

Integration of Rwandan crafts students in Germany: a case study

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Abstract: Attracting African youths to vocational training in Europe can help address skills shortages, while African countries benefit from remittances and returning skilled workers. However, integration challenges can hinder this approach. This study uses case study methodology to explore such challenges. It begins with a literature review on the theoretical framework of educational migration and previous research on integration of African education migrants in Germany. The focus then narrows to Rwandans who migrated to Germany for apprenticeships in the crafts sector. Semi-structured interviews with five migrants examined their integration experiences, highlighting both, challenges and mitigation strategies. Participants stressed the importance of thorough preparation before and upon arrival, particularly in learning the German language and understanding local customs, including dialects. These findings offer practical insights for policymakers and training providers to improve integration support, contributing to a more stable skilled labour supply in Europe.

Keywords: apprenticeship, integration experiences, migration, Germany, Rwanda

Introduction

The transition of Germany to a climate-neutral economy requires new competencies and more workforce in the sectors construction, energy, manufacturing and transport (Mengis et al., 2022). The role of regular labour migrants from non-European countries, particularly African youths who migrate to Germany to do an apprenticeship, may become a key success factor in this transition, due to the lack of own youths interested in vocational professions in Germany and due to the strong motivation of unemployed youths from Africa (Beicht & Walden, 2019). The African home countries will in return benefit from diaspora remittances and brain gain – since the youths typically leave only with basic qualifications and some of them might remigrate fully qualified or do skills transfer remotely. But this

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approach can only lead to sustainable outcomes, if the migrated African youths successfully integrate in the society and decide to stay in Germany long-term.

Germany's transition to a climate-neutral economy is highly dependent on a sufficient number of skilled workers in vocational professions, particularly in the crafts sector, which plays a central role in construction, energy systems and manufacturing (Bundesministerium für Wirtschaft und Energie, 2021; Mengis et al., 2022). At the same time, Germany faces a persistent lack of domestic youth interested in vocational careers (Federal Institute for Vocational Education and Training, 2023). Previous studies have highlighted both the opportunities and challenges of integrating young migrants into the dual training system (Beicht & Walden, 2019). However, little research has so far examined how regular labour migrants from African countries, such as Rwanda, experience integration during apprenticeships in Germany's crafts sector. By addressing this gap, the paper contributes to the literature on labour migration, vocational training and integration by providing empirical insights into the challenges and coping strategies of Rwandan apprentices.

The manuscript uses case study as strategy of inquiry. To this end, the paper, firstly, reviews the existing literature, while including theories in the context of integrating education migrants, as well as previous research on integration challenges of migrated African apprentices in Germany, and proven mitigation strategies for these challenges. The aim is to identify strategies to ensure the successful integration of migrant apprentices and to prevent remigration, which would undermine the investments made in their training.

After this review, secondly, the paper narrows the case down to Rwandans, who migrated for apprenticeship in the crafts sector to Germany. Semi-structured interviews with five Rwandans were conducted, focusing on their integration experiences in Germany – again focusing on integration challenges and strategies to overcome these. Thematic analysis is used to identify codes, categories and themes in the transcripts.

This manuscript focuses on two research questions (RQ):

- RQ1: What integration challenges do Rwandan crafts apprentices have in Germany?
- RQ2: What mitigation strategies do Rwandan crafts apprentices apply and what mitigation strategies might help in future, overcoming these integration challenges?

This paper first outlines the research methodology, including case and participant selection, data collection and analysis. The results section presents the coding, key themes and demographic background, illustrated with quotes and quantitative data. The discussion relates the findings to the literature. The conclusion summarizes insights, notes limitations, suggests future research and highlights implications for stakeholders.

1. Literature review

The literature review was conducted in three steps. First, relevant theories were identified as the foundation of the study. Second, previous research related to the research questions was reviewed. Finally, research gaps were identified.

1.1. Theoretical framework

This study is guided by a set of migration, human capital and educational theories that together provide a comprehensive lens on the integration of African apprentices in Germany. Migration theories offer structural and agency-based perspectives: neoclassical approaches frame migration as a rational response to economic disparities, while world systems and migration networks theories highlight how global inequalities, historical ties and social networks shape opportunities and barriers to integration (Triandafyllidou, 2023). Assimilation, multiculturalism and segmented assimilation explain the different pathways through which migrants adapt to host societies, whereas the mobilities perspective emphasizes circular and transnational movements, pointing to the fluidity of migrant trajectories (Triandafyllidou, 2023). To complement these, human and social capital theories underline how education, skills and networks constitute resources that can either facilitate or constrain integration processes (Russ, 2014).

In the educational context, Bronfenbrenner's ecological systems theory shows how integration outcomes depend on interactions across multiple environments – from family and peers to institutions and policy frameworks (Bronfenbrenner, 1979). Tinto's student integration model further emphasizes the importance of academic and social belonging for persistence and success, highlighting institutional responsibility in fostering inclusive environments for education migrants (Tinto, 1993).

Together, these theories inform the analytical framework of this paper by explaining why African apprentices migrate, how they build and use resources, and which multi-level factors influence their integration experiences in Germany's vocational training system.

1.2. Previous research on vocational migration

A literature review of scientific articles, books, policy and scientific reports was conducted, using online research databases, to obtain relevant data on the integration of African Technical and Vocational Education and Training (TVET) migrants in Germany. Of twenty identified sources, ten were assessed of appropriate quality to contribute to the findings. These included studies based on quantitative and mixed-methods designs. The other ten sources were excluded as they did not meet the quality assessment criteria, for example due to methodological shortcomings, linguistic deficiencies or potential bias compromising scientific rigor.

Because of time constraints, certain biases were tolerated. First, the only person involved in the literature selection and data extraction was the author. This might have affected transparency and reproducibility and might have increased risk of errors. Second, this research just focused on sources published since 2018 in English or German. This might have excluded significant information.

The selected studies show that the research questions were not yet researched in detail. This paper groups the findings by integration challenges and mitigation strategies, starting with the integration challenges. For instance, the low level of skills and education – being technical, but more important language – was identified in the literature review as a key factor for integration failure of African TVET migrants in Germany (Adedeji & Bullinger, 2019; Backhaus, 2020; Becker, 2024). Thus, migrants would have challenges to cope with the speed of education (Studthoff et al., 2024).

In addition to education, the German (work) culture is perceived as non-welcoming and some migrants experienced insult or physical harm (Froehlich & Schulte, 2019; Idemudia & Boehnke, 2020).

Other major integration issues are caused by the administration processes in regards to visa, family reunification and recognition of prior qualification: some offices are difficult to access, e. g. due to short opening times; the attitude is perceived as non-welcoming, not offering services in English; there are some unclear or overlapping mandates, so that migrants have to deal with several offices instead of one (Becker et al., 2023; European Commission, 2022; 2024; Studthoff et al., 2024).

General errands related to integration (e. g. bank account opening, apartment search or registering with health insurance) may also cause difficulties (Studthoff et al., 2024). For instance, limited income and career opportunities, poor medical treatment and living conditions, limited social relations, concerns in regard to safety and finances seem to cause Africans to remigrate to their home countries after finishing apprenticeship (Adedeji & Bullinger, 2019; Backhaus, 2020).

At last, another integration challenge was identified in the difficult German climate, compared to tropical and subtropical African climate (Idemudia & Boehnke, 2020).

Literature have also emphasized some possible strategies in order to mitigate integration obstacles. According to the literature review, the low level of skills can be overcome by contextualizing and building a partnership, in which the quality of education in Africa is improved before migration to Germany (Backhaus, 2020; Becker, 2024; Clemens et al., 2019). This should include qualified language courses, conversational and technical, in the home countries before migration and in the host countries after migration (Becker, 2024; Becker et al., 2023; Clemens et al., 2019; Studthoff et al., 2024). Short preparational trainings in the home countries, prior to departure, on the (work) culture and expectation management, would also facilitate integration (Clemens et al., 2019; Studthoff et al., 2024).

Administration processes should be improved by making them leaner, faster and more welcoming, particularly with regard to accelerated procedures for visas, recognition of prior qualifications and family reunification (Becker, 2024; Becker et al., 2023; European Commission, 2022; 2024). In addition, the efficient use of existing networks of integration support offers – such as voluntary training initiatives or the sharing of experiences by successfully integrated migrants – could further enhance communication with authorities (Clemens et al., 2019; Studthoff et al., 2024).

Beyond administrative improvements, fostering mutual understanding between migrants and host communities is essential. Prejudices can be reduced through face-to-face interaction between both groups, which helps build trust and dismantle stereotypes (Froehlich & Schulte, 2019).

Building on this, integration can also be facilitated through individual onboarding and tailored integration services, jointly provided by companies, training institutions and local governments. Such cooperation not only strengthens institutional support but also demonstrates a caring mentality toward migrants – for example, by covering certain expenses related to visa procedures or assisting with everyday administrative tasks (Becker, 2023; 2024Studthoff et al., 2024).

Finally, social integration requires efforts beyond the institutional sphere. Joint activities with host communities – such as religious gatherings – or within migrant groups themselves – such as communal dinners – can provide important opportunities for African TVET migrants to build social ties and strengthen their sense of belonging (Idemudia & Boehnke, 2020).

Despite the growing body of literature on migration and integration, several gaps remain relevant for this study. Research on the integration of regular African migrants in Germany is scarce, as most existing studies primarily focus on irregular migration, neglecting the dynamics of skills- and education-related migration. Moreover, there is a lack of integrated research on African education migrants who specifically enter Germany for TVET programmes. Empirical studies are needed to assess whether this pathway can contribute sustainably to addressing Germany's skills shortage, taking into account both structural aspects (e. g. labour market demands, training company practices) and soft factors of integration (e. g. daily life challenges). Finally, much of the existing research treats Africa as a homogeneous region, whereas country-specific analyses are necessary to capture the diverse contexts of African migrants. Addressing these gaps would provide a stronger empirical basis for developing strategies to facilitate the integration of African TVET migrants in Germany.

2. Methods

Basing on the general findings in the literature review, qualitative research was applied for this research, to further study the integration experiences of African apprentices in Germany. To get more specific insights, the research narrowed the

case down. The Rwandan diaspora was chosen because of its long-standing cooperation in education with Germany. The focus is on the crafts sector, because this is one of the sectors with the highest skills shortage in Germany. The case to be analysed is defined as follows: perspective of five Rwandan crafts journeymen (graduated apprentices), focusing on their experiences in the context of integration in Germany during the apprenticeship.

The approach applied in this study is a case study as strategy of inquiry. Creswell (2009) recommends case study as inquiry strategy to examine a specific phenomenon in detail in a bound system. Here, the phenomenon is „integration experiences” and the bound system is „Rwandan apprentices in the German crafts sector”. The research aimed to answer two questions:

- RQ1: What integration challenges do Rwandan crafts apprentices have in Germany?
- RQ2: What mitigation strategies do Rwandan crafts apprentices apply and what mitigation strategies might help in future, overcoming these integration challenges?

A case study design was therefore chosen to gain detailed insights into the contextualized experiences of the trainees. In particular, the analysis considered how different factors (preparation, education, finances, society, culture, administration and work or school environment, family and friends) influence integration.

When it comes to the selection of participants, purposive and opportunity sampling were combined. The focus was on Rwandan citizens who had migrated to Germany directly after graduating from high school in Rwanda, without any additional formal education, and who had successfully completed an apprenticeship in Germany at least two years earlier. This profile ensured that participants were able to retrospectively evaluate their integration challenges and the strategies they had used to overcome them. The sample was recruited through opportunities within the researcher’s professional network, developed over more than ten years of work in East Africa with a focus on technical training.

Regarding data collection, the author was the interviewer and conducted five semi-structured interviews, either in person or online if a physical meeting was not possible. Most meetings took place in a restaurant setting, to create a relaxed atmosphere. Each interview was structured in two parts: a fully structured section for collecting general and quantitative information, and a semi-structured section for qualitative insights into individual experiences. The question catalogue can be derived online (Tomingas, 2025). An interview and observation protocol was implemented in an application (Google Forms), which was used both for reading instructions and questions and for recording answers and observations. In addition, audio taping was used. The typed answers and observations were consolidated with the transcriptions from the audio recordings within a week from each interview.

For data analysis and interpretation, the software ATLAS.ti (version 25) was applied. Thematic analysis guided the process. First, the researcher familiarized

himself with the data and noted impressions regarding tone, credibility and general ideas. Then open coding was conducted, limiting each code to a maximum of five words. From there, broader themes were identified, revised to avoid redundancies, and refined to ensure concise and descriptive names. The findings are summarized in the description of the case, supported by quotes and quantitative data. Finally, the results were interpreted in relation to the research objectives and existing literature.

In terms of reliability, all captured information was read, reviewed and corrected, and steps and procedures were documented in memos to avoid a shift in the meaning of codes, as recommended by Creswell (2009). Validity was enhanced by presenting also discrepant or negative information, by providing detailed descriptions, and by reflecting on the researcher's own bias as an experienced development worker who normally promotes employment opportunities within Africa rather than migration to Europe. Generalizability was not the aim; instead, the intention was to specify, verify or contradict findings from the literature and add new knowledge for this defined case.

Finally, ethical considerations followed the European Charter for Researchers (European Commission, 2005). At the beginning of each interview, the purpose and societal benefits of the research were explained to the participants. Informed consent forms were shared and signed by both parties, with one copy each retained. This protected participants' rights and guaranteed the possibility to withdraw at any time. Audio files, physical consent forms and notes were destroyed within one week, while anonymized and password-protected digital versions were safely stored. Participation was voluntary, non-discriminatory and designed to ensure participants' comfort, including the provision of food and water during the interviews.

Basing on the general findings in the literature review, qualitative research was applied for this research, to further study the integration experiences of African apprentices in Germany. To get more specific insights, the research narrowed the case down. The Rwandan diaspora was chosen because of its long-standing cooperation in education with Germany. The focus is on the crafts sector, because this is one of the sectors with the highest skills shortage in Germany.

The case to be analysed is defined as follows: perspective of five Rwandan crafts journeymen (graduated apprentices), focusing on their experiences in the context of integration in Germany during the apprenticeship.

3. Results

In this section, the document summarizes the findings for the case. The study identified 137 codes in open coding as part of the thematic analysis process. Within repetitive revision cycles, it consolidated ten key themes, emerging from the codes.

In the next sub-section, the study first shares demographic information of the research participants. Then, it explains the different themes in detail, starting with

the most emerging themes (most mentions consolidated). The theme explanations are supported by evidence from data, as direct quotes and quantitative information.

3.1. Demographic information on participants

All five research participants had Rwandan citizenship and were male. Four of them were Christians and one was Moslem.

Table 1. Demographics of participants

Basic Demographics (current)	<p>Gender: 5 male / 0 female</p> <p>Religion: 4 Christian / 1 Moslem</p> <p>Mean age: 37 years (29 – 42 years)</p> <p>Family situation: 4 married with children / 1 single</p>
Migration Background	<p>Migration history: 3 in 2005 to Germany (returned to Rwanda) 2 in 2019 to Germany (still work in Germany)</p> <p>Family: 3 migrated without family / 2 migrated with 1 relative</p>
Education	<p>Education before migration: 5 secondary school graduates</p> <p>Education in Germany: 3 masons / 1 cook / 1 caretaker</p> <p>Education after migration: 3 TVET graduates / 1 bachelor's degree / 1 master's degree holder</p> <p>German language skills before migration: 3 without language skills / 2 with basic language skills</p> <p>German language skills now: 4 with advanced language skills / 1 with native language skills</p>
Employment	<p>Mean salary: Mean before migration = 315 USD (0 – 1,000 USD) Mean now = 1,800 USD (1,000 – 2,000 USD)</p> <p>Employment now: 4 in formal employment / 1 student</p>

Source: author's representation

Three migrated to Germany 20 years ago, while two migrated six years ago. The motivation for all of them to migrate was „exposure to something new” and

„learning something new”. Three of them already returned to Rwanda, while two now work as skilled workforce in Germany.

At the time of migration, all research participants were fresh graduates of 12-years basic education in Rwanda. Three had no income, while two had little income (mean income of the five participants = 315 USD). They had no (three participants) or basic (two) German language skills. Three migrated without any family or friends, while one migrated with a sibling. One already had extended family in Germany.

Three of the five interviewees did a journeyman certificate as masons in Germany, while one became a cook and one a caretaker. They all successfully graduated after four years of training, of which the first year was focusing on German language competence. The other three years focused on the practical and theoretical technical competences.

At the time of the interviews, they were between 29 and 42 years of age (mean age = 37). Four were married and had children, one was single. All of them either gained advanced or native German language skills. Two joined university after graduating in TVET and were bachelor's or master's degree holders now.

At the time of research, two participants worked in formal employment according to the learnt profession. Two were formally employed in a different sector and one was student. They earned 1,800 USD on average now (mean). That is six times more than before migration. All of them were in a range between 1,000 and 2,000 USD.

3.2. Personal support as pre-dominant factor for a successful integration

Personal support was the pre-dominant factor for a successful integration in Germany (most mentions consolidated). It is therefore considered to be the most important integration strategy.

Three interviewees migrated without family members to Germany. Thus, one of their major challenges in integration was the lack of personal support, particularly friends and family. All participants confirmed that they missed the life with their friends and families in the home country. However, two interviewees already had (extended) family in Germany and confirmed that this was a big support.

According to all five interviewees, German friends and spouses were important for the social integration, particularly learning the language. German friends and spouses helped also with understanding the culture and with understanding the German law system.

Ideally, this gap of not having family and friends in Germany was filled by other personal supporters. Integration was most successful, if these stepped in from the very beginning. All participants got to know about the possibility to migrate to Germany and to do an apprenticeship through personal contacts. For all, personal contacts supported them in the preparation of the migration to Germany, by giving

informal advice on what to expect (e. g. racism, weather, non-welcoming society or work life) and how to behave (e. g. punctuality or legal regulations).

The same personal contacts introduced them to their employers for apprenticeship. Some even paid the flight tickets and rented a home for the first year of the Rwandan migrants in Germany. In all cases, they did not yet receive in that year an apprenticeship allowance, since they only studied German language. The allowance was later (for the other three years of their education) paid by the employer. This made them financially independent.

The extended contacts of the initial supporters were also supportive in several administrative challenges, e. g. when there were delays in the visa procedures or with the recognition of prior qualification. According to all interviewees, the stakeholders involved in the training wanted to support the aim of the initial supporters to train African youths in Germany. Thus, they supported the Rwandan apprentices. The employers and company trainers helped the Rwandans in learning, how to do errands, e. g. supermarket shopping, or gave behavioural advice, e. g., how to dress. Even a mayor supported some of the interviewees in creating shorter procedures for administrative issues.

The following is a quote from one interviewee on the personal support mentioned:

He helped us so much. Whenever there was a challenge, he found a solution through his network. When we went to the visa office and the officer was denying work visas, he called the Rwandan Honorary Council and within one day the problem was solved. He even asked work colleagues to look for winter clothes for us. I would not have managed to integrate in German society without his personal support.

3.3. Organized preparation and language skills as essential foundations for a successful integration

The Rwandan migrants emphasised that their integration was easier compared to other groups of vocational migrants they met, particularly due to the personal support they received. However, they also criticised that this support was not organized. Therefore, they had to remain flexible, put in a lot of effort and improvise to successfully integrate. They faced challenges with errands (e. g. shopping due to the new currency or the new products), with the expectations of employers and society (e. g. punctuality or how to dress) as well as with the traffic system.

For a better integration, all interviewees recommended organized preparation courses. This aspect was the second most frequently mentioned factor for a successful integration, though all of them confirmed that their preparation had been more informal than organized. Thus, this constitutes a recommendation for a future integration strategy. Such organized preparation courses should be divided into two

parts: a pre-migration stage in Rwanda and the arrival in Germany. According to two interviewees, the part in Rwanda could be offered by an agency, financed by future employers. The courses should contain language (conversational and technical), occupational aspects (theoretical and practical), expectations, administration (e. g. visa procedures or recognition of prior qualifications), errands and regional aspects. Following the recommendation of two interviewees, employers could play the main role in the preparation courses in Germany upon arrival. They should explain their expectations to new apprentices, but also what apprentices can expect, e. g. regarding infrastructure, organization or weather. These preparation courses should also include cultural norms, such as how to behave or dress.

Closely connected to preparation are language skills, which all five interviewees highlighted as an additional and indispensable condition for successful integration. None of them had more than basic German skills prior to migration. They stated that they failed to integrate smoothly in the first year of technical training in the company and in vocational school, because they could not communicate properly with their bosses, colleagues, customers and trainers. Consequently, they perceived the training speed as too fast, which also explains why some partly failed their first examinations. The main problem was that the available language courses focused on conversational German, whereas they needed technical vocabulary both at the workplace and in school. At the same time, they also lacked conversational language for daily life.

Language skills were therefore the third most frequently mentioned factor for successful integration and are considered a key integration strategy. The interviewees applied different mitigation strategies. They attended evening classes in technical language, but also admitted that language was best learned through personal interactions, particularly with Germans. To achieve this, they avoided remaining only among the Rwandan diaspora and actively sought to integrate with Germans. Some had already started learning German prior to migration. Nevertheless, the research participants strongly recommended easier access to German language courses (e. g. in the form of evening classes), ideally as part of the formal preparation outlined above.

3.4. Strong personality and regional preparation as complementary conditions for effective integration

A strong personality was the fourth often mentioned integration strategy. All interviewees confirmed that the migration to Germany was a chance for self-development and to learn something new. They were prepared by personal contacts, who emphasised commitment, punctuality and discipline as prerequisites to succeed in German work culture. Also, as already mentioned above, they had to remain flexible and empathic, to be motivated and durant to successfully integrate.

The interviewees stated that they needed to learn new skills, particularly soft skills, and to adapt to new contexts very fast. To succeed, it was not enough just to work and study during worktime. It was a complex task, which included evening classes, both, technical and language, as well as volunteering and integrational hobbies in the free time. Continuous adjustment was necessary. The research participants had to work hard. This included additional work.

The following is a quote from one interviewee regarding the personality:

My friend always told me, Germans live for work. It requires strong personal commitment and extra hours to succeed and integrate. Somebody, who believes, he arrives and people will just donate money, will not succeed.

Regional preparation was the fifth often mentioned integration strategy. The research participants emphasised that all German regions they visited were different, with different integration challenges. They lacked the specific behavioural information for their training regions, e. g. how to dress or how to greet.

According to their perception, society and employers were not patient with the migrants. They wished that the local community would also be better prepared for hosting foreigners, e. g. in being patient with migrants.

According to the interviewees, particularly learning the local dialect was important for their integration at the workplace and in private life: standard German was not understood by the local population. The interviewees also failed to understand the locals. Therefore, the research participants recommended the inclusion of local dialects in preparation courses, besides the local customs. These courses could be conducted by the employer.

3.5. Integration without major obstacles in certain areas

Four of five interviewees emphasised that the recognition of their Rwandan high school certificates, as part of the official apprenticeship registration, was easy. Neither the accreditation process with German government nor with the public school took long. Most interviewees perceived the entry requirements and formal procedures as easy, because they were used to similar administration in Rwanda. Two research participants emphasised that the visa procedures were ok. One mentioned that the labour office informed him well, prior to apprenticeship.

The German TVET system was judged as accommodative: all research participants confirmed that it is well explained, structured and organized. Standard operating procedures would exist. The training would contain many learning materials and practical exercises. All interviewees confirmed that apprenticeship was easy for them.

Two research participants still lived in Germany. They emphasised that there was no difference in payment between them and Germans with similar

qualifications. They believed that they had equal job opportunities in Germany as Germans.

Even without having savings before migrating to Germany, all apprentices succeeded and graduated as journeymen. They did not lack anything, neither healthcare, nor housing, nor food. The overall integration experience was considered as good by all interviewees.

3.6. Role of group activities in strengthening social integration

All interviewees participated in sports activities, e. g. basketball or football, to make new friends and to learn German language. New friendships not only helped with language, but also led to other social activities: all interviewees regularly went out with the sports friends. One interviewee started to work in the garage of a sports friend.

Besides, the interviewees participated in different self-aid groups, in which they shared their daily challenges. They supported each other, based on their experiences. Three interviewees organized themselves in study groups with either their sports friends or other apprentices of their companies. All groups were mixed (Germans and foreigners). This was helpful, because it forced foreigners to speak German and to socially integrate.

The interviewees also participated in religious gatherings, in which they made new friends. There, they applied the German language, though they complained that, due to secularization, it was difficult to find a community with people in their age group. Other gatherings were organized by the African diaspora, in which African migrants could share experiences and support each other.

One interviewee shared his experience and his views on the role of the African diaspora:

We met twice a month in the Africa house. I noticed that not all influence from fellow expats is good, particularly the generalization. People said that our home countries have challenges. But I am Rwandan, and I want to speak for my country and not for a continent. My country is good and the development is incredible, thanks to the good leadership and governance. Back to the diaspora: we met for church, we met for dinner, we listened to music, danced and laughed a lot. That was good. One friend shared that he cannot read coins and therefore always pays with bills at the supermarket. We helped each other.

3.7. Negative reception and irreplaceable exposure as contrasting experiences of integration

All research participants emphasised that the German work culture and social culture were perceived as rather non-welcoming. One example mentioned was the

ignorance towards neighbours; at the beginning, migrants thought this was personal, but later they noticed similar behaviour even among German neighbours. All interviewees also experienced racism, which included random searches or passport controls by police, people moving away from them in public transport, insults and bullying by colleagues or strangers. One interviewee explained that his colleagues were jealous, because he worked hard and was therefore more successful. As a mitigation strategy, one participant suggested that racism should be punished more strictly, criticising that the German government was not doing enough against it.

At the same time, the participants underlined that exposure in Germany was irreplaceable for internalising the cultural and social environment. However well they were prepared for migration, they still experienced cultural shocks, such as the coldness of winters or the advanced infrastructure. Everyday encounters, like driving on a German highway, using trains or reading traffic signs, were described as both, surprising and formative. Soft skills such as reliability, punctuality and commitment were perceived as best internalised through direct experience in the German training and work environment.

To cope with these challenges and shocks, interviewees mentioned several strategies. They actively avoided remaining within the Rwandan diaspora in order to learn German language and culture more quickly, and some organised preparatory visits. A few even spent one-month trial stays in Germany before starting their apprenticeships, which they described as particularly helpful for easing their later integration.

3.8. Reducing bureaucracy as relevant condition for smoother integration

The interviewees emphasised that administration in Germany was challenging and that they needed guidance. Though the recognition of prior skills was easy for four research participants, one had strong challenges with it. It even failed. All participants did not consider family reunification, due to the complexity of the process. Also, the visa process was stressful and complex. It required personal intervention (compare above).

Therefore, the interviewees recommended the German government to ease administration procedures, particularly visa, recognition of prior qualification and family reunification. They also advised the government to establish one-stop-centres, where migrants could receive services in all migration related matters, e. g. administration.

4. Discussion

The findings of this study illustrate the complex integration experiences of Rwandan apprentices in Germany and show how they both confirm and nuance existing theories and previous research. Economic motivations were central for all

participants, confirming Neoclassical Economic Theory (Triandafyllidou, 2023). The challenges they encountered after arrival reveal the limitations of this perspective. As noted in earlier work (Triandafyllidou, 2023), economic disparities alone cannot explain integration trajectories; rather, they must be complemented by sociocultural and institutional perspectives.

Language barriers emerged as one of the most persistent challenges, in line with earlier studies highlighting limited technical language skills among African TVET migrants as a key obstacle (Adedeji & Bullinger, 2019; Backhaus, 2020; Becker, 2024; Studthoff et al., 2024). While participants had attended conversational courses, these did not prepare them for the technical vocabulary required at the workplace or in vocational schools. This supports Tinto's (1993) Student Integration Model, which emphasises the importance of academic integration for persistence, and resonates with Chiswick and Miller's (2007) findings that language proficiency is decisive for labour market integration. Participants mitigated this by attending evening classes and engaging with German peers, which underlines the relevance of Bronfenbrenner's (1979) Ecological Systems Theory, since integration outcomes were shaped by both institutional and peer environments.

Migration Systems and Networks Theory is also confirmed, as participants relied heavily on mentors, family and diaspora connections to navigate challenges. These networks provided critical information and emotional support, echoing Social Capital Theory and previous findings on the significance of bonding and bridging capital (Russ, 2014). Participants with stronger networks experienced smoother transitions, supporting earlier research on the role of informal support (Froehlich & Schulte, 2019; Idemudia & Boehnke, 2020). At the same time, overreliance on diaspora networks was sometimes avoided, as participants realised that socialising exclusively within African circles slowed their language acquisition – confirming the mixed role of networks already highlighted in Beicht and Walden (2019).

Administrative hurdles were another recurring theme. Participants described visa processes and family reunification as stressful, a finding consistent with studies documenting bureaucracy as a barrier for African migrants (Becker et al., 2023; European Commission, 2022; European Commission, 2024; Studthoff et al., 2024). While recognition of prior schooling was experienced more positively in this study, the general perception of German administration as complex aligns with earlier literature (Bommes & Kolb, 2004). The participants' recommendation of one-stop offices corresponds to OECD (2020) policy advice on simplifying administrative procedures for migrants.

Discrimination was reported by all participants, ranging from everyday microaggressions to workplace jealousy. This confirms earlier findings on prejudice towards African migrants (Froehlich & Schulte, 2019; Idemudia & Boehnke, 2020) and supports World Systems Theory, which highlights structural inequalities persisting even when migrants are formally included in the labour market (Triandafyllidou, 2023). Participants' call for stricter punishment of racism resonates

with findings by the EU Fundamental Rights Agency (European Union Agency for Fundamental Rights, 2022), which underline that, despite existing legal frameworks, anti-discrimination laws in Germany are often insufficiently enforced in practice.

At the same time, the study reveals positive experiences. Several participants described integration as relatively smooth, reporting equal pay, good training structures and access to healthcare. This diverges from previous findings of poor living conditions and limited opportunities (Adedeji & Bullinger, 2019; Backhaus, 2020), suggesting heterogeneity in integration outcomes depending on support, preparation and individual resilience. The role of strong personality traits such as perseverance and openness, highlighted by participants, further expands Human Capital Theory (Becker, 1993), showing that personal attributes are as relevant as formal skills for integration.

Finally, the study underscores the irreplaceable value of exposure. Despite preparatory courses, cultural shocks (e. g. climate, infrastructure) could not be avoided. Instead, participants emphasised that direct experience in the German context was crucial for learning norms of reliability and punctuality. This aligns with Kolb's (1984) theory of experiential learning, emphasizing that direct immersion and practical engagement are essential components of successful integration. Preparatory visits to Germany before migration were perceived as particularly beneficial – a strategy rarely highlighted in earlier literature.

In summary, this study confirms key findings of earlier research, particularly regarding language, administration and discrimination, but it also nuances the picture by emphasising the centrality of personal support, the heterogeneity of experiences, and the irreplaceable role of exposure. The results suggest that integration is best understood through a multi-theoretical lens: while economic motivations explain the decision to migrate, social capital, institutional environments and experiential learning shape how integration unfolds in practice.

Conclusions

TVET migration from Africa, particularly from Rwanda to Germany, can be more successful than migration of fully qualified workforce. Its benefit is that the German companies can design the training of the migrated apprentice according to their needs, instead of working with someone, who already studied his profession in another context and might not be ready to learn again.

In the following, the manuscript summarizes its key findings. First, the most important factor for successful integration is good preparation, most importantly focusing on language skills, particularly local dialects.

Second, soft skills as the individual character, motivation and will are other key factors, which lead to successful or unsuccessful integration. These can be partly trained, but also depend on the background of a person.

Third, integration becomes easier, the more welcome and confident the migrant feels. Previous migration experiences and socio-cultural, language or technical knowledge additionally build his or her confidence. Strong personal support and networks are more success factors. Non-welcoming factors as prejudices and discrimination are counterproductive and lead to lack of confidence of the migrant.

Fourth, mingling in non-homogeneous groups of friends, consisting of foreigners and locals, helps to learn the best of each culture and therefore is an important tool for integration in any country. This way, migrants can select to learn the processes and customs of a country from its nationals and the mitigation strategies to overcome challenges from the expat community.

The study is also marred by limitations. It is limited by the low number of research participants and therefore not generalizable. However, this was not the research aim, but to add knowledge in the context of the selected case. There are two reasons for the low number of research participants. First, up to now, only a few thousand Rwandan nationals graduated apprenticeship in the crafts sector in Germany. Second, due to data protection law, it is very difficult to identify them.

Future research should apply the same methodology, but focus on a bigger sample, to be more representative and generalizable. The sample size could be increased by focusing on different East African countries, e. g. Uganda and Rwanda. Another aspect for future research would be the reintegration experiences of East African crafts graduates after returning from Germany, particularly focusing on the benefits of this model for the home countries.

This research may guide the relevant stakeholders to understand integration challenges of African TVET migrants in Germany and how to mitigate them. Relevant stakeholders were identified in the African home countries as well as in Germany, being policymakers, embassies, public authorities, private sector representations, employers, training providers and civil society.

This research might consecutively contribute to sustainable reduction of skills shortage in Germany and economic development and youth employment in partaking African countries.

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