Disrupted mobility experiences: International students in Germany in times of COVID-19

Carola Bauschke-Urban, Dorina Dedgjoni, Stephanie Michalczyk

Im vorliegenden Beitrag wird untersucht, wie sich im Zusammenhang mit der anhaltenden Corona-Pandemie die Auslandserfahrungen internationaler Studierender in MINT-Fächern in Deutschland verändert haben. Im Kontext der globalen Corona-Krise wurden die Mobilitätserfahrungen internationaler Studierender erheblich transformiert. Die qualitative Studie basiert auf problemzentrierten Interviews mit 32 internationalen MINT-Studierenden, die während der ersten beiden Pandemiewellen in Deutschland (2020-2021) geführt und mit der Grounded Theory Methodologie ausgewertet worden sind. Die empirisch verankerte Datenanalyse wird mit einer transnationalen theoretischen Erweiterung des ungleichheitssoziologischen Kapitalbegriffs von Bourdieu verknüpft, die mit Rückgriff auf das Konzept des Mobilitätskapitals ("Mobility Capital"); eingeführt wird. Die Untersuchung zeigt, dass sich die Pandemie negativ auf die Mobilitätserfahrung von internationalen Studierenden ausgewirkt hat, dies gilt insbesondere für internationale Studierende mit sozialen Benachteiligungen. Der Ertrag, den internationale Studierende sich von einem Auslandsstudium erhofften, wurde durch die Pandemie in weiten Teilen nicht ermöglicht und führte bei den von der Corona-Pandemie betroffenen Kohorten internationaler Studierender zum Teil zu stark beeinträchtigten Mobilitätserfahrungen.

1 Introduction

While the COVID-19 pandemic rapidly became a global public health threat, the higher education sector also came to a temporary standstill. Higher education mobility is broadly considered to lead to positive outcomes (Jungbauer-Gans & Gottburgsen, 2021, p. 5). Similar to Brodersen (2014) who stated an *ideology of mobility*, Bauschke-Urban (2010, 2011) as well as Neusel and Wolter (2017) unpacked the internationalisation of higher education as a requirement for institutionally embraced mobility. Accordingly, despite travel restrictions and general disruptions during the pandemic, universities continued internationalisation activities, even as campus life was largely replaced with digital teaching. Notwithstanding the pandemic-related restrictions, international student numbers reached record highs in some countries as the UK (Kercher, 2021). In Germany, new enrolments of international students declined, but the total number of international students still increased slightly (ibid.). While the *battle for the brains* (Doomernik et al., 2009) continued, the individual experience of studying abroad was

severely affected by lockdowns and social distancing measures. The freedom to "travel anywhere at any time" (Amelina, 2017, p. 43) was disrupted, leading to a general loss of the benefit of studying abroad.

This paper¹ adopts a perspective to explore the temporary experiences of international STEM students during the COVID-19 pandemic in Germany as a certain disruption of their mobility experiences and is framed by the theoretical concept of *mobility capital* (Murphy-Lejeune, 2002). It was taken up to explore the multiple dimensions of international student mobility, which usually results in a range of gains and benefits for students living and studying abroad. Since the pandemic provoked a severe temporary alteration of international students' mobility experiences, the article explores the particular obstacles to the successful accumulation of mobility capital.

2 Mobility capital and the crisis of the COVID-19 pandemic: theoretical perspectives

The objective of this paper is to analyse the experienced limitations of international students' lives and learning processes during the COVID-19 crisis, which led to a potential inversion of their initial intentions and engagement when studying abroad. Next to the change in their learning experience from face-to-face to online settings, where the relevance of going abroad decreased, it is also about the motivation of international students to establish international and intercultural contacts, to learn and practice foreign languages, to enter an attractive labour market with better earning possibilities than in most of their home countries and foremost, to experience an internationally mobile lifestyle that would often lead them to future mobility. Given the consequences of the pandemic, it is debated whether the COVID-19 crisis had the general character of an *immobility turn* (Cairns et al., 2021) and thus negatively affected the benefits of mobility capital accumulation. *Mobility capital* is defined as the way in which "an individual or group takes possession of the realm of possibilities for mobility and builds on it to develop personal projects" (Flamm & Kaufmann, 2006, p. 168).

In her study on European mobile students, Murphy-Lejeune (2002) highlights that each mobility experience is self-enforcing and increases habits and attitudes of benefit to future mobility. Brodersen (2014, p. 99) pointed out that the concept of mobility capital is informed by Bourdieu's (1983, 1988) inequality theory, which includes four distinct forms of capital (economic, social, cultural and symbolic capital). Discussing mobility as a capital, basically is a transnational amplification of Bourdieu's capital theory, which also includes the possibility of conversion into other forms of capital. Cultural and social capital of international mobile students is generated primarily through

¹We thank for the insightful comments of two unknown reviewers, who contributed to strengthen this paper. We also thank Laura Rose Hauser and Ryan Grabijas for proofreading this article.

social networks, communication competence and activities in a foreign language (Brodersen, 2014), but also through access to institutions, infrastructures, foreign higher education certificates and to financial benefits, which are all closely related categories to Bourdieu's differentiation of forms of capital.

The research interest of this paper is directed towards the analysis of inequalities, faced by mobile international students when living abroad, which is closely connected to theories of mobility and immobility. Since the pandemic provoked a disruption of mobility experiences for international students (which lead to a temporary increase of social inequalities and to a multidimensional loss of mobility capital), we consequently related to Bourdieu's concepts of social, cultural and economic capital and broadened it for a transnational frame, which derives from mobility and in the case of this empirical research, from mobility and also disrupted (im)mobility of international students. Distinct from Becker's approach to human capital (1994) and from Putnam's concept of social capital (1995), Bourdieu employed differentiated concepts of capital, habitus and field to analyse social inequalities in order to reproduce and maintain intergenerational privilege and social advantages. Therefore, the paper refers to Bourdieu's inequality theory driven capital approach, which is also the referential background for the current discussion of mobility capital.

By taking up the concept of mobility capital, the paper is focused on if and to what extent social inequalities were enforced for international students during the pandemic and whether they experienced a transformation of their mobility experience. Before the COVID-19 crisis, mobility was seen as a resource for the globalised educational pathways and mobile life patterns of international students. The focus is therefore on changing the scope of mobility as a key feature of globalisation and as a precondition for the internationalisation of higher education. As Bourdieu's capital theory (Bourdieu & Passeron, 1971; Bourdieu 1983, 1988) lacks a global framework, the concept of mobility capital introduces a transnational perspective on capital accumulation, which is also relevant for an understanding of transnational social networks (Vertovec, 2002) as a general framework for highly skilled migration and international student mobility.

Against this background, further mobility aspirations of the international students, their academic success, their social networks and financial security as facets and substantial elements of the gain of mobility capital were analysed. A particular focus was placed on the increase of inequalities, on international students' emotional problems and also on pandemic-related xenophobic experiences, as the pandemic has further exacerbated the (existing) inequalities faced by international students (see Bilecen, 2020; Martel, 2020, Xiong et al., 2020). Against this background, the paper contributes to a reflection of the downturn of international students' mobility capital and draws

attention to the limits of individual mobility gains from studying abroad during the COVID-19 crisis.

3 Literature review: impact of the pandemic on international students

International mobility is highly beneficial for international students and labour markets, especially through the exchange of knowledge and know-how (see King & Raghuram, 2013; Madge et al., 2015). However, the pandemic has fundamentally changed the framework for harnessing international mobility experience through studying abroad. Recent research is dealing with a variety of living and learning conditions of international students, affected by the downturn of spatial mobility.

According to the European University Association (EUA) survey on *Digitally enhanced learning & teaching* (2020), 95 percent of European Universities pivoted to distance learning throughout the institution, while 4 percent offered it only in some faculties. In the summer semester 2020, almost half of the universities (47 %) in Germany switched to exclusively virtual teaching, and almost as many (45 %) higher education institutions favoured a mixed model of face-to-face and virtual teaching (Kercher & Plasa, 2020, p. 4). The lack of internet access, which especially occurred when students temporarily returned to their home countries in the Global South during the lockdown measures, and the digital divide came together with a lack of equipment for online teaching, which often prevented students from fully engaging and participating in online learning (see Adnan & Anwar, 2020; Bilecen, 2020; Jena, 2020; Marinoni et al., 2020).

Further research has shown the negative impact of the COVID-19 crisis on students' mental health, mostly due to disruption, insecurity, anxiety and hopelessness (Amoah & Mok, 2020; Husky et al., 2020; Kaparounaki et al., 2020; Peters et al., 2020). In addition, students who self-isolated in response to the COVID-19 outbreak were more prone to emotional problems than those who did not (see Tang et al., 2020). Largely due to the pandemic-related health crisis and host nationals' fear of the virus, many international students have struggled with social exclusion, xenophobic reactions and an increase in discrimination based on ethnicity, skin colour and culture (see Cohen et al., 2020). According to a 2020 Erasmus Student Network survey, 24 percent of Italian students and 19 percent of Asian students have experienced discrimination based on nationality, either to a great or very great extent (Gabriels & Benke-Aberg, 2020). Chinese international students in particular struggled with stigma and biases in both their home and host countries, which put a strain on students' self-esteem and sense of belonging (Zhou & Li, 2021). COVID-19 also led to greater uncertainty and financial difficulties for some of the international students, mainly due to the loss of their parttime jobs on or off campus (see Bilecen, 2020) and the lack of family and support structures (see Chen et al., 2020).

The engagement of international STEM students in the local German labour market also suffered from the decline in economic capital gains resulting from disrupted spatial mobility. According to a survey conducted by the EUA, almost half of the international students in Europe (40 %) lost their jobs in 2020, and thus relied on family support. This has led to major problems and financial disadvantages for students, with, for example, a large number of Indian students having to take out loans for higher education (Jena, 2020, p. 79). In general, international students were greatly affected by the uncertainties resulting from the COVID-19 crisis and, as a result, became more concerned about their educational and career path (Cohen et al., 2020). This disruption not only resulted in delayed or missed opportunities for further international mobility, scholarship and knowledge generation, but also in a loss of professional advancement and training for students (Aucejo et al., 2020). In the long run, this may further jeopardise their future career prospects and ability to compete in the labour market.

Due to the pandemic situation in Germany, face-to-face teaching has been replaced by remote and hybrid teaching and learning. This had a huge impact on the way students conducted their studies and on how they organised themselves. At the beginning, the transition to digital teaching was difficult for most students, as 80 percent of those students enrolled at German higher education institutions reported having a heavier workload (Aristovnik et al., 2020, p. 9). Adnan and Anwar (2020, p. 48) conclude that only a minority of students find online learning more motivating than face-to-face learning environments. In contrast to the predominantly negative effects of the pandemic, students also report positive outcomes of online learning, such as beneficial learning experiences with pre-recorded lectures, an increased amount of written feedback from lecturers, more time for additional learning interests and a better work-life balance (see Almendingen et al., 2021; Varadarajan et al., 2021).

In summary, recent research reflects the impact of the COVID-19 crisis on international students in a variety of aspects, such as the radical digital shift towards online learning environments, which often leads to demotivation and social isolation among students. Another aspect is the loss of students' part-time jobs, which led to financial difficulties and a general decline in optimism for the future. Consequently, a general loss of the benefits of international students' spatial mobility was observed, which resulted in a decline in the opportunities to accumulate and convert the gains from spatially bound mobility capital, which is a key feature of international students' learning and living experiences.

4 Methods

The conducted research for this paper² was driven by the observation that the international students we were in contact with in the run of a larger longitudinal study and who were interviewed twice before and during the pandemic, were clearly negatively affected by the crisis. The focus was exclusively on international students enrolled in Bachelor's and Master's degree programmes in the STEM field at three universities of applied sciences in Germany. The majority of the interviewees were postgraduates, pursuing a master's degree taught in English.

The first round of pandemic-related interviews was conducted between July 2019 and May 2020, with follow-up interviews taking place between October 2020 and June 2021. Some of the initial interviews took place during the first lockdown in 2020, while the others were conducted during the second wave of the COVID-19 crisis in Germany. The findings are based on data derived from problem-centred interviews (Witzel & Reiter, 2012; Witzel, 2000), the focus of which was directed on the impact of the pandemic on the everyday life and learning conditions of international students in Germany. The problem-centered interview (Witzel, 2000) is an exploratory qualitative interview format, directed towards a certain problem, aiming to generate subjective perspectives of the interviewees. The conducted problem-centred interviews started with an open question, which addressed the experiences of the international students during the pandemic. In almost all cases, this approach generated a freely developed narrative flow accentuated by the interviewees themselves. The semi-narrative approach of problem-centred interviews provides a well-adjusted and flexible concept for generating data from multilingual samples at different language levels. This is a clear advantage over fully open interview methods such as narrative approaches (e.g. Chase, 2011; Fischer-Rosenthal & Rosenthal, 1997; Küsters, 2009), which are not only shaped by Western-centred concepts of subjectivity and biography, but also lack the flexibility to adapt the data generation process to highly diverse samples with different levels of foreign language proficiency.

The problem-centred approach was structured by the following perspectives: After the opening section of the interviews, semi-structured questions were asked about international mobility experiences, digital learning during the pandemic, students emotional and financial aspects and the impact of the pandemic on their future career and personal life.

²The data was generated and analysed in the frame of the BMBF-funded research project *Migration*, *Diversity and Institutional Change in the STEM field* (Migration, Diversität und sozialer Wandel in den Ingenieurwissenschaften. Miglng) BMBF FKZ: 01UM1821Y at Fulda University of Applied Sciences (01/2019-08/2022). Principal investigator: Carola Bauschke-Urban, researchers: Dorina Dedgjoni and Stephanie Michalczyk (URL: https://miging.de/).

The research focus on the experiences of international STEM students during the pandemic was embedded in the larger context of a longitudinal research on the study experiences of international students in the STEM field with a subsequent focus on the study pathways of international STEM students at German Universities of Applied Sciences with regard to their entrance into the labour market.

A total of 32 interviews with international students were conducted and subsequently analysed with grounded theory methodology (Strauss & Corbin, 1996). To ensure the anonymity of the interviewees, students' real names have been changed and the study programmes in the STEM field were not mentioned. Focusing on the experiences of international STEM students during the pandemic, our interview sample is heterogeneous and consists of 18 females and 14 males from 18 different countries all over the world, most of them from the Global South. The participants mainly come from highly educated, upper-middle class families, who in some cases also support their children financially during their studies (regarding this phenomenon, see King et al., 2011). The family status of the interviewees includes both single and married students with or without children. Our interviewees also differ in terms of their length of stay (from a few months to several years) and their foreign language skills in German as well as in English. Therefore, the diversity of the sample also resulted in multilingual interviewing in English and, as an option, interview participation in German was offered as well.

The data was analysed according to the grounded theory methodology, which provides an analytical tool to understanding actions of individuals in experienced social situations (Strauss & Corbin, 1996). The main methodological principles of Grounded Theory include theoretical sampling, constant comparative analysis of data, elaboration of memos and codes (ibd.; Strübing, 2004). Theoretical sampling is one of the differentials in relation to other qualitative research designs. Since the data collection was already embedded in a follow-up interview setting, it was not possible to make changes in the primary qualitative sample. Instead, an additional focus on the international study experience during the pandemic was added to the larger context of the Migling study, since the internationalisation of the higher education system faced substantial transformations after the unexpected outbreak of the pandemic, which evidently could not be ignored in a research which is directed to international students' study situation in the STEM field in Germany, which happened to be partially situated during the pandemic in the course of the project time.

As the initially generated sample of a group of different international students from the STEM field in German Universities of Applied Sciences had gained experiences in relation to the research phenomenon *transition of international students' study experiences abroad during the pandemic*, it was accepted to let the sample constant,

whereas the research focus had to be broadened in order to fully introduce the transformed study situation of international students in the STEM field after the outbreak of the pandemic.

According to the approach of Strauss and Corbin (1996), grounded theory methodology is conducted by constant analysis and comparisons. The instruments of writing memos and generating codes profoundly contribute to developing a theory. Coding is the procedure, in which data is conceptualised for data analysis. In a first step, the data is analysed line-by-line (open coding), which is further developed by conceptual comparison and grouping of the coding segments (axial coding). In this process, knowledge is generated in a mode of comparison, analysis and further categorisation, of which a core category is emerged (selective coding), which conceptualises the main concern of the study (disrupted mobility experiences of international students during the pandemic). Throughout this process, literature was subsequently used for developing the emerging theory by comparing the data immanently with each other, but also with already existing knowledge and theoretical frames (Kelle, 2007; Strauss & Corbin, 1996; Strauss 1998).

The qualitative combination of a problem-centred research approach with data analysis according to grounded theory methodology allows to highlight subjective reflections and individual impact of the pandemic for international STEM students in Germany; yet, the presented findings are not representative.

5 Transformations of mobility capital: empirical findings

In the following section, five main aspects of the change in the mobility experiences of international students are reflected. Since the interviewees in our sample typically like to travel, which is highly relevant for the international experience of studying and living abroad, we firstly examined the pandemic-related changes in students' attitudes towards future mobility projects. The second part of the empirical discussion focused on the complex social, motivational and emotional consequences of distance teaching and learning. Thirdly, the economic consequences of the pandemic for international students are addressed, which is followed by a fourth section on changes in social relation and cultural participation during the pandemic. Fifth, the influence of a xeno-phobic discourse on the lived experiences of our interviewees is discussed.

5.1 "I didn't get the complete experience"

The problem-centred data collection process revealed a general enthusiasm for travel and other forms of mobile lifestyles. In general, all of our interviewees considered travelling to be a highly motivating and fascinating aspect of studying abroad. As

Murphy-Lejeune (2002) pointed out, both past and further mobility strategies are essential features in the lives of international students, as mobility is considered of high relevance for the constitution of mobility capital. Thus, the international students perceive themselves as global travellers and look back to their previous mobility experiences as essential for developing and imagining their future lifestyles:

"I used to travel from different cities to (other) cities very often.

So, I would also like to travel over all the world if I get an opportunity."

(Ranvir, male Master's student from India, I1, 449–451)

The first interview with Ranvir, which took place before the pandemic, reflects the intention of many other international students, who dreamed of further mobility experiences during or after their studies in Germany. The sudden outbreak of the pandemic significantly curtailed their already existing mobility prospects. Moreover, the dramatic change in the situation has led to a general uncertainty about travelling and moving further towards other higher education institutions abroad:

"I came back to X-Town for my Erasmus because I wanted to go to Z-Town in Italy. [...]

And then I decided to travel to Z-Town for my exchange semester.

It was a hard decision to be honest. Because I didn't know what will happen, and Corona, and everything. [...] So [...] I was scared, but it was exciting."

(Hala, female Master's student from Jordan³, I2, 59–75)

Hari, a male Master's student from India, explained in his interview that, for him, travelling to different places is an essential experience of studying abroad. However, as a result of the crisis that accompanied the COVID-19 pandemic, future mobility opportunities became increasingly limited and signified the mutual disruption of the desired mobility experiences:

"I love traveling, so this was like the start of a new adventure. So I was just like, "Yeah, let's just...let's see where we go. Let's see what we do. Let's explore Germany. Let's explore ...

if only coronavirus hadn't happened, I'd have been traveling. I actually wanted to go to Italy pretty badly. Italy, I wanted to go to Spain. I wanted to go to so many places. But now ... yeah, now you can't."

(Hari, male Master's student from India, I2, 1203–1209)

³Our cordial thanks go to all international students, who accepted to conduct interviews in the context of the BMBF (German Ministry of Education and Research)-funded research project Miglng. All names of the interviewees are thoroughly anonymised. In order to make any personalisation of the interviewed international STEM students impossible, we neither gave information on the selected higher education institutions nor on the study programmes the interviewees were affiliated with. In case of countries of origin with small numbers of interviewed international students, information on home countries was spared out. All unmentioned world regions of origin with small case numbers are situated in the Global South.

Similar to Hari, the initial expectations of living independently as an international student and being able to move freely from place to place were gradually disappointing for most interviewees and resulted in an actual loss of mobility capital. The experience of studying abroad was clearly limited, as the pandemic prevented the interviewees in our sample from having the *full mobility experience* they originally expected while studying abroad. In conducting the interviews with the students during the first and second waves of the COVID-19 crisis in Germany, we observed that increasing difficulties in developing *the taste for living abroad* (Murphy-Lejeune, 2002) became the rule and diminished the desired experiences previously coming along with mobility:

"Germany, the majority of my experience in Germany has been during the pandemic. I do regret the fact that there's a pandemic and that I didn't get the complete experience. That can't be helped. That's just the way things are."

(Hari, male Master's student from India, I2, 227–233)

Finally, study-related mobility experiences, such as Erasmus and exchange semesters, also suffered from the immobility turn, forced by the pandemic, which resulted in organisational impact due to mobility restrictions and in a severe loss of international and intercultural students' experiences. Furthermore, in some cases, even exchange programmes, which represent an attractive feature of an international study experience, had to be cancelled. Consequently, this marked a loss in the internationalisation features of the higher education institutions and implied disadvantages for international students' further mobility expectations and experiences.

"This semester, the third semester, is supposed to be our away semester. But because of the pandemic, our abroad semester was canceled, and now we have to take classes at our university. [...] We applied for the university in Norway. And yeah, they decided to just cancel this semester. [...] But my other colleagues, they were lucky to have ... even though they didn't go away to the ... where they're supposed to go, but they're taking classes from their universities."

(Cristina, female Master's student from Mexico, 12, 62-73)

5.2 Digital learning during the pandemic

In this section, the focus is set on the entanglement of internationally acquired symbolic and cultural capital in the context of international students' mobility, which are core features for the gain of mobility capital. Especially at the start of the pandemic, the international students faced both technical as well as connectivity challenges. This was particularly evident among students from the Global South, who returned to their families and stayed in places where internet connectivity was not always reliable for longer periods of time. Even from students in the STEM disciplines, the switch from

face-to-face to online communication was perceived as a severe barrier for international students, since they often could not attend classes and had problems of language perception, which also occurred more often than in the context of campus teaching. However, some of the interviewees reported some gains from online communication, which became more established during the pandemic. They also mentioned benefits, such as a greater flexibility in time and place, which led to an increased independence and provided more options for them.

The implementation of distance teaching and learning as a substitute for on-campus study had multiple effects. In addition to the loss of physical and spatial proximity, graduating on time as a gain of international symbolic capital became more difficult for the students, and often resulted in longer periods of studying (see also Falk, 2021). Successful completion of a degree programme abroad within the standard period of study is perceived as one of the key factors for the success of international students abroad, as many of our interviewees reported to us. In so far, also prompt graduation constitutes a key feature for the gain of mobility capital. This is especially relevant for students with limited financial resources, as each extension causes additional costs and leads to a growing loss of individual reputation at home. Furthermore, students articulated the fear that a delayed graduation could also have a negative impact on their future educational success and employment prospects since the gain of symbolic capital has to be postponed. This practically implies a severe loss of the usually promising features of mobility capital, which formerly used to be easily convertible from symbolic to economic capital during a study stay abroad, which is a transnationally embedded process. Thus, the pandemic implied a severe disruption and endangerment of these - previously far leading mobility experiences, which were convertible in other forms of capital with more ease before the outbreak of the pandemic.

The students also missed opportunities to acquire foreign language skills gains in the online learning environments, which is also an important feature of the gain of cultural capital abroad, leading to a finally successful acquisition of mobility capital. The lack of opportunities to practice language skills in the classroom was followed by increasing comprehension problems in online learning environments. Digital formats of teaching and learning could also hardly replace hands-on learning experiences in laboratories, which led to an overall reduction in the benefits of studying abroad for international students and again, to a loss of mobility and a severe disruption of the originally desired mobility experience.

German universities of applied sciences offer excellent conditions for practical work in laboratories, the international recognition is especially true for the STEM field. Cooperations with local engineering companies and the provision of well supervised work placements also make studying in Germany highly attractive for international students.

However, the opportunity to gain initial practical experience in the German STEM field was again affected by the outbreak of the COVID-19 pandemic. Above all, the desire to gain practical experience was a driving force behind their decision to study at a university of applied sciences in Germany.

Michele, a female Bachelor's student from the USA, describes the compensation strategy of her university as follows:

"We had, instead of the "Praktika" (internships), that we were supposed to do in the university, we basically had to read theoretically, what the thing would be about, and then, we had to write a protocol about it. It's [...] all different because of Corona."

(Michele, female Bachelor's student from the USA, I2, 646-655)

In the context of the digital transformation of teaching and learning, the comprehension and use of texts have become more important in most STEM teaching strategies, which subsequently leads to difficulties for international students with low language skills (see also Marinoni et al., 2020). Yet, even work placements became harder to gain, which resulted in cumulative effects for the mobility experiences. Students were often confronted with various challenges in the first pandemic semester, which led to a large number of postponed exams and increased pressure on international students' life-cycles. Most students were unable to carry out practical exercises in the laboratory during their studies. Similarly, Xin, a female Master's student from China reported that she was unable to write on her thesis due to not having access to laboratory facilities:

"This year it's pretty difficult because of Corona, we are not allowed ... since two months we are not allowed to work in the laboratory. [...] And that's why, these two months, I can't work on my thesis."

(Xin, female Master's student from China, I2, 204-211)

Jena (2020, p. 79) concluded that learners from low-income families and disadvantaged groups are more likely to suffer from digitalisation, as they may not be able to afford high-speed internet connection or the required technical gadgets for online learning. Many of the interviewees, who travelled back to their home countries, were confronted with a restrictive access to connectivity and therefore, faced challenges in obtaining the provided study materials.

In addition to difficulties with technical requirements, many students also refer to problems with self-organised work, which often resulted in a lack of concentration and motivation in a more flexible working arrangement. The sudden individualisation of the learning settings generally required high competence in dealing with digital communication devices. Also, individual competence for taking self-responsible

choices for spending attention at learning was requested. However, many of the interviewed international students reported how they got lost in the temporarily lesser framed digital learning environments:

"I lost sometime attention in between the lectures that, if something is on the window or, I would say, on the mobile came, then I just lost my attention."

(Adnan, male Master's student from Pakistan, I2, 565–567)

In particular, the lack of face-to-face communication with teachers and students was frequently mentioned. In this regard, Shadi, a female Master's student, described how she struggled with understanding contents in digital environments:

"[I]f I had been in the lecture room, I could ask the next neighbor, right, left, front, back, what that means.

And it can easily come about in another routine. [...] For example, you can't read Prof's script when she's writing something, okay? In the lecture room then you can easily ask."

(Shadi, female Master's student from Iran, I2, 176–182)

Digital learning also led to indirect effects, especially for female international students, particularly those with young children, who often found themselves pushed back into traditional gender patterns during the COVID-19 crisis (see Speck, 2020). For instance, Liliana, a female Master's student from Bulgaria and mother of a young child, encountered difficulties with her studies, because childcare facilities were closed during the pandemic, which also prevented her to explore more options to successfully gain gendered features of mobility capital:

"Um no, that was very exhausting. Yes. And there was no chance. I've tried it, but when I sit down at the computer, she comes to me and wants to sit down next to me, so that she also watches that she clicks the mouse or does something on the keyboard. That (laughing) doesn't work at all. I can't concentrate at all."

(Liliana, female Master's student from Bulgaria, 12, 496-503)

5.3 Financial struggles

During the COVID-19 crisis, enterprises offering job opportunities for students were largely shut down, leaving many of them to live on a very low income (see also Aristovnik et al., 2020; Bilecen, 2020). While many of our interviewees are partially or fully supported by their parents, some had to live on private savings. Nevertheless, most of the students in our sample relied on income from part-time student jobs, which enabled them to compensate for global income inequalities and afford to study in Germany. Even before the pandemic, some of the international STEM students in our

sample were in a precarious financial situation, characterised by a general imbalance in access to economic capital between domestic and international students. Yet, also the benefits from the salary of jobs from deskilling fields (Kofman, 2012; Kofman & Raghuram, 2015), turned out to be perceived by the mobile students as one of the general gains from mobility capital.

The outbreak of the COVID-19 crisis was broadly disruptive to almost all interviewees, particularly those coming from the Global South, many of whom reported living on very low incomes due to the loss of part-time jobs. Their economic uncertainty increased as their personal and family savings were running out in the midst of the pandemic. Consequently, many of the students had to take out loans, creating additional financial burdens and potential long-term hurdles for their future prospects. Evelina, a female Bachelor's student from Lithuania describes her precarious financial situation during the pandemic as follows:

"How finance has changed is, that I lost a lot of my part-time jobs. [...] I only have the credit and my other earning opportunities are still down."

(Evelina, female Bachelor's student from Lithuania, I2, 228–291)

However, some of the international students in our sample reported applying for a so-called *KfW* (Credit Institute for Reconstruction) student loan, a low interest loan, designed to cover basic economic needs of students in Germany. For instance, Alisha, a female Bachelor's student from India shows how she was able to rely on this loan, after experiencing difficult economic times:

"And then I have definitely taken a loan to finance my education now. I was working and then I lost my job. [...]

And it was a setback for me for like, for four or five months"

(Alisha, female Bachelor's student from India, 12, 451–455)

In conclusion, the pre-existing economic inequalities faced by international students have increased during the pandemic, which will also have long-term effects on their academic success.

The findings of our study show once again that the gain of cultural and symbolic capital in higher education is closely linked to the conversion of economic capital (Bourdieu, 1983), which is especially true for international students who severely suffered from losing income opportunities while sustaining their costly studies abroad. As a consequence, also the temporarily endangered access to income sources during the pandemic led to a particular loss of international students' mobility capital. This also resulted in the fear of having to face long-term effects of diminishing career opportunities abroad. However, the exploration of long-term effects of the pandemic

on international STEM students career chances needs further exploration. Since the academic success of international students is highly dependent on their financial situation in the host countries and in the financial possibilities of their families, further research on the economic situation of international students is necessary.

5.4 Social isolation and temporary return mobility

Since establishing contacts and relationships abroad is particularly important for international students, the temporary increase of social isolation was an experience of hardship for the interviewees. The development of social capital is also beneficial for the gains derived from international student mobility, which also provides options for developing cross-border networks. Social relations influence the well-being of international students as well as the frequent use of a foreign language. Accumulating social capital (Bourdieu, 1986) was particularly difficult for international students during the pandemic, as they were severely affected by contact restrictions and the lack of face-to-face communication in digital learning environments. Therefore, they were more affected by the consequences of social isolation compared to domestic students.

"I stay all the time in my room, so, sometimes, I feel like being discouraged from concentration on my study.

So, sometimes, I will spend like hours watching movies."

(An, male Master's student from Vietnam, I2, 724–727)

Loneliness and depression also had an overall influence on the life of the international STEM students during the pandemic. They especially related their worries and pessimism towards their expected future work perspectives. For instance, Baju, a male Bachelor's student, openly expressed his worries about his future employment prospects, which he feared for his post-pandemic life when interviewed during the lockdown measures:

"So what comes my way now, for example, what is in the future, will be a difficult situation for me, maybe later because of job search. If only if this corona doesn't end, right?"

(Baju, male Bachelor's student from Indonesia, 12, 937–941)

For some of our interviewees, a temporary return to their home countries was a reaction to their miserable and isolated situation they were confronted with in Germany. In this regard, Wilczewski et al. (2021) found that a temporary return to international students' countries of origin was mostly perceived as socially and emotionally beneficial. Similarly, all students in our sample, who returned and were allowed to travel during the pandemic, were in favour of returning to their home countries, since this

offered an escape from the unexpected and radically changed living conditions they were confronted with during the lockdown situation in Germany:

"It was actually much, much better back there. Like the cases were really low. The infection rate was really low.

And people were just socializing and quite... It was much, much better than here in Germany".

(Adnan, male Master's student from Pakistan, I2, 680–683)

The shared temporary return experiences of the international STEM students correspond with Kercher's (2021) findings for Germany. In a comparative study on the effects of the pandemic on international student mobility, cross-national data of the four main receiving countries of international students was compared. The study found a wide variety of temporary return patterns of international students due to a variety of globally existing travel restrictions. In the case of Germany, where only basic entry bans existed, special permits for the entry of scientists and international students were introduced after June 2020, which contributed to an increase of options for the choice of international students whether to stay in Germany or to return to the home country during the pandemic.

5.5 Increase of racism

The outbreak of the COVID-19 pandemic increased racist attitudes towards international students. In particular, international students from China and Asia had to face hatred and racism (see Allen & Ye, 2021; Peters et al., 2020, p. 972). When the novel COVID-19 pandemic first broke out in China, racial projections were mainly directed against persons, who were blamed for their supposed *Chinese appearance*. This particular racism was a global phenomenon and did not only occur in Germany. For example, Cohen et al. (2020) explored this matter in the USA, stating that especially Asian and Asian-American students experienced an increase in racial discrimination (see also: Rzymski & Nowicki, 2020, p. 374). A racist narrative about the virus *from abroad* developed into a whole stigmatising discourse on international students, as "potential carriers of the disease" (Ivic & Petrovic, 2020, p. 430). The rise of this particular racism was also reflected in the experiences of our interviewees. Hari, a male Master's student from India described his experience as follows:

"So while I'm walking, I'll be walking on one side of this ... like this forest path, and then there'll be like a person coming from the other side. They'll see me, and they'll pull their mask up.

And I don't know whether it's happening because I'm a foreign student or because, you know, these people are genuinely concerned that, you know, I might be carrying corona or something, but I've seen this happen.

Some people do it. Some people don't. And it makes me feel a little weird. Like is this ... you know, are you ... is there some sort of message you're trying to send me?

Some sort of ... you know, is this ... I don't want to use the word racism, but at the same time, it does feel a little weird. And that's not to say that I have not done it.

I do the same thing, but only in the city. I don't do it, you know, out in the middle of the forest "

(Hari, male Master's student from India, I2, 1103–1119)

Hari's narrative illustrates that the COVID-19 discourse was also been linked to a certain racist public discourse (Ivic & Petrovic, 2020, p. 429), which led to an experience of being stigmatised and embodied as *the other* (see e. g. Reuter, 2015). Although it cannot be clarified whether the situation in the forest was clearly directed against Hari's Indian origin and skin colour, the episode shows how unsafe and uncomfortable international students felt during the global pandemic. This is mainly due to the fact that there was reason to assume that a xenophobic finger-pointing was going on. And international students in Germany found themselves trapped in unexpected situations, like Hari, who reported how he got into an uncomfortable situation while taking a walk in a forest.

6 Conclusions

The grounded theory discussion of problem-centred interviews with international students from the STEM field focused on the disruption of mobility experiences of international students during the COVID-19 crisis in Germany from a multi-level perspective. In general, the pandemic had negative effects and increased inequalities for mobile students in the STEM field, especially for those from disadvantaged backgrounds. Overall, the benefits of studying abroad were reduced, which led to a sudden shift of teaching and learning environments towards digitalisation as a notable side effect of the pandemic. In the STEM field, especially practical experiences in laboratories were confronted with the sudden loss of spatial embeddedness, as it was no longer possible to enter the laboratories on campus. Especially in the field of the engineering sciences at German universities of applied sciences, international students' practical expectations for their studies abroad were particularly high. Since the empirical findings of this paper result from a grounded theory analysis of qualitative interviews with international students from the STEM field, the overarching concept disrupted mobility experiences was emerged from five axial concepts: 1) lost mobility experiences, 2) digital learning effects, 3) financial struggles of the international students, 4) social isolation and temporary return, 5) experiences of racism. First, the international students suffered from a general loss of mobility opportunities that they intended to have had during their stay in Germany. Second, the digital learning experience profoundly changed their study experience abroad. While there was an increase of chronological and spatial independence, digital learning environments led to student's fear of ending up in longer study periods, a loss of practical experience in laboratories and work placements, increased comprehension problems for international students in digital learning settings and reduced communication opportunities with teachers. International students also stated that they tend to get lost in the loosely structured digital learning environments in terms of motivation and successful selforganisation. Gender-specific effects were also observed, with an increase in the unequal distribution of family responsibilities among female parents out of the international students (e.g. Speck, 2020). Third, the international students reported severe financial struggles as many of them lost their jobs and were forced to take out loans. Fourth, the accumulation of social capital (Bourdieu, 1986) was reduced and the international students often suffered from emotional problems and pessimism about their own professional future and employability. Also, most of the international students from the STEM field in our sample chose to temporarily return to their home countries during the German lockdown in 2020. Fifth, Asian interviewees in particular reported experiences of racism, which seem to have increased among international students during the pandemic. Racism and resentments towards Asian-looking international students have also been observed in other empirical studies on international students' experiences during the pandemic (e.g. Allen & Ye, 2021; Cohen et al., 2020; Ivic & Petrovic, 2020; Peters et al., 2020; Rzymski & Nowicki, 2020).

All in all, the pandemic had a large impact on international students. As a result, the overall gains from studying abroad that international students originally sought in the German STEM disciplines, were largely diminished. The intended gains and contributions to the successful transnational accumulation of mobility capital (Brodersen, 2014; Flamm & Kaufmann, 2006; Murphy-Lejeune, 2002) were reduced and as a consequence, the pandemic led to a temporary disruption of mobility experiences among the current cohorts of international students in the STEM disciplines.

The freedom to "travel anywhere at any time" (Amelina, 2017, p. 43) and the barriers against being able to move freely, which had been core principles of the international higher education experience for decades, were largely curtailed during the COVID-19 crisis. As a consequence, international students found themselves in a greatly transformed situation, either returning temporarily to their home countries or living in an isolated and lonely situation in their place of residence in Germany. The decision of international students to stay or return during the pandemic was also studied by Falk (2021). Her findings pointed out that a reasonable number of international students did not spend the summer semester 2020 in Germany, but returned temporarily to their countries of origin. Falk also showed that a high number of international students,

especially at MA level, indicated a need to extend their studies as necessary compensation for the pandemic experience.

Although the three universities of applied sciences we studied worked intensively and successfully on immediate strategies to compensate the impact of the general disruptions of campus life and learning structures during the pandemic, the previous spatial embedding of higher education teaching and learning could not be satisfactorily replaced by the rapidly implemented digital learning environments. The pandemic thus resulted in a high number of postponed exams and the negative effects of the pandemic on emotional well-being, motivation and learning outcomes of international students could also not be compensated immediately. In addition to the reduced practical benefits of studying in the STEM field at a German university of applied sciences in the course of the pandemic, intercultural encounters as well as the frequent use of foreign language skills in social contexts on campus, among friends and at work were limited by the general contact restrictions, which were necessary to reduce the fundamental and global health risk posed by the pandemic. Another, possibly temporary, effect was that the international students' attitudes towards their own future prospects were negatively affected, as finding a job proved to be a particularly challenging task at that time.

In light of the discourse on the general benefits of internationalisation of higher education and the mobility of international students (Jungbauer-Gans & Gottburgsen, 2021; King & Raghuram, 2013; Madge et al., 2015), it must be concluded that the pandemic had the character of an immobility turn (Cairns et al., 2021) for the higher education institutions. This reduced the attractiveness of an academic experience abroad, although the overall numbers of international students enrolled in Germany did not decline (Kercher, 2021). All in all, the opportunities to acquire *mobility capital* were severely limited for international students, especially in the early stages of the pandemic.

In summary, this leads to the conclusion that the cohorts of international students who studied abroad during the pandemic, suffered to a greater or lesser extent from its manifold effects. At least temporarily, the hopes and intentions of international students to study abroad were affected by the general standstill, which disrupted the mobility experiences of international students to a certain extent during this period. As this research is limited to a cross-sectional perspective during the first and second waves of the global pandemic in Germany in 2020 and early 2021, further research on the long-term effects of the pandemic and its consequences for international student mobility is needed.

References

Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45–51.

Allen, R. M., & Ye, Y. (2021). Why Deteriorating Relations, Xenophobia, and Safety Concerns Will Deter Chinese International Student Mobility to the United States. *Journal of International Students*, 11(2), i–vii.

Almendingen, K., Morseth, M. S., Gjølstad, E., Brevik, A., & Tørris, C. (2021). Student's experiences with online teaching following COVID-19 lockdown: A mixed methods explorative study. *PLoS ONE, 16*(8), e0250378.

Amelina, A. (2017). *Transnationalizing Inequalities in Europe. Sociocultural Boundaries, Assemblages and Regimes of Intersection.* London/New York: Routledge.

Amoah, P., & Mok, K. H. (2020, June). *The COVID-19 Pandemic and Internationalisation of Higher Education: International Students' Knowledge, Experiences, and Wellbeing.* Higher Education Policy Institute.

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective. *Sustainability*, *12*(20), 8438.

Aucejo, E. M., French, J. F., Ugalde Araya, M. P., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of public economics*, 191, 104–271.

Bauschke-Urban, C. (2010). *Im Transit. Transnationalisierungsprozesse in der Wissenschaft.* Reihe: Geschlecht und Gesellschaft. Wiesbaden (VS Verlag).

Bauschke-Urban, C. (2011). Mobile Wissenschaftlerinnen. Transnationale Verortungen und biografische Perspektiven. In C. Bauschke-Urban & S. Metz-Göckel (Eds.), *Transnationalisierung und Gender* (pp. 81–89). Schwerpunktheft 01/2011; 3. Jg. der Zeitschrift Gender. Geschlecht, Kultur und Gesellschaft.

Becker, G. S. (1994). *Human capital. A theoretical and empirical analysis, with special reference to education* (3. ed., [reprint]). Chicago, III.: The Univ. of Chicago Press.

Bilecen, B. (2020). Commentary: COVID-19 Pandemic and Higher Education: International Mobility and Students' Social Protection. *International Migration*, 263–266.

Bourdieu, P. (1983). Ökonomisches Kapital – Kulturelles Kapital – Soziales Kapital. In R. Kreckel (Ed.), *Soziale Ungleichheiten* (pp. 183–198). Göttingen: Otto Schwartz & Co.

Bourdieu, P. (1986). The Forms of Capital. In J. G. Richardson (Ed.), *Handbook for Theory and Research for the Sociology of Education* (pp. 241–258). Westport: Greenwood.

Bourdieu, P. (1988). *Homo academicus*. Frankfurt/Main: Suhrkamp.

Bourdieu, P., & Passeron, J.-C. (1971). Die Illusion der Chancengleichheit: Untersuchungen zur Soziologie des Bildungswesens am Beispiel Frankreich. Stuttgart: Klett.

Brodersen, M. (2014). Mobility: Ideological Discourse and Individual Narratives. In J. Gerhards, S. Hans, & S. Carlson (Eds.), *Globalisierung, Bildung und grenzüberschreitende Mobilität* (pp. 93–108). Springer VS, Wiesbaden.

Cairns, D., França, T., Calvo, D.M., & Azevedo, L. (2021). An immobility turn? The Covid-19 pandemic, mobility capital and international students in Portugal. *Mobilities*, *16*(6), 874–887.

Chase, S. E. (2011). Narrative inquiry: Still a field in the making. In N. K. Denzin & Y. S. Lincoln (Eds.), *The sage handbook of qualitative research* (pp. 421–434). Thousand Oaks, CA: Sage Publications.

Chen, J. H., Li, Y., Wu, A. M. S., & Tong, K. K. (2020). The overlooked minority: Mental health of International students worldwide under the COVID-19 pandemic and beyond. *Asian J. Psychiat*, *54*, 102333.

Cohen, A. K., Hoyt, L. T., & Dull, B. (2020). A Descriptive Study of COVID-19-Related Experiences and Perspectives of a National Sample of College Students in Spring 2020. *Journal of Adolescent Health*, *67*, 369–375.

Doomernik, J., Koslowski, R., & Threnhardt, D. (2009). *The battle for the brains. Why immigration policy is not enough to attract the highly skilled.* Washington, D.C.: The German Marshall Fund of the United States.

EUA. (2020). *BRIEFING: European higher education in the Covid-19 crisis*. Retrieved 10.06.2021 from https://eua.eu/downloads/publications/briefing_european%20 higher%20education%20in%20the%20covid-19%20crisis.pdf

Falk, S. (2021). Internationale Studierende an deutschen Hochschulen während der Corona-Pandemie (IHF Kompakt, April 2021). Bayerisches Staatsinstitut für Hochschulforschung und Hochschulplanung (IHF). Retrieved from https://www.ihf.bayern.de/fileadmin/user_upload/Publikationen/IHF_Kompakt/IHF-kompakt-April-2021.pdf

Fischer-Rosenthal, W., & Rosenthal, G. (1997). Narrationsanalyse biographischer Selbstpräsentationen. In R. Hitzler & A. Honer (Eds.), *Sozialwissenschaftliche Hermeneutik* (pp. 133–164). Opladen: Leske & Budrich (utb).

Flamm, M., & Kaufmann, V. (2006). Operationalising the Concept of Motility: A Qualitative Study. *Mobilities*, 1(2), 167–189.

Gabriels, W., & Benke-Aberg, R. (2020). Student Exchanges in Times of Crisis – Research report on the impact of COVID-19 on student exchanges in Europe. Erasmus Student Network AISBL.

Husky, M. M., Kovess-Masfety, V., & Swendson, J. D. (2020). Stress and anxiety among university students in France during Covid-19 mandatory confinement. *Comprehensive Psychiatry*, *102*(4), 152191.

Ivic, S., & Petrovic, R. (2020). The Rhetoric of Othering in a Time of Pandemic: Labeling COVID-19 as a 'Foreign Virus' in Public Discourse. *Kultura Polisa*, 17(43), 421–433.

Jena, P. K. (2020). Impact of Covid-19 on higher education in India. *International Journal of Advanced Education and Research*, *5*(3), 77–81.

Jungbauer-Gans, M., & Gottburgsen, A. (2021). *Migration, Mobilität und soziale Ungleichheit in der Hochschulbildung*. Wiesbaden: Springer VS.

Kaparounaki, C. K., Patsali, M. E., Mousa, D. P. V., Papadopoulou, E. V. K., Papadopoulou, K. K. K., & Fountoulakis, K. N. (2020). University students' mental health amidst the COVID-19 quarantine in Greece. *Psychiatry Research*, *290*, 113111.

Kelle, U. (2007). Theoretisches Vorwissen und Kategorienbildung in der "Grounded Theory". In U. Kuckartz, H. Grunenberg, & T. Dresing (Eds.), *Qualitative Datenanalyse: computergestützt: Methodische Hintergründe und Beispiele aus der Forschungspraxis* (pp. 32–49). Wiesbaden: VS Verlag für Sozialwissenschaften.

Kercher, J. (2021). *International student mobility in the wake of COVID-19.* University World News. Retrieved 07.01.2022 from https://www.universityworldnews.com/post.php?story=20211122121828241

Kercher, J., & Plasa, T. (2020). *COVID-19* and the impact on international student mobility in Germany. Results of a DAAD survey conducted among international offices of German universities (DAAD Working-Paper, Juni 2020). Bonn: DAAD.

King, R., Findlay, A., Ahrens, J., & Dunne, M. (2011). Reproducing advantage: the perspective of English school leavers on studying abroad. *Globalisation, Societies and Education*, *9*(2), 161–181.

King, R., & Raghuram, P. (2013). International Student Migration: Mapping the Field and New Research Agendas. *Population, Space and Place, 19*(2), 127–137.

Kofman, E. (2012). Gender and skilled migration in Europe. *Cuadernos de Relaciones Laborales*, 30(1), 63–89.

Kofman, E., & Raghuram, P. (2015). *Gendered Migrations and Global Social Reproduction*. Migration Diaspora and Citizenship. Basingstoke: Palgrave.

Küsters, I. (2009). *Narrative Interviews. Grundlagen und Anwendungen* (2nd ed.). Wiesbaden: VS Verlag für Sozialwissenschaften.

Madge, C., Raghuram, P., & Noxolo, P. (2015). Conceptualizing International Education: From International Student to International Study. *Progress in Human Geography, 39*(6), 681–701.

Marinoni, G., van't Land, H., & Jensen, T. (2020). THE IMPACT OF COVID-19 ON HIGHER EDUCATION AROUND THE WORLD. Paris: International Association of Universities

Martel, M. (2020). COVID-19 effects on U.S. higher education campus: From emergency response to planning for future student mobility. Washington D.C.: Institute of International Education.

Murphy-Lejeune, E. (2002). Student Mobility and Narrative in Europe. The new strangers. London/New York: Routledge.

Neusel, A., & Wolter, A. (Eds.). (2017). *Mobile Wissenschaft. Internationale Mobilität und Migration in der Hochschule*. Frankfurt: Campus Verlag (Hochschule und Gesellschaft).

Peters, M. A., Wang, H., Ogunniran, M. O., Huang, Y., Green, B., Chunga, J. O., Quainoo, E. A., Ren, Z., Hollings, S., Mou, C., Khomera, S. W., Zhang, M., Zhou, S., Laimeche, A., Zheng, W., Xu, R., Jackson, L., & Hayes, S. (2020). China's Internationalized Higher Education During Covid-19: Collective Student Autoethnography. *Post-digital Science and Education, 2*, 968–988.

Putnam, R. (1995). Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6(1), 65–78.

Reuter, R. (2015). Ordnungen des Anderen. Zum Problem des Eigenen in der Soziologie des Fremden. Bielefeld: Transcript.

Rzymski, P., & Nowicki, M. (2020). COVID-19-related prejudice toward Asian medical students: A consequence of SARS-CoV-2 fears in Poland. *Journal of Infection and Public Health*, 13(6), 873–876.

Speck, S. (2020). Zuhause arbeiten. Eine geschlechtersoziologische Betrachtung des "Home Office" im Kontext der Corona-Krise. In M. Volkmer & K. Werner (Eds.), *Die Corona-Gesellschaft. Analysen zur Lage und Perspektiven für die Zukunft* (pp. 135–142). Bielefeld: Transcript.

Strauss, A. L., & Corbin, J. (1996). *Grounded Theory: Grundlagen Qualitativer Sozial-forschung*. Weinheim: Beltz.

Strübing, J. (2004). Grounded Theory. Zur sozialtheoretischen und epistemologischen Fundierung des Verfahrens der empirisch begründeten Theoriebildung (Qualitative Sozialforschung, 15). Wiesbaden: VS Verlag für Sozialwissenschaften.

Tang, W., Hu, T., Yang, L., & Xu, J. (2020). The role of alexithymia in the mental health problems of home-quarantined university students during the COVID-19 pandemic in China. *Personality and Individual Differences*, *165*, 1–7.

Varadarajan J., Brown A. M., & Chalkley R. (2021). Biomedical graduate student experiences during the COVID-19 university closure. *PLoS ONE, 16*(9), e0250378.

Vertovec, S. (2002). *Transnational Networks and Skilled Labour Migration*. Paper presented at Ladenburger Diskurs 'Migration' Gottlieb Daimler und Karl-Benz-Stiftung, Ladenburg, 14.-15. February. https://pure.mpg.de/rest/items/item_3012174/component/file_3012175/content

Wilczewski, M., Gorbaniuk, O., & Giuri, P. (2021). The Psychological and Academic Effects of Studying from the Home and Host Country During the COVID-19 Pandemic. *Frontiers in psychology, 12,* 644096.

Witzel, A. (2000). Das problemzentrierte Interview. Forum Qualitative Sozialforschung/Forum: Qualitative Sozial Research, 1(1), Art. 22. http://nbn-resolving.de/urn:nbn:de:0114-fqs0001228

Witzel, A., & Reiter, H. (2012). *The problem-centred interview: Principles and practice*. SAGE Publications Ltd.

Xiong, W., Mok, K. H., Ke, G., & Cheung, J. O. (2020). Impact of COVID-19 Pandemic on International Higher Education and Student Mobility: Student Perspectives from Mainland China and Hong Kong. *Centre for Global Higher Education, 105*(3), 1–36.

Zhou, W., & Li, X. (2021). Between nationalism and cosmopolitanism: Chinese international students' (un)imagined mobility during Covid-19. Retrieved 10.06.2021 from https://www.a-id.org/2021/05/02/between-nationalism-and-cosmopolitanism-chinese-international-students-unimagined-mobility-during-covid-19/

Manuskript eingegangen: 14.07.2021 Manuskript angenommen: 09.05.2022

Angaben zu den Autorinnen:

Prof. Dr. Carola Bauschke-Urban
Dorina Dedgjoni, M.A.
Dr. Stephanie Michalczyk
Fulda University of Applied Sciences
Department of Social and Cultural Sciences
Leipziger Straße 123
36037 Fulda
E-Mail: carola.Bauschke-Urban@sk.hs-fulda.de
dorina.dedgjoni@sk.hs-fulda.de

stephanie.michalczyk@sk.hs-fulda.de

Carola Bauschke-Urban is professor of sociology, gender & diversity studies at Fulda University of Applied Sciences and principal investigator of the BMBF funded research project *MigIng. Migration, Diversität und sozialer Wandel in den Ingenieurwissenschaften* (01/2019-08/2022).

Dorina Dedgjoni is researcher in the BMBF funded project *Migling. Migration, Diversität und sozialer Wandel in den Ingenieurwissenschaften* at Fulda University of Applied Sciences and doctoral researcher at Fulda Graduate Centre of Social Sciences, FGCSS.

Stephanie Michalczyk is researcher in the BMBF funded project *MigIng. Migration, Diversität und sozialer Wandel in den Ingenieurwissenschaften* at Fulda University of Applied Sciences. She gained her doctorate in Sociology from Göttingen University in 2021.