2021). A self-contained cycle is the consequence, which legitimises a "From West to the Rest" (Grech 2011) dynamic of inclusive education by itself and, thus influences discourses, as well as theory and practice. The underlying specific epistemology thus produces Knowledge Inequity that is capable of sustaining this order. Quintero and Garbe (2013) speak, therefore, of a 'coloniality of power', which leads to a problem that can be dubbed 'epistemic monoculture' (Santos et al. 2007, xxxiii), 'epistemic violence' (Brunner 2020) or 'coloniality of knowledge' (Quijano 2000).

In the context of inclusion research in North-South relations, equity in the research process is already endangered by the epistemic basis on which such a research project is built. The "epistemic monoculture" (Santos et al. 2007) leads to an asymmetry between the researcher and the researched, which is justified by this epistemic imbalance. It becomes clear that knowledge - in order of producing, distributing and using - goes hand in hand with the question of power. It is based on perspectives, reasons and history and entails a specific responsibility towards the researched (see Kruschick & Schoch in this volume). Consequently, the analysis of how, for what and why knowledge is produced, distributed and used must be handled as an elementary component in research processes in order to be able to approximately fulfil the claim of Knowledge Equity in this way.

In the context of inclusion research in North-South relations, we advocate that the question of equity must, therefore, already be introduced before the first practical research steps in the research process. It is important to become aware of the epistemic grounding and the associated implications and to integrate these into the research design. These aspects play a significant role in both data collection and data analysis, as well as in writing the theoretical framework, if one wants to create a research situation that is as equal as possible. The research process must, therefore, be strongly reflexive and seek to reveal the pre-concepts (Breuer et al. 2019) of the person conducting the research via reflective impulses from biases in the science system (Wikimedia Deutschland n. d.).

Of course, other practical decisions in the research process play an important role when it comes to equity in research. For example, it needs to be asked to what extent the research field must and can be informed about the research project when linguistic communication

is difficult and the understanding of knowledge and science varies. What does informed consent mean, for example, in the research context of North-South relations and to what extent can and must it be implemented (Byrne 2001)? These and other questions play an important role, especially in colonially-burdened contexts, although we emphasise that the basis of an equal co-existence seems to lie in epistemic equity. Starting from this, a/symmetries can be reproduced and reified, which have an impact on the question of equity in the research process, both in theory and practice.

This is also evident in the analyses of disability, inclusion and inclusive education in Ghana (Anthony 2011). While the foreword of the Ghanaian Inclusive Education Policy, which was developed in cooperation with UNICEF, states: "This policy will respond to changing priorities and national aspirations as well as international development trend in provisions for inclusive education" (Republic of Ghana, Ministry of Education 2013), Anthony (2011) points out that inherent conflicts between the international and Ghanaian conceptualisations of disability and the understanding of inclusion stand in the way of equal co-existence.

Access to knowledge

We highlight exclusion dynamics in the context of inclusion research in North-South relations on two levels: on the one hand, the level of knowledge generation, as we explained in the previous sub-chapter against the background of equal cooperation in the research process. On the other hand, exclusion dynamics that lie at the level of knowledge distribution, which will be discussed in the following paragraph.

Without a basic understanding of knowledge as an epistemic and structural construct, (inclusion) research in North-South relations regarding knowledge generation runs the risk of reproducing its own understanding of knowledge and inclusive education. In this way, Eurocentric perspectives are perpetuated, which leads to knowledge being classified and ordered in a certain way.

In order to be able to understand this arrangement/sorting, we need to have a look at the discourse on inclusive education in North-South relations under the following approaches to reflection: Who navigates, how, why and on what basis through the inclusive education discourse? To what extent can this navigation be described as a/symmetrical in nature? How are these a/symmetrical dynamics and structures maintained? What understanding of inequity/equity resonates at the same time in answering the preceding questions? All these questions aim to reveal the power relationships in which access to knowledge is embedded. As knowledge forces us to realise that all access to knowledge remains bound up in power relationships, as Faulstich (2011) points out, it is important to always also reflect on what is meant by 'knowledge itself is power' (proverb by Sir Francis Bacon) (Faulstich 2011).

In the context of inclusion research in North-South relations, we assume, as Grech (2011) has already correctly described, that a "From West to the Rest" (Grech 2011) mentality is hierarchising and excluding. Consequently, it does not seem surprising if, against the

background of a concept of inclusion derived from the global North (Werning et al. 2016), knowledge is also concentrated and accumulated in this geographical indication. The unilaterally epistemically charged terms, therefore, result much more in a speaking about than in a speaking with, which is based on an unequal exchange process.

Science communication

In order to open up the constitution of inclusion research in North-South relations towards more participation in knowledge and Knowledge In/Equity, the project on the understanding of inclusive education in a rural area in Ghana is pursuing the implementation of Open Science. To gain more participation, we advocate that first and foremost the research process and the problems identified must be discussed widely, with and before a heterogeneous audience. The communication about science with others is about becoming aware of our own prejudices and stereotypes, our own limited perspectives and trying to minimise them. For us, this is one essential criterion of conducting inclusive and transparent research, because, only by opening up our own research ideas, other perspectives and irritating moments become possible to enrich our research design.

As the discussion about making qualitative data public is a controversial issue in social and educational research topics (Von Unger 2014Bayer et al. 2022), practising science communication is one major aspect of giving insight into your ideas and allowing your ideas to be discussed without making the data material accessible in a public manner. In this context, the sharing of ideas and issues that emerge regarding research on inclusive education in North-South relations is of even greater importance to further develop and visioning about this thematic area.

Science communication is not only about making the final product accessible, such as the dissertation publication in open access format. Rather, it is also about discussing the extent to which knowledge can be prepared and made available in an accessible manner in the sense of Open Methodology, Open Data and Open Access principles to increase the reusability of the research data via science communication.

3. Conclusion

In Germany, a great deal of scepticism about Open Science in qualitative educational and social science research (still) exists. One could state that Open Science negotiations focus on aspects such as reproducibility, replication and significance. However, these aspects are less relevant for qualitative research. In our contribution, we, therefore, focus on aspects of Open Science that have great relevance for educational and social qualitative research, such as transparency, intersubjective comprehensibility, pre-concepts and the involvement of research participants. Taking these aspects into account, the great relevance of Open Science also becomes apparent for qualitative research.

In the examination of In/Equity in our projects, we also dealt with posibilities to reduce injustice and the assumption of responsibility in the research process when it comes to the production and re-use of knowledge. We formulated questions such as: in what context is

research conducted? By what is knowledge generation and science defined? What does research and the accumulation of knowledge actually mean? What kind of responsibility does it entail?

The focus is on ethical questions associated with the research process. We have presented three aspects in our contribution using two examples: Equity in the research process, access to knowledge and re-use of data. By comparing the research processes from the two projects, we draw five overarching conclusions:

- The two projects have a different research focus: on German students and on doing research on inclusive education in North-South relations. Both projects differ in the way they are discussing Knowledge In/Equity: the first project is concentrating on practical considerations during the interpretation process, while the second is analysing the context regarding epistemic and structural biases in which knowledge about inclusive education is produced. Furthermore, asymmetries (power imbalances) are also presenting themselves differently. While the first project is dealing with asymmetries during data analysis, the second project is highlighting asymmetries on the level of knowledge production and distribution. Accordingly, research and the associated power imbalances should be examined and discussed in the specific context of each relationship.
- Ethical questions about specific research relationships are part of most qualitative research projects. However, these are mostly about data protection and anonymisation issues. In our contribution, we have shown the added value of dealing with Knowledge In/Equity as part of the research process. In the first project, the imbalance of power between the interviewee and the interviewer was focused. In the second project, ethical questions concerning reproducing post-colonial and power based issues were focused, using the example of the contextualisation of inclusive education. We, therefore, advocate that ethical research questions be expanded to include the aspect of epistemological, structural, institutional, as well as personal biases. In our opinion, besides anonymisation efforts in the data material, processes of knowledge generation also play a role in the context of research ethics discussions. Our aim was to show that Knowledge In/Equity should be a permanent, intensive and differentiated discussion during the research process, not an on-the-top issue at the beginning or end of the research process.
- It is then crucial to reflect on one's own pre-conceptions, as well as pre-conceptions inscribed in epistemologies. In this way, fundamentally problematic knowledge negotiations, as based on postcolonial, discriminatory perspectives, can be made apparent. It is then necessary to analyse how this understanding can find its way into the application of methods and be re-interpreted. For example, if a researcher does not reflect on his/her own understanding of education, disability or inclusion and where those understandings are deriving from, it is likely that those understandings finds their way into the research design and the research process. We identified that this process is problematic in the context of research on inclusive

education in North-South relations, due to 'epistemic monoculture' (Santos et al. 2007, xxxiii) or 'coloniality of knowledge' (Quijano 2000).

- One of the decisive advantages of qualitative research is the possibility to interact with the research participants and not only speak about them. Thus, in the negotiation of the research results, for example, through participant feedback, a validation of the results can take place and, thus, the views, ways of thinking and forms of expression of the respondents can be taken seriously.
- Furthermore, science communication plays an important role in providing insights into and discussing elements of research states. Especially when there are concerns about publishing data due to anonymity and confidentiality issues, this is a way to share and discuss ideas and perspectives. This is especially important where 'speaking about' or processes of 'othering' underpin inequity due to post-colonial, power-related aspects. As persons socialised in Germany, conducting research on inclusive education in North-South relations and using Ghana as an example, therefore, absolutely requires some exchange between different groups that irritate and question this socialisation. Furthermore, it is important to reflect on the approaches, ideas and findings back to researched contexts and, thus, provide them with insights into the construction of this knowledge.
- The comparison of the projects has shown that the provision of knowledge and the transfer of knowledge should be strongly orientated towards the recipients and, above all, their technical skills and their data literacy skills (Humm and Schrögel 2020).

With this article, we would like to contribute to the discussion on qualitative methods and Open Science practices and to focus on the question of Knowledge Equity. We are well aware that our assumptions of research cannot be transferred one-to-one to other research areas. However, we hope that, with this contribution, we can provide stimuli for thinking about Knowledge In/Equity. Reflecting on preconceptions and power inequalities is relevant for all forms and fields of qualitative research.

We also know that the question of Knowledge In/Equity should not only focus on how respondents are treated, but also on who is doing research in the first place and how the science system promotes Knowledge In/Equity. It is hardly possible to include both in one article. And yet, in the end, we would like to point out that we had the privilege of being given the freedom to deal with these questions through the fellowship. We were freed for a short time from the otherwise prevailing pressures of the science system (including competition, publication pressure or third-party funding quotas) in the discussion of Open Science and, in our case, Knowledge In/Equity. This kind of freedom is needed much more often in science.

Acknowledgements

Funding program

References

- Anthony J (2011) Conceptualising disability in Ghana: implications for EFA and inclusive education. International Journal of Inclusive Education 15 (10): 1073-1086. https://doi.org/10.1080/13603116.2011.555062
- Artiles A, Dyson A (2005) Inclusive education in the globalization age: The promise of comparative cultural historical analysis. In: Mitchell D (Ed.) Contextualizing Inclusive Education: Evaluating Old and New International Paradigms. [ISBN 978-1-134-36642-2].
- Atkinson P, Coffey A, Delamont S, Lofland J, Lofland L (Eds) (2007) Handbook of Ethnography. SAGE Publications Ltd, London. [ISBN 978-1-4129-4606-3] https://doi.org/10.4324/9780203944769
- Bayer S, Huff M, Lösch T, Steinhardt I, Daniel A, Jansen M (2022) Open Science - Kulturwandel zu einer offenen Bildungsforschung? GEBF 2022. Publisher: OSF. URL: https://osf.io/ysfxu/
- Bivand Erdal M (2019) Open Knowledge Beyond Replicability. URL: https://blogs.prio.org/2019/10/open-knowledge-beyond-replicability/
- Bourdieu P (1977) Outline of a theory of practice. Cambridge University Press, Cambridge. https://doi.org/10.1017/CBO9780511812507
- Bremer H, Teiwes-Kügler C (2013a) Habitusanalyse als Habitus-Hermeneutik. ZQF – Zeitschrift für Qualitative Forschung 14 (2): 199-219. https://doi.org/10.3224/zqf.v14i2.16382
- Bremer H, Teiwes-Kügler C (2013b) Zur Theorie und Praxis der „Habitus-Hermeneutik". Empirisch arbeiten mit Bourdieu: theoretische und methodische Überlegungen, Konzeptionen und Erfahrungen93-127. URL: https://bibliographie.ub.uni-due.de/servlets/DozBibEntryServlet?id=ubo_mods_00064215
- Breuer F, Muckel P, Dieris B (2019) Reflexive Grounded Theory: Eine Einführung für die Forschungspraxis. Springer Fachmedien, Wiesbaden. https://doi.org/10.1007/978-3-658-22219-2
- Brunner C (2020) Epistemische Gewalt: Wissen und Herrschaft in der kolonialen Moderne. transcript Verlag, Bielefeld. https://doi.org/10.1515/9783839451311-004
- Byrne M (2001) The Concept of informed consent in qualitative research. AORN Journal 74 (3): 401-403. https://doi.org/10.1016/S0001-2092(06)61798-5
- Chan L, Okune A, Hillyer R, Albornoz D, Posada A (2019) Contextualizing Openness: Situating Open Science. University of Ottawa Press, Ottawa. URL: http://ruor.uottawa.ca/handle/10393/39849

- Dyson A (2013) Inclusion and inclusions: theories and discourses in inclusive education. In: Daniels H, Garner P (Eds) World Yearbook of Education 1999: Inclusive Education. [ISBN 978-1-136-16610-5].
- Eberth A, Röll V (2021) Eurozentrismus dekonstruieren. Zur Bedeutung postkolonialer Perspektiven auf schulische und außerschulische Bildungsangebote. ZEP: Zeitschrift für Bildungsforschung und Entwicklungspädagogik 44 (2): 27-34. https://doi.org/10.25656/01:23729
- Engelbrecht P, Green L (2018) Introducing key strategies in response to the challenges of inclusive education. In: Engelbrecht P, Green L (Eds) Responding to the Challenges of inclusive education in southern Africa.
- Faulstich P (2011) Aufklärung - Der Zugang zum Wissen und die Macht seines Gebrauchs. Aufklärung - Der Zugang zum Wissen und die Macht seines Gebrauchs https://doi.org/10.3278/REP1102W015
- Flick U (2019) Gütekriterien qualitativer Sozialforschung. In: Baur N, Blasius J (Eds) Handbuch Methoden der empirischen Sozialforschung. [ISBN 978-3-658-21308-4]. https://doi.org/10.1007/978-3-658-21308-4_33
- Grech S (2011) Recolonising debates or perpetuated coloniality? Decentring the spaces of disability, development and community in the global South. International Journal of Inclusive Education 15 (1): 87-100. https://doi.org/10.1080/13603116.2010.496198
- Haskell, S. H. (1998) Inclusive Schooling: The contemporary cultural imperialism of western ideologies. Second International Exhibition and Congress on Rehabilitation.
- Horn C, Scarano N (Eds) (2013) Philosophie der Gerechtigkeit. Texte von der Antike bis zur Gegenwart. [Philosophy of Equity. Texts from Antiquity to the Present.]. suhrkamp taschenbuch wissenschaft, Frankfurt am Main.
- Humm C, Schrögel P (2020) Science for All? Practical Recommendations on Reaching Underserved Audiences. Frontiers in Communication 5 URL: https://www.frontiersin.org/article/10.3389/fcomm.2020.00042
- Johnson RB (1997) Examining the Validity Structure of Qualitative Research. Education 118: 282-292.
- Köpfer A, Powell JW, Zahnd R (2021) Entwicklungslinien internationaler und komparativer Inklusionsforschung. In: Köpfer A, Powell JJW, Zahnd R (Eds) Handbuch Inklusion international: globale, nationale und lokale Perspektiven auf Inklusive Bildung. [ISBN 978-3-8474-2446-8].
- Kruschick F (2021) Ethnografische Forschung in Ghana während der Covid-19 Pandemie: (un-)vereinbar? *Sozialwissenschaftliche Methodenberatung*. URL: https://sozmethode.hypotheses.org/1155
- Küsters I (2009) Narrative Interviews: Grundlagen und Anwendungen. 2. Aufl. VS Verlag für Sozialwissenschaften, Wiesbaden. https://doi.org/10.1007/978-3-531-91440-4
- Lange-Vester A, Teiwes-Kügler C (2013) Das Konzept der Habitushermeneutik in der Milieuforschung. In: Lenger A, Schneickert C, Schumacher F (Eds) Pierre Bourdieus Konzeption des Habitus: Grundlagen, Zugänge, Forschungsperspektiven. [ISBN 978-3-531-18669-6]. https://doi.org/10.1007/978-3-531-18669-6_9
- Mitchell D (2005) Introduction: Sixteen propositions on the contexts of inclusive education. In: Mitchell D (Ed.) Contextualizing Inclusive Education: Evaluating Old and New International Paradigms. [ISBN 978-1-134-36642-2]. https://doi.org/10.4324/9780203606803

- Morrison H, Rahman A (2020) Knowledge and equity: analysis of three models. URL: Preprint http://hdl.handle.net/10393/40664
- Muthukrishna N, Engelbrecht P (2018) Decolonising inclusive education in lower income, Southern African educational contexts. South African Journal of Education 38 (4): 1-11. https://doi.org/10.15700/saje.v38n4a1701
- Quijano A (2000) Coloniality of Power, Eurocentrism, and Latin America. Nepantla. Views from South 1 (3): 533-580.
- Quintero P, Garbe S (2013) Kolonialität der Macht. [Coloniality of Power]. 1st. UNRAST-Verlag, Münster. [In german]. [ISBN 978-3-89771-650-6]
- Republic of Ghana, Ministry of Education (2013) Draft. Inclusive Education Policy. URL: http://www.voiceghana.org/downloads/MoE_IE_Policy_Final_Draft1.pdf
- Rochmyaningsih D (2018) Showcase scientists from the global south. Nature 553 (7688): 251-251. https://doi.org/10.1038/d41586-018-00662-w
- Santos BdS, Nunes JA, Joao A, Meneses MP (2007) Introduction. Opening up the Canon of Knowledge and Recognition of Difference. In: Santos BdS (Ed.) Another knowledge is possible : beyond northern epistemologies. URL: http://archive.org/details/anotherknowledge0000unse [ISBN 978-1-84467-256-1].
- Schindler C, Veja C, Kminek H (2017) Interfacing collaborative and multiple-layered spaces of interpretation in humanities research. The case of semantically-enhanced objective hermeneutics. Digital Humanities 2017 Montréal : Alliance of Digital Humanities. URL: https://dh2017.adho.org/abstracts/DH2017-abstracts.pdf#page=580
- Schütze F (1977) Die Technik des narrativen Interviews in Interaktionsfeldstudien : dargestellt an einem Projekt zur Erforschung von kommunalen Machtstrukturen. Univ., Bielefeld.
- Singal N (2014) Disability, Poverty and Education. Routledge, London. https://doi.org/10.4324/9781315829531
- Singal N, Muthukrishna N (2014) Education, childhood and disability in countries of the South – Re-positioning the debates. Childhood 21 (3): 293-307. https://doi.org/10.1177/0907568214529600
- Steinhardt I (2018) Open Science-Forschung und qualitative Methoden – fünf Ebenen der Reflexion. MedienPädagogik: Zeitschrift für Theorie und Praxis der Medienbildung 32: 122-138. https://doi.org/10.21240/mpaed/32/2018.10.28.x
- Steinhardt I (2020) Learning Open Science by doing Open Science. A reflection of a qualitative research project-based seminar. Education for Information 36 (3): 263-279. https://doi.org/10.3233/EFI-190308
- Steinhardt I, İkiz-Akıncı D (2020) Digitale Bildungspraktiken von Studierenden (DEPS). Daten- und Methodenbericht zur Studie DEPS. DZHW. URL: https://metadata.fdz.dzhw.eu/public/files/data-packages/stu-dps2018$-1.0.0/attachments/dps2018_Data-Methods_Report.pdf
- Steinhardt I (2021) Digitale Praktiken und das Studium. In: Bremer H, Lange-Vester A (Eds) Entwicklungen im Feld der Hochschule. https://doi.org/10.31235/osf.io/rebh7
- Steinhardt I, Bauer M, Wünsche H, Schimmler S (2022) The Connection of Open Science Practices and the Methodological Approach of Researchers. Quantity & Quality online first https://doi.org/10.1007/s11135-022-01524-4
- UNDESA (United Nations Department of Economic and Social Affairs) (n. d.) Convention on the Rights of Persons with Disabilities (CRPD) | United Nations Enable.

URL: https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html

- UNSDG (United Nations Sustainable Development Group) (n. d.) 2030 Agenda - Universal Values. URL: https://unsdg.un.org/2030-agenda/universal-values
- Vicente-Saez R, Martinez-Fuentes C (2018) Open Science now: A systematic literature review for an integrated definition. Journal of Business Research 88: 428-436. https://doi.org/10.1016/j.jbusres.2017.12.043
- Von Unger H (2014) Forschungsethik in der qualitativen Forschung: Grundsätze, Debatten und offene Fragen. In: Unger Hv, Narimani P, M´Bayo R (Eds) Forschungsethik in der qualitativen Forschung. [ISBN 978-3-658-04288-2 978-3-658-04289-9]. https://doi.org/10.1007/978-3-658-04289-9
- Werning R, Artiles A, Engelbrecht P, Hummel M, Caballeros M, Rothe A (2016) Introduction. In: Werning R, Artiles AJ, Engelbrecht P, Hummel M, Caballeros M, Rothe A (Eds) Keeping the promise? Contextualizing inclusive education in developing countries. [ISBN 978-3-7815-2113-1].
- Wikimedia (2017) Strategy/Wikimedia movement/2017/Direction. URL: https://meta.wikimedia.org/w/index.php?%20title=Strategy/Wikimedia_movement/2017/Direction&oldid=18747691
- Wikimedia Deutschland (n. d.) Offen und gerecht! Anstöße zur (selbst-)kritischen Reflexion von Biases im Wissenschaftssystem – Lernraum Freies Wissen. URL: https://lernraumfreieswissen.de/lessons/offen-und-gerecht-anstoesse-zur-selbst-kritischen-reflexion-von-biases-im-wissenschaftssystem/