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RESEARCH ARTICLE

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The contribution of informal learning in the integration process of immigrants into the labour market: Individual and organisational perspectives in selected sectors

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Abstract

In Germany and Canada, the integration of immigrants into the labour market is closely related to the various approaches towards the recognition and validation of informal learning. This paper aims to analyse the informal learning measures undertaken by immigrants as well as those offered by employers in the health and information and communication technology sectors during the labour market integration process. The study focused on nurses as well as IT project managers and programmers. The comparison focuses on the occurrence and quality of the four dimensions of the dynamic model of informal learning from an individual and an organisation perspective. The results show similarities between these two perspectives regarding the relevance of the four dimensions in the integration of immigrants into the labour market. In addition, clear differences between the two investigated sectors as well as country-specific differences appear.

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INTRODUCTION AND RESEARCH INTEREST

In Canada and Germany, the integration of immigrants into the labour market has several problems. Foreign-trained workers receive a lower income and are more often unemployed than native workers are. The qualifications of foreign trained workers along with their skills and work experience are often devaluated and they may experience economic marginalisation (e.g., Gilmore, 2009; Green & Worswick, 2012; Li, 2008; Li & Sweetman, 2013; Mergener, 2017; Owen & Lowe, 2008; Picot, 2004; Picot & Sweetman, 2012; Reitz, 2005; Thompson & Worswick, 2004 and e.g., Battisti & Felbermayr, 2015; Brück-Klingberg et al., 2007; Höhne & Buschoff, 2015; Seibert & Solga, 2005).

Various learning experiences are common in the migration process. Very few studies have investigated immigrants' (informal) learning process before and during their integration into their new local labour market (Cuban, 2014; Guo, 2013b; Monkman, 1999; Waters & Brooks, 2012). There are limited research insights regarding the extent that immigrants can shape their own learning process and which learning opportunities their employers provide them. This paper presents comparative insights on immigrant learning processes before and during their integration into the German and Canadian labour markets.

This paper argues that informal learning experiences during the migration and integration process are determined by both individual immigrants as well as the learning opportunities provided by their employers. In addition to the stakeholder-oriented approach, this paper also takes systemic national aspects as well as sector-specific circumstances and requirements into consideration. To address the latter, both countries were chosen for a comparison, because Canada is characterised by a liberal labour market while Germany stands out for an occupationally structured labour market. The two sectors chosen in this study are characterised by different qualification and learning cultures. In the health sector, due to the high degree of regulation, formal learning and qualifications determine individuals' labour market access and success to a great extent. In contrast, the information and communication technology (ICT) sector is strongly characterised by dynamic innovations resulting in less focus on formal learning and qualifications. The required fast adaption to new requirements and learning on the job in the ICT sector is important for employers and employees to keep up with the changes in this dynamic work environment.

In addition, workers in the two sectors compared are in high labour market demand in Germany (Bundesministerium für Gesundheit [BMG], 2018; Institut der deutschen Wirtschaft [IW], 2018a, 2018b) (Bundesagentur für Arbeit [BA], 2018; Czepek et al., 2015; Zika et al., 2015) and in Canada (Canadian Occupational Projection System COPS, 2017a, 2017b).

On an individual level, immigrants are equipped with qualifications, skills, former work experience and social capital (e.g., Li, 2008), which are assumed to influence their decisions and actions in the migration related learning process. On an organisational level, the employers are affected by national migration and recognition policy (Guo, 2013a; Hawthorne, 2007) as well as by the sector-specific learning culture. Furthermore, ogranizations have various degrees of freedom in designing the worker integration process.

This paper analyses the roles and intentions of immigrants and their employers within the (informal) learning process which occurs during labour market integration. The analytical approach considers relevant differences between the two selected sectors—ICT and health. The results of this paper aim to contribute to a better understanding of problems associated with the integration of immigrants into local workforces.

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Souto-Otero and Villalba-Garcia (2015) provide a literature review on migration in the context of the validation of nonformal and informal learning in Europe. The review focuses on the role of immigrants in the field of validation of informal learning, as well as the outcomes of validation systems for immigrants. The authors state that these two strands of literature have so far been largely disconnected. Souto-Otero and Villalba-Garcia (2015) indicate that past research has not given much attention to the validation of informal learning in the context of migration. They state that there is a dearth of data on validation of informal learning and immigration. By focusing on the importance of informal learning in the integration process of immigrants, this paper attempts to begin to fill the literature and empirical research gap identified by Souto-Otero and Villalba-Garcia (2015).

In the North American context, Van Noy et al. (2016) provide a multi-disciplinary literature review of over 600 publications on informal learning, in which they examine different types of informal learning, opportunities and challenges, as well as issues of access and equity. One core finding is that learners with a greater educational attainment benefit more from informal learning opportunities than less educated individuals. Van Noy, James and Bedley point out sometimes tensions between individuals and organisational goals emerge within an organisational context and stress the importance of research in the workplace, to understand how workplaces can be changed to facilitate better opportunities for employees' informal learning processes. This paper also builds on these findings and looks at immigrants from the perspective of informal learning.

This paper aims to provide answers to the following two research questions: Which (informal) learning measures do immigrants as well as their employers take during the labour market integration process and how do both stakeholders perceive them? Which characteristic differences and similarities occur between the countries and sectors?

This study aims to promote international dialogue that supports informal learning and its recognition in a migration context. The results aim to help the individuals and organisations to reflect on the effectiveness of their own measures and procedures in place and to further facilitate an effective integration process.

In the following, the recognition of informal learning and its relevance in the context of migration in Germany and Canada is explained. This is followed by the underlying theoretical model and the methodological design of the study. The results of the company case studies are reported, dividedinto individual and organisational perspectives and summarised in a comparative synopsis. The paper ends with a discussion of the results and a conclusion.

OUTLINE OF MIGRATION POLICY AND RECOGNITION OF (INFORMAL) LEARNING IN GERMANY AND CANADA

Characteristics of Germany

Germany has received an increasingly large number of immigrants within the last decade and is in the process of developing a comprehensive and differentiated migration system. The country recently developed a new law on migration to facilitate the migration process as well as the labour market integration especially of non-European immigrants. The German Recognition Act, which came into force 2012, is intended to help combat the shortage of skilled workers by promoting the migration of qualified people from abroad. This Act is also intended to facilitate social integration and labour market access of immigrants who already

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live in Germany. The German Recognition Act enables immigrants to undergo a recognition process, in which the equivalence of their foreign qualification to a comparable German qualification is evaluated. This recognition process is closely linked to the laws on residence permits.

In Germany, recognition of informal learning is relevant in terms of education policy due to the implementation of the German Qualifications Framework (DQR, 2011) and the recommendation of the Council of the European Union (2012) to introduce procedures for validating nonformal and informal learning by 2018. Nevertheless, there is currently no recognition procedure in Germany that leads to the award of a formal qualification and is based on the validation of nonformal and informal learning (Gutschow, 2020). The equivalence tests (based on a procedure called qualification analysis) with subsequent certification provided for in the Recognition Act show a certain proximity to this goal. In addition, the ValiKom project developed a procedure with a strong focus on labour market usability, in which users can decide, after a phase of counselling and self-assessment, whether and they would also like an external assessment of their learning outcomes by experts. In this case, formal recognition and certification occurs by the competent body (Gutschow, 2020; Oehme et al., 2017). Overall, the organisational effort for conducting a qualification analysis is relatively high, as it must be organised individually.

Characteristics of Canada

Canada as a migration driven country has the most elaborate and longest-standing skilled labour migration system of all OECD countries (OECD, 2019). Canada's economic and population growth is highly dependent on migration. Migration into Canada can be permanent or temporary, where the Federal Skilled Worker Programme and the Temporary Foreign Worker Programmes complement each other (Guo & Shan, 2013b).

In Canada, the recognition of foreign qualifications is closely linked to a tradition of assessment and recognition of prior learning in adult education, known as Prior Learning Assessment and Recognition (PLAR). PLAR encompasses more than informal learning, because learning outcomes from a wide variety of fields are considered: employment, volunteering, military training, hobbies and other significant life experiences (Simosko, 2012).

Defining and delimiting the recognition and assessment of prior learning is difficult in Canada, both in the practical and theoretical context (Conrad, 2008). Werquin (2007) indicates that in Canada, prior learning assessments initially focused on the educational system and then later shifted its focus to the labour market/labour market actors. While the first PLAR developments occurred in Quebec, all Canadian provinces and the Canadian Association for Prior Learning Assessment (CAPLA) currently support it (Evans, 2000; Morrissey et al., 2008). Simosko (2012) provides a handbook on behalf of CAPLA to assist regulators, employers and other stakeholders. There is a close connection between PLAR and the integration of immigrants into the Canadian labour market (Van Kleef, 2011). Politically, the connection between the recognition of prior learning and the recognition of foreign credentials becomes clear, as the Canadian government funds initiatives to recognise learning outcomes under the umbrella of credential recognition or in connection with workplace learning initiatives (Conrad, 2008).

The lack of knowledge and skill recognition is a key obstacle for immigrants to pursue their profession in Canada (Van Kleef, 2011). As such, there is an economic intention behind

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Canada's efforts to develop and adopt the PLAR as well as the country's migration policy in an effort to attract qualified workers (Evans, 2000). To date, no studies have been conducted on the recognition of foreign qualifications and competences that systematically consider the recognition of informal learning. Various authors point out that improving and intensifying the use of PLAR would improve labour market integration of immigrants (cf. Guo, 2007; Andersson & Guo, 2009; Guo & Shan, 2013a). The lack of a national qualifications framework is another problem (see Wheelahan, 2011).

Commonalities and differences between both countries

Canada and Germany differ regarding their educational systems and their labour market structures. In Canada, registered nurses (RNs) need a bachelor's degree to practice, while German nurses are qualified through the VET (Vocational Education and Training) system. The framework conditions of the recognition processes are comparable in both countries within each analysed sector.

In both countries, nurses must prove their qualifications and work experience to be licensed by the legally responsible body. In addition, in Canada they must pass a compulsory standardised exam to be registered. While nursing is a VET qualification in Germany, Canada differentiates between two categories of nurses. RNs are educated at universities and graduate with a bachelor's degree, and Licensed Practical Nurses are trained in colleges graduating with a diploma. Only Canadian RNs, who need a bachelor's degree to perform their job, were interviewed in this study. In the ICT sector, the labour market is unregulated, which means that no formal qualifications (in terms of formal certificates or fixed number of years of work experience) are required. This provides increased decision power to employers, who can determine which requirements are required for their open positions.

THEORETICAL BACKGROUND: A DYNAMIC MODEL OF INFORMAL LEARNING

The distinction between formal, nonformal and informal learning is associated with conceptual uncertainty (e.g., Björnavold, 1997). There are numerous competing definitions of the different terms and concepts, although the differences are sometimes marginal. An overview of numerous internationally discussed approaches to differentiating forms of learning is given by Werquin (2010). In the context of Werquin's (2010) international OECD study on the recognition of nonformal and informal learning, he looks at existing approaches and concepts. Despite the conceptual vagueness, the distinction between the three forms of learning (formal, nonformal and informal) is the dominant concept in the literature. Werquin (2010) notes that Coombs and Ahmed (1974) popularised the categories of formal, nonformal and informal learning. A comprehensive literature review regarding the criteria used to distinguish the three types of learning has been undertaken by Colley et al. (2003). Conlon (2004) investigated the background and definitions of informal learning, as well as its relevance and applications in the workplace. He argues that informal learning is important for the development of professional expertise, but that no theoretical model exists, which balances the conflicts between the role of the individual employee and the organisation. He states that a model which combines the individual informal learning with a workplace role, is beneficial for both employees and employers.

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Tannenbaum et al. (2010) provide an overview of the literature on informal learning (cf. ibid. p. 303ff.) and clarify that various definitions of informal learning exist. They assume that informal learning has the following characteristics: 1. Predominately learner directed and self-guided (individually not organisationally controlled), 2. Reflects at least some intent for development, growth, learning, or improvement (not simply incidental learning), 3. Involves some action and doing, and is not purely educational, 4. Does not occur in a formal learning setting.

In general, informal learning is less structured and more dynamic than formal training and its beginning and completion points are often unclear or undefined. This is why Tannenbaum et al. (2010) assume that a linear model may not accurately capture the dynamic nature of informal learning, which leads to their dynamic model of informal learning (see Figure 1). The model is also particularly well suited for this study, as it was developed specifically for the corporate context. The model forms the theoretical background for this paper, because it captures the organisational as well as the individual dimension of informal learning, which are the two foci of the qualitative study this paper presents.

Tannenbaum et al's (2010) model contains four informal learning dimensions, which each form a part of the larger context of organisational and individual characteristics. This context either encourages or impedes the informal learning process (Dechant, 1999; London & Smither, 1999).

The model (Tannenbaum et al., 2010) differentiates the following four informal learning dimensions:

- Intent to learn, improve, and develop: recognising or being personally aware of the need to improve oneself, acquire knowledge, or build expertise.
- Experience and action: engaging in an action or an experience that involves the individual actively doing something.
- Feedback: receiving feedback related to an event or action. Feedback can come from the task itself or from others; it can be directed toward the learner or occur vicariously.
- Reflection: engaging in thoughtful consideration to seek understanding about one's experiences.

It is important to recognise that a person can enter the informal learning process at any point in the above model. An individual may experience one or more of these dimensions, one

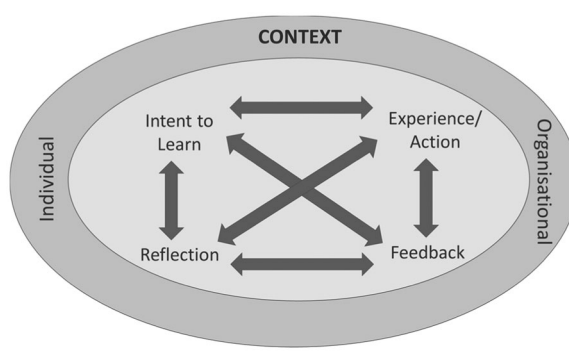

FIGURE 1 Dynamic model of informal learning. *Source*: Tannenbaum et al. (2010), p. 307.

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or more times. As this study focuses on the recognition of informal learning of immigrants, the following example can illustrate the model: An immigrant may identify a lack of competences and/or skills for the aspired job in the host country and decide that he/she needs to become more competent in this regard (intent). Hence, he/she consults a migration agency, a manager or a colleague for their opinion (feedback), performs some work that involves building this competence (experience and action), and reflects (possibly together with the migration agency, the manager or a colleague) about his/her performance and how he/she can handle similar situations in the future (reflection) (cf. respective ideal typical recognition pathways in Germany BMBF, 2014 and in Canada FLMM Forum of Labour Market Ministers, 2009).

All four dimensions can potentially be used for analysing the individual and the organisational perspectives. Clear focal points of the four dimensions can be identified regarding the two groups of actors. In the following, the analytical assignment of the dimensions to one of the two actors will be justified argumentatively.

The intention to learn can be promoted by appropriate framework conditions in the company as well as the communicative motivation by a superior, but it always requires the intention to learn by the learner/employee.

The informal learning process can also be promoted by the employer or the supervisor. However, the reflection of the (own) informal learning process is primarily the task of the employee himself.

In today's work environment, employees have degrees of freedom in their choice of activities and thus can influence their professional experiences and actions. Nevertheless, it is primarily up to the employer at the workplace, which professional tasks he assigns to employees, and which (learning) experiences he enables employees to have.

Regarding the dimension of feedback, the model (Tannenbaum et al., 2010) creates the option that the feedback comes directly from the (work) object with which the employee deals. Despite this option, feedback in the context of induction and integration of new employees is primarily given by employers represented by supervisors or colleagues with more experience.

The above justifications lead to analysing two of the four dimensions of Tannenbaum's model in relation to the actor group for which they are primarily relevant.

STUDY DESIGN AND METHODOLOGY

The basis for the presented results are twelve case studies, six in German as well as six in Canadian ICT companies and hospitals. Each case study is comprised of interviews with foreign-trained employees as well as with HR-representatives. The subjective perspectives of these stakeholders have not been investigated sufficiently in former research studies. The sample of this study is consistent with existing research which considers country-specific aspects (Wheelahan & Moodie, 2016) as well as sector specialities (Saar et al., 2014).

Sample and case study design

The sample of case studies in both countries follows the maximum variation sampling (Patton, 2001). The ICT and the health sectors are characterised by different qualifications and learning cultures as well as different degrees of regulation and occupational requirements. The selected sectors vary regarding systemic context factors. The analyses are based on interviews

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conducted with nurses in the health sector and project managers or software engineers in the ICT sector. The selected sectors are characterised by high labour market demand for skilled workers. An intensity sampling (Patton, 2001) was applied in the health sector to select the regions for the case studies. Intensity sampling allows the selection of a manageable number of cases that provide in-depth information of an investigated topic. As such, Ontario in Canada and North Rhine-Westphalia in Germany were selected, which both are the provinces with the largest population-share and the highest absolute share of immigrants in their respective country.

To gain the individual as well as the organisational perspective on the (informal) learning process during labour market integration, in each country six case studies (three in the ICT and three in the health sector) were conducted. In each country, 13 interviews with employees and 12 interviews with HR representatives were conducted leading to overall 50 semistructured interviews. Within the group of HR representatives there are those working directly in the HR department as well as mangers from other technical departments who are responsible for recruitment in their field of responsibility. The term 'HR representatives' is used for both. In each company case study, at least two employees and two HR representatives were interviewed. Recruitment of interviewees through company request was chosen to ensure that all interviewees who represent the employer had extensive experience in hiring immigrants. The company selection was based on the presence of progressive practices in hiring foreign-trained employees. The selection of employees ensured they were already in employment and thus able to report on their entire integration process. Table 1 shows the characteristics of the interviewees. The participating companies selected the interviewees themselves (criteria for HR representatives: broad experience with hiring foreign-trained employees; criteria for employees: qualification on a bachelor level and variation in countries of origin). In addition, the companies were asked to select the employees based on these criteria: in the host country since at least 2 years, having acquired most of their formal qualifications abroad, German or English are not their mother language. In selecting the HR representatives, the companies were only limited to the criteria that the interviewees should have experience in hiring foreign-trained employees.

The interviews

Within the interviews, both groups were asked questions regarding the learning process during labour market integration and the respective measures undertaken by the immigrants as well as measures within the companies.

The employees were asked the following questions: 1. What do you think were the biggest gaps between your foreign qualifications and competences and the comparable/required qualifications and competences in Canada? If there were gaps, how did you close them? 2. Did you do any further training, bridging programmes or undertake other programmes after you migrated to Canada and before you applied for a job? If so, which measures, programmes and so forth were there? How would you evaluate them? 3. Did you attend any training or educational programmes and so forth. at or supported by your company/organisation after they hired you? (a) If so, what kind of training or education did you undertake? Which institution provided the training or education, and what was the reason for attending it? Where these measures more standardised or individualised? If they were individualised, how was it adjusted towards you? (b) Was the training or education helpful? Why? What could be done to improve these measures?

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TABLE 1 Sample details.

	Germany (25 interviews—13 employees; 12 HR representatives)	Canada (25 interviews—13 employees; 12 HR representatives)
Employees	Gender: ICT sector: seven interviewees (five male and two female); Health sector: six interviewees (four female and two male)	Gender: ICT sector: six interviewees (five male and one female); Health sector: seven interviewees (six female and one male)
	Education: interviewees mainly received the entirety of their education in their country of origin; two interviewees acquired parts of their education in Germany	Education: interviewees mainly received the entirety of their original education (not including necessary bridging and/or further educational measures required in Canada) in their country of origin
	Status: one interviewee is a refugee, all others are work migrants or came because of private reasons	Status: one interviewee is a refugee, all others are work migrants or came because of private reasons
	Stay in Germany: between 2 and 17 years	Stay in Canada: between 2 and 14 years
	Language Skills: all interviewees speak English as a second or third language	Language Skills: one interviewee speaks English as mother language and all others as a second or third language
	Countries of origin: Spain, Ukraine, Yemen, India, Iran, Serbia, Croatia, Cameron, Canada, United States	Countries of origin: Scotland, Germany, Hungary, Ukraine, Brazil, India, China. South Korea, Philippines, Ruanda
	Years of work experience: between 0 and 16 in their country of origin or other foreign countries	Years of work experience: between 0 and 24 in their country of origin or other foreign countries
HR representatives	Origin: mainly Germany with only one exception (German not native language)	Origin: seven from Canada and five from other countries
	13 interviewees (six female and seven male)	12 interviewees (three female and nine male)

The employers answered the following questions: 1. Which different processes and measures are there, if any, that are conducted when a foreign-trained employee is hired in comparison to a native-born employee? What are these measures and what are the reasons for them? 2. If you hire foreign-trained employees, what are typical adjustment measures to help these people integrate in your company? Are they different from the ones for Canadian born/trained employees? 3. Do you have special (training) measures or programmes etc. in place to support foreign-trained employees to gain further qualifications/credentials after they are hired to close gaps between their qualifications/credentials and your demands? (a) What are these measures, programmes and so forth.? (b) Are they more standardised or individualised and why? If they are individualised, how do you adjust them towards the individual employee and his/her needs? If they are more standardised, what were the rationale and considerations when developing them? (c) Do these measures involve other

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stakeholders like for example, educational institutions? If yes, which institutions are involved and in which regard?

All interviews were audio recorded and transcribed verbatim. By using MAXQDA the textual data were segmented according to meaning units and thematically coded. A mix of deductive and inductive coding was used for the data analysis. For the informal learning aspects, the above theoretical framework was the point of reference. For the occurrence of further sector and country-specific effects on the recruiting and the integration process, an inductive coding mode was used. The author conducted all interviews personally and coded them.

RESULTS: RELEVANCE OF INFORMAL LEARNING IN THE LABOUR MARKET INTEGRATION OF IMMIGRANTS

Various investigation methods are used in comparative educational research (Epstein, 1992) and comparative education in VET can be considered as its own academic discipline (Lauterbach & Mitter, 1998; Pilz, 2007). This study uses a comparative approach and it is required to define a set of criteria determining the variables compared—the 'tertium comparationis' (Lauterbach & Mitter, 1998). This paper investigates informal learning occurring in the labour market integration for immigrants by using the above model of informal learning as a theoretical basis. This model differentiates between the individual and the organisational perspective, as did the empirical approach utilised. The comparison is structured by these two perspectives (organisational and the individual). Furthermore, the measures within the labour market integration process, as well as the four dimensions differentiated in the above model (Tannenbaum et al., 2010) of informal learning structure the results. Here, the analyses on the individual level focus on the two dimensions 'intent to learn' as well as 'reflection', while on the organisational level the analyses focus the dimensions 'experience/action' as well as 'feedback'. Table 2 illustrates how the measures within the labour market integration process relate to the dimensions of the informal learning process. This structure captures the full context of both processes which occur in parallel. Furthermore, the structure allows for the identification of possible interactions between the four dimensions of informal learning described in the theoretical reflections. The individual as well as the organisation determine the success of the integration process and the informal learning process, it is necessary to consider both perspectives to draw a complete picture of these processes.

The results are derived from qualitative interviews, which leads to limitations regarding generalisation. The findings provide explorative insights of typical perceptions of foreign-trained employees and their employers regarding the (informal) learning occurring within the integration process. The results aim to shed light on the rarely investigated informal learning with regard to migration (see Introduction). All interviewees were asked about the integration measures following hiring and how they perceived these measures. Furthermore, foreign-trained employees were asked about the measures they took themselves before their application to their employers. The employers were asked which training, learning and onboarding measures their companies offer for immigrants (see detailed questions asked in the interviews in the methodology section). The results are presented in the structure of the foci of the interview questions to make the qualitative research process transparent. The results are systematised according to the theoretical framework. This allows for the evaluation the

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TABLE 2 Relationship between the labour market integration and informal learning processes.

		Measure(s) within the labour market integration process	Dimensions of the informal learning process	
ICT	Employer/ Organisational Perspective	Onboarding measures (Focus: Experience & Action) Adjustment measures (Focus: Experience & Action) General learning and training opportunities (Focus: Feedback)	Experience & Action	Feedback
	Employee/ Individual Perspective	Measures before the application (Focus: Intent to Learn) General learning and training opportunities (Focus: Reflection)	Intent to Learn	Reflection
Health	Employer/ Organisational Perspective	Onboarding measures (Focus: Experience & Action) Adjustment measures (Focus: Experience & Action) General learning and training opportunities (Focus: Feedback)	Experience & Action	Feedback
	Employee/ Individual Perspective	Measures before the application (Focus: Intent to Learn) General learning and training opportunities (Focus: Reflection)	Intent to Learn	Reflection

informal learning occurring within the integration process from the individual as well as the organisational perspective.

Individual perspective: Measures before the application

Employees in both countries were asked the measures they took before applying for a job in their host country and their respective learning experience. Sector-specific, as well as country-specific differences were seen in the results.

In Germany, foreign healthcare professionals undergo a highly standardised formal recognition process, which is why only a few additional individual measures are taken by the nurses before applying. Hospitals often hire foreign professionals at the beginning of the formal recognition process and support them through it. In the IT sector, respondents in Germany state that language courses are particularly important for most employers, but the specific need of each employer varies. According to the employees surveyed, German employers in the IT sector tend to be less demanding than Canadian IT companies in terms of language skill requirements.

The interviewed Canadian nurses underwent extensive qualification measures before applying to their roles. Most of these measures are programmes specifically tailored to country-specific adaptation of their skills and competences - generally called bridging programmes. However, since places in these bridging programmes are very limited, some of the interviewees also had to complete much more extensive qualification measures lasting several years (in some cases entire bachelor's degrees).

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Canadian employees in the IT sector state more frequently that they completed specific qualification measures before applying for their role. The intention here was often to obtain a domestic job reference, to build up a network and to facilitate migration and integration in general. A Canadian ICT-employee describes his intention as follows: 'This programme was actually meant to give us some references, so to help us out with this. [...] the programme just promised an internship—and the rest is based on you and your performance'. (Interview 36).

IT professionals in both countries strongly emphasise the importance of informal learning in their sector. They often state that they make up for skill and competency 'deficits' through their informal learning activities, which is perceived as characteristic of the ICT sector. This differs from the health sector, where learning is more standardised and sector specific formal learning and qualifications exist. A Canadian ICT employee characterises his learning process as follows: 'Never anything official at all. It was always either learning on the job or me learning by myself'. (Interview 28). Another Canadian ICT employee also highlights the importance of self-directed informal learning: 'I did often buy the course book and I would learn them for my own knowledge. But I would pick certain things that I found interesting or I think that are applicable for my work'. (Interview 32).

The interviewed employees who have undergone learning measures such as bridging programmes, language or integration courses before their application largely rate these positively. Canadian nurses place particular emphasis on building up a professional network as well as adjustment and acclimatisation to the Canadian health system. A Canadian nurse comments: 'They are very helpful in a sense that you learn a lot—the Canadian nursing—the culture itself. But the skills and knowledge—all those other programmes—it was very redundant. ... And of course, the clinical hours—that was very helpful as well. ... So the 400 clinical hours—that helped a lot—plus the cultural awareness'. (Interview 45).

Canadian IT workers also see the main advantage of preapplication measures as networking, which helped them in their job search. A Canadian ICT employee said: 'Well it [pre-application programme] was good to remember some techniques, and it was good to create some network. But technically it wasn't of any help'. (Interview 37).

Some of the surveyed employees, especially in Germany, report that they were not aware of any measures before applying. The Canadian employees in the ICT sector report that they had already taken the necessary measures at the time of migration to successfully apply for a role in Canada. Here, networking and/or building social capital was the priority. A Canadian ICT employee describes his own approach as follows: 'I emailed a lot of people before I came over. So that doesn't cost a lot of money. I was already here when I applied for the job. The migration thing was already clear'. (Interview 29).

Organisational perspective: Onboarding and adjustment measures

All HR representatives were asked which onboarding and adjustment measures their companies have in place and which ones they use to integrate foreign-trained employees. The following results show clear differences between the two investigated sectors. In addition, country-specific differences are apparent.

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Onboarding measures

Regarding the onboarding measures for foreign employees, all HR representatives indicated that these employees are sometimes given more time to familiarise themselves with their job. Just like new local employees, the new migrant employees are usually assigned a colleague with whom they can exchange ideas. Decisions regarding further training, as required, are usually made in consultation with the supervisor or manager.

Furthermore, HR representatives in both sectors make it clear that there are few to no differences at the organisational level with regard to onboarding measures between foreign and local employees. Differences arise on a needs-oriented individual level. Here, some HR representatives explicitly point out the importance of individual on the job learning.

In addition to professional support from colleagues, the HR representatives mention other onboarding measures that are offered. These include language courses, support in finding accommodation as well as mentoring and coaching. In addition, some of the interviewed HR representatives also work with regional partners to integrate the foreign employees into local communities.

Regarding onboarding measures for foreign employees, the HR representatives in the health sector in both countries state that these are adapted to the needs of the individual.

The HR representatives in the IT sector express a similar opinion and state that largely the supervisors or managers are involved in decisions regarding necessary individual onboarding measures. A German IT HR representative characterises this interaction as follows: 'There is the respective manager responsible for this employee, they sit together with the employee regularly, and they plan together what goals and perhaps what needs this employee has in terms of what training he or she needs, what training, what support. [translated from German]' (Interview 1).

The importance of cultural differences in onboarding is rated as low by the ICT HR representatives. In Germany, the HR representatives point out the differences in terms of practical training of nurses between Germany and many other countries, which offer more theoretically oriented training programmes. In Canada, differences exist mainly due to the strong collaborative working relationships between the actors in the health system, unlike the mostly hierarchical structures of other countries (Pursio et al., 2021). Canadian health HR representatives also mention the higher degree of autonomy of Canadian nurses in contrast to other national work cultures in the health sector.

Adjustment measures

HR representatives in the health sector in Germany state that they offer a largely standardised range of qualification measures to close skill and competency gaps for foreign employees during their formal recognition process. This usually includes a language course in addition to the professional adaptation qualification. In general, individually tailored learning opportunities are provided, which include accompanied learning on the job.

HR representatives in the health sector in Canada report a similar approach although learning opportunities for foreign employees seem to be less comprehensive and more individualised than in Germany.

In the health sector, specific adjustment measures for new foreign employees are mainly special guides or on-the-job-training plans. These measures depend on the individual needs of the employees.

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HR representatives in the ICT sector report, especially in Germany, that they create and implement qualification and development plans for the foreign-trained employees. These are mostly individualised and oriented to professional activities and tasks of the individual. Similarly, this is also done for local employees. The HR representatives strongly emphasise the importance of learning on the job and project orientation in the ICT sector. A German ICT HR representative describes this: 'In IT, it is often the case that specific knowledge is acquired when it is rapidly needed for a special project. [translated from German]' (Interview 6). In the ICT sector, foreign employees usually have a colleague who ensures that they understand their professional role and perform well. This depends largely on of the level of seniority at which the employee was hired. Quite a few ICT HR representatives, especially in Canada, report that following this, foreign employees are often already well integrated, and few adjustment measures are necessary.

Overall, the measures offered by employers are very requirement/project-specific and generally individualised in the ICT sector. ICT HR representatives in both countries emphasise the international comparability of the competences and skills required in this sector and the importance of learning on the job.

Regarding specific adjustment measures for foreign-trained employees, some HR officers and managers interviewed said that these measures do not differ between local and foreign applicants.

Organisational and individual perspective: General learning and training opportunities

Foreign-trained employees as well as the HR representatives were asked about their perception of general learning and training opportunities in their companies. The results show consistent evaluation of both stakeholders regarding the exit opportunities, which differ noticeably between the two sectors and slightly between both countries.

The training measures and learning opportunities after the hiring process are usually offered by the companies in both sectors and in both countries. All interviewees uniformly express this.

The intentions of the employees for participating in company offered training measures vary between respondents. In addition to individual interest and benefit, the company and/or client/patient benefits are often in the foreground. A German ICT employee describes his situation: 'It [the learning opportunities] was 50:50. So my manager—she focused on the development. So there are some suggestions coming in our way and we can see which one we are interested in and we can do it.' (Interview 4).A Canadian IT employee also reflects this when they said: 'The project management was 100% based on the job and the pharma training was more client specific'. (Interview 29).

The interviewed employees report that the employer offered measures can be standardised or individualised. Standardised offers often take place before the application. In the health sector in particular, there are learning opportunities that are offered to all new employees. In addition, there are also individual offers in both sectors that are custom tailored to the needs of individual employees. In this respect, measures in the health sector are much more standardised than in the ICT sector. The measures in the medical field, in both countries, include specialised training courses (e.g., resuscitation, defibrillation, transfusion, hygiene, and oxygen supply) and some language courses. A Canadian nurse speaks very positive about the

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offers of his employer: 'Every year they have lots of offers, conferences, certificates and so forth. They are really supportive. They have good funding and offer lots of support regarding continuing education. [...]The hospital itself has very structured educational programmes. [...]I believe I had 4 weeks of orientation training with ongoing education by unit educators and preceptors. This was ok for me to learn about the Canadian nursing work environment'. (Interview 44).

Employees in the IT sector paint a similarly positive picture of what their employers offer. All respondents express that there are sufficient training measures for the integration of foreign-trained new employees in their companies. The importance of informal support is particularly emphasised in both sectors by all interviewees. Here, in particular German employees and employers very often report that informal support from the organisation or from their colleagues has been offered and that it has been helpful in finding their way in their new job. According to the HR representatives interviewed, this informal support does not only refer to the technical training-on-the-job, but also addresses individual issues and questions of the new employees. Several of the interviewed employees and employers, especially in Germany, point to the offer of buddy or mentor programmes often considering their individual cultural background. Initiatives such as diversity networks or various cultural groups were also mentioned in the interviews. With regard to the aspect of informal support, the respondents in Canada were much less likely to make specific comments on the presence or absence of such support.

If employees participated in learning and training measures offered by their company, they rated them consistently well. Finally, some of the employees interviewed also reported that they did not participate in any learning and training measures offered by their employers. They gave different reasons for this, such as lack of language skills or time.

DISCUSSION

According to Tannenbaum et al. (2010) all four above presented dimensions of an informal learning process are equally important. The involvement of all dimensions guarantees that informal learning is most effective. Furthermore, the experience of one dimension can trigger the others, while the missing of any dimension can be detrimental by short-circuiting the informal learning process (Tannenbaum et al., 2010). The question arises, what are the consequences if one or more of these dimensions are missing? In the following, the subjectively perceived importance of the four dimensions by the employees and employers, as well as corresponding development potentials are discussed.

The four dimensions of the model of Tannenbaum et al. (2010) are used to structure the discussion, which mirror the presentation of the results (see Table 3).

According to Tannenbaum et al. (2010), learners may be not able to take full advantage of a potential learning opportunity if the dimension ***intent to learn*** is missing. Hence, without this dimension learning would be just incidental. In the context of this study, it became clear that especially in the ICT sector the employees have a self-driving mindset to identify their learning needs and gaps and become active in informal, on the job learning to address them. In the health sector, there is also awareness for the importance of practical workplace learning, although this is often not controlled by the nurses themselves. Regarding the dimension intent to learn this study demonstrates a need to create awareness for the required skills and competences to immigrants while they are still in their home countries. Here transparent and

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TABLE 3 Comparative overview of the integration process in Canada and Germany.

Country	Sector	Stakeholder	Dimensions of the informal learning process	
Canada	ICT	Employee	Intent to learn Very active in initiating necessary learning process before migration Awareness of required domestic network and domestic experience Roles and working resources perceived as comparable lead to low need for adjustment	Reflection Strong feeling of responsibility for their own successful learning process IT sector perceived as very international and characterised by similar job profiles and roles Canadian network and language identified as clear barrier
		Employer	Experience & Action Working culture of 'hit the ground running' Attitude to hire employees and see what happens High importance and support of learning on the job Former experience (informal learning outcomes) extremely important to the employers Project related tasks already important in hiring process (activity-oriented)	Feedback Managers and colleagues provide regular feedback Informal open learning culture Dynamics of the sector perceived as a key argument for close and frequent communication process between employees and their managers
Canada	Health	Employee	Intent to learn Recognition process determines not only required formal learning, but also the necessary (informal) learning on the job Individuals highly motivated to gain practical experience and learn in the workplace, but not to go through redundant theoretical formal training programmes	Reflection Provided programmes and courses rise individuals' consciousness regarding differences of their job role and the health system Informal learning (practical hours) perceived a lot more valuable than formal learning Network gained while learning on the job perceived as very valuable Informal learning experiences seen as important criterion to get a certain job (e.g., spezialisation and senior role)

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TABLE 3 (Continued)

Country	Sector	Stakeholder	Dimensions of the informal learning process	
		Employer	Experience/Action Learning on the job dimension in the bridging programmes especially valued by employers Practical hours in hospitals before the hiring process build trust for the employers Hospitals provides access to networks outside the job to support integration	Feedback Individualised feedback process Necessary individual learning measures are identified in conversations and offered based on individual needs Canadian health system requires (informal) sozialisation based on communication and interaction with the stakeholders
Germany	ICT	Employee	Intent to learn Individuals identify clear necessity of German language skills Job roles and work resources are perceived as internationally comparable so that there is no need for a lot of adjustement Required (informal) learning is strongly related to client needs and German market specific aspects	Reflection Strong awareness that informal learning outcomes are valuable and are an advantage in comparison to other job applicants Support in informal learning and provision of informal learning opportunities by companies is perceived and valued High dynamics in the sector motivate employees to continuously learn in new contexts with new work resources
		Employer	Experience & Action Employers value informal learning outcomes strongly independent from where they were acquired Informal learning outcomes are key reference point to fill job positions and roles in projects Employers trust that IT skills are completely transferable into new projects Social skills especially supported through offered networks and buddy programmes	Feedback Managers and colleagues provide regular feedback Informal open learning culture Dynamics of the sector perceived as a key argument for close and frequent communication process between employees and their managers Provision of (diversity) networks and cultural groups to provide informal support

(Continues)

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TABLE 3 (Continued)

Country	Sector	Stakeholder	Dimensions of the informal learning process	
Germany	Health	Employee	Intent to learn Recognition process determines a lot of the formal learning and necessary informal learning on the job Individuals highly motivated to gain practical experience, but not to go through redundant theoretical training programmes	Reflection Individuals express frustration about necessity to prove their skills and competences (especially formally acquired theoretical part) Informal learning on the job (practical hours) perceived as very valuable Individuals clearly see necessity of extensive practical experience/informal learning to perform their job (e.g., for diagnostic skills)
		Employer	Experience/action Most employers have consistent and detailed onboarding/learning concept Employers see lack of practical experience (specific for German VET) and provide respective opportunities for informal learning on the job Employers accompany learners through recognition process by offering practical tasks to create learning opportunities Probationary work frequently used to assess (potential) employees	Feedback Colleagues and/or mentors closely interact and communicate with the foreign-trained employees to help them identifying their training needs The practical orientation and the respective tasks are an essential aspect of which the foreign-trained employees are made aware of by their colleagues

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accessible profiles of requirements would help individuals to identify learning needs earlier, to develop a clear learning plan and to have more ownership in their (informal) learning process in their home country as well as post migration. This ownership is important, Marsick and Volpe (1999) point out that the learning process must be driven by the individual to be perceived as informal learning. The event of migration can be especially fruitful in identifying gaps between goals and accomplishments or between perceived capabilities and needed capabilities (cf. Tannenbaum et al., 2010). Hence, the experience of migration can trigger the individual intent to learn informally.

The dimension ***reflection*** is important in the informal learning process, because without it the learners could fail to uncover insights from their experiences as it connects action and outcome (Tannenbaum et al., 2010). The results show that the employees in both sectors reflect their informal learning experience in the context of their integration process. Here it is remarkable that the reflection and the positive evaluation of their informal learning experiences in the context of their recognition process is extremely strong among the employees in the health system. This is particularly notable because in this sector the informal learning opportunities are initiated and predetermined often by third parties. In retrospect, the individuals clearly recognised the benefit, even if they themselves had no corresponding intention of their own at the beginning of the learning process. This shows that the two dimensions of intent and feedback can be related to each other and compensate for each other. Unlike in the health sector, the reflection process for workers in the ICT sector often takes place before migration. In this sector, self-directed informal learning is a standard with which they are familiar. According to their own assessment, this also benefits them in the integration and migration process. In the health sector, there is great potential to optimise the learning process based on individual reflection. Here, the practical informal learning phases should be expanded, and the redundant formal theory phases reduced.

In the informal learning model by Tannenbaum et al. (2010) ***experience or action*** is important to ensure that the individual has a chance to learn by doing. This study showed that in the ICT sector employees gain their experience primarily in projects and by learning on the job, whereby informal learning takes place naturally in the sector. In the health sector, the possible learning experiences are largely externally controlled during the recognition process as well as within work within hospital. Especially in Germany, employers strongly shape the learning processes of employees. In doing so, employers orient themselves to the requirements of their organisation. As such, employees qualified abroad could take more responsibility for their own learning processes, as they clearly recognise the gaps and differences between their own competence profile and the requirements in their new work environment. Leslie et al. (1998) point out that work activities like meetings, customer interactions, supervision, peer-to-peer communications, assuming a new position or new responsibilities and others are triggers for informal learning. The new company can learn in the context of these activities from their foreign-trained employees. Here it is important for both stakeholders—employees and employers—to understand the migration situation as a learning opportunity. Immigrants need support from companies and other stakeholders (migration agencies, consultants etc.) to undergo a successful (informal) learning process that facilitates and improves labour market integration.

Finally, the dimension ***feedback*** also ensures that the individuals can take advantage of potentially valuable learning experiences, because without this there is a larger likelihood that they have decreased learning or acquire the wrong lessons from their experience (McCall, 2004). Furthermore, research has shown that actionable feedback focused on individual tasks

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containing examples or specific recommendations for improvement is most effective (Cannon & Witherspoon, 2005; Kluger & DeNisi, 1996). The presented study proves that both sectors have developed different methods to manage the learning process of immigrants effectively. In the health sector, structured forms are common, such as personal development plans. Research also proved that goal setting in combination with performance feedback has a powerful effect on performance (Bandura & Cervone, 1983; Locke et al., 1984). This is accomplished with a slightly different approach in the ICT sector. Here buddy systems are widespread, which also rely on peer-to-peer communication, but less systematically. As such, the two sectors may be able to learn from each other. In the ICT sector, a stronger structuring of the integration process could provide more orientation for new foreign-trained employees. In contrast, greater individualisation in the health sector would generate degrees of freedom for individuals as well as for hospitals. In addition, the informal support from colleagues highlighted by some of the interviewees is something that also addresses social aspects outside of professional activity and promotes social learning within the company.

CONCLUSION

Sector-specific

The results prove high relevance of informal learning in the labour market integration process of immigrants in both analysed sectors. The reasons why this form of learning is perceived as important differ between employees and employers. In the ICT sector, employees often informally acquire skills and competences, which are crucial to be able to get hired for a certain position and to be able to perform in this job role. As stated by various interviewees the ICT sector in general is strongly characterised by a culture of informal learning. In the health sector, the high relevance of informal learning is related to the importance of developing a routinized work manner and to broaden professional expertise. Hence, an exposure to various complex work situations is important to increase professionalism and routine. The timeline of informal learning processes also differs between both sectors. In the health sector, a lot of practice and informal learning is required before one can perform the job. In the ICT sector, continuous informal learning is required to adapt to the fast changing dynamic work environment. Referring to the question raised at the beginning (Van Noy et al., 2016), to what extent the objectives of informal learning differ between employees and employers, the results show that both stakeholder groups in both sectors have similar interests, which differ between the sectors as the results show.

Country-specific

Besides these sector-specific aspects, the results also reveal country-related differences. In Canada, the key purposes of informal learning measures often initiated by the immigrants themselves are the establishment of networks as well as the gain of Canadian work experience and references. In the health sector, learning on the job before applying at a hospital is strongly focused on the acculturation in the Canadian health system. In Germany, the purpose of informal learning on the job in the health sector is more directed towards the acquisition of practical work experience. This aspect is closely linked to the strong focus of the German VET

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system towards learning on the job and the high relevance of practical training phases in companies in Germany. ICT employees are in general familiar with the sector-specific culture of informal learning. German ICT employees less often than Canadians report the perceived necessity and actual conduction of informal learning measures before their application. Here, transparent information of potential applicants while they are still abroad would be a measure to initiate informal learning processes already before migration. Referring to the questions raised by Souto-Otero and Villalba-Garcia (2015) regarding the relationship between different migration contexts and individual informal learning processes, it can be stated that the national framework conditions of both migration policy and the general labour market situation are influential.

A higher importance of informal learning in the ICT sector in comparison to the health sector is characteristic in both countries. Besides, formal qualifications are more important in the German ICT sector than in the Canadian. An explanation for this result could be that the German labour market is stronger structured according to occupations than the more liberal Canadian one. Hence, the degree of liberality of a labour market leads to detectable differences between sectors (more liberal labour market in ICT than in health sector), and between countries (more liberal labour market in Canada than in Germany).

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