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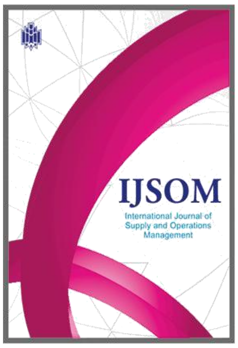

Processes of Staff Onboarding in the Supply Chain Management of Industrial Enterprises: A Comparison of Best Practices and Literature

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Abstract

This work focuses on best practice processes and methods of onboarding in the supply chain management (SCM) of industrial companies by means of a qualitative investigation. The findings from other industrial companies are compared with each other as well as with the processes and methods given in the literature. This study highlight similarities, differences and examples of best practices. The key findings of this study show that structured onboarding is successful above all through the interplay of professional and social onboarding. The study also identified that social familiarization is given special consideration in the literature as well as in practice through the topics of appreciation and trust as well as the development of a godparent, mentor or buddy program. None of the industrial companies makes use of holistic concepts of onboarding, which are presented in the literature. This is due to the fact that various interfaces common in the SCM-industry exhibit highly individual requirements.

Keywords: Best-Practices, Chemical Industry, Focus-Group, Human Resource Management, Onboarding, Supply Chain Management, Supply Chain Networks.

1. Introduction

Strategic talent management is becoming increasingly relevant to counteract challenges such as demographic change and the shortage of skilled workers (Enaux & Henrich, 2011). As a component of talent management, a personnel onboarding process adapted to the company and integrated effectively should be understood as a strategic necessity (Stulle, 2018). Structured onboarding is a critical success factor for companies and constitutes a competitive advantage. Providing knowledge about the company, processes, and goals is essential to create the basis for competent employees (Brenner, 2014). Effective onboarding can lead an organization to high performance and productivity (Schreiner & Schmid, 2015; Snell, 2006).

The staff onboarding process often faces the challenge in the practice of many companies, such as industrial companies, that various uncoordinated actors do not perceive the overall process and thus create a suboptimal onboarding process (Bradt & Vonnegut, 2009). Especially the division of supply chain management (SCM) defined as "an integrated system of interrelated equipment and activities, which serves in relation with process, transfer, and distribution of the products among costumers" (Saeedi Mehrabad et al., 2017, p. 140) has various interfaces to other divisions. Hence, a structured

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coordination of the process is vital. The understanding that onboarding and socialization of new employees are essential has also grown among many scientists and academics in recent years. However, a research gap exists about the practical application of onboarding processes and the socialization of new employees (Klein & Heuser, 2008). This results in the need to investigate current practices (Klein & Polin, 2012). Previous research has had a different focus. For example, research by Bauer & Green (1994) and Slaughter & Zickar (2006) focuses on the organizational socialization of doctoral students, while others focus exclusively on the socialization of new employees (Bauer & Erdogan, 2012). Often, studies do not deal with the practical design of applications in individual cases but serve to quantitatively investigate the methods and procedures used (Klein & Heuser, 2008; Klein & Polin, 2012). Due to the benefits and goals of a successful onboarding process, an increasing number of industrial companies are faced with developing and implementing it (Laurano, 2013). Furthermore we aim to shed light on empirical findings from the Supply Chain Management literature which was to this date neglectet. Hereby we are proposing a comparison of best practices and suggestions from the literature. As far as we know, this is the first time we present results from this area. Other studies have focused either on theory development (learning or socialsation), on popular science contributions or lacked the human side when examining factors to improve the organization (Chen et al., 2021).

The first aim of this work will be to present methods and processes from the relevant literature to generate a basis for the current state of research. Next, the study will highlight relevant practical examples with regard to their application of staff onboarding processes. This will be the basis for expressing possibilities of implementing selected processes in the area of the supply chain. At the same time, by examining the processes of staff onboarding of selected industrial companies, it will be possible to show what challenges such a process faces in supply chain management and what approaches to solutions exist in practice.

Addressing the research questions will guide the study and will be methodologically and thematically aligned with research objectives (Saunders et al., 2016):

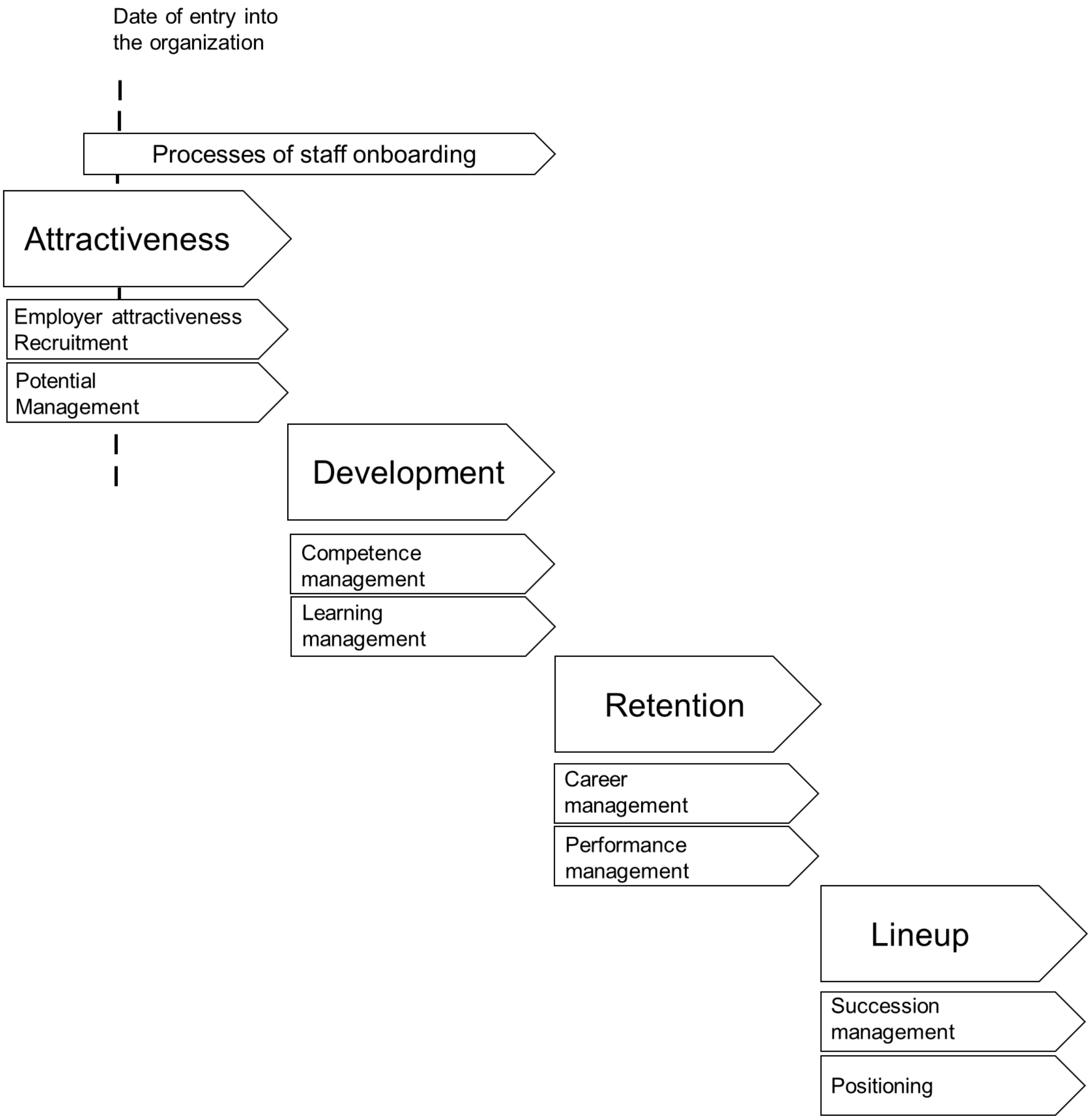
1. Which processes and methods for the induction of new employees exist in the literature, and are there any unique characteristics for industrial companies or supply chain management?
2. to what extent do industrial companies have best practice examples of processes and onboarding methods?

The staff onboarding process deals with the professional and social support of new employees to a business organization or division. An efficient staff onboarding process adapted to the circumstances and requirements of the respective organization is part of strategic talent management (Stulle, 2018). Figure 1 illustrates how the process of staff onboarding fits into this framework.

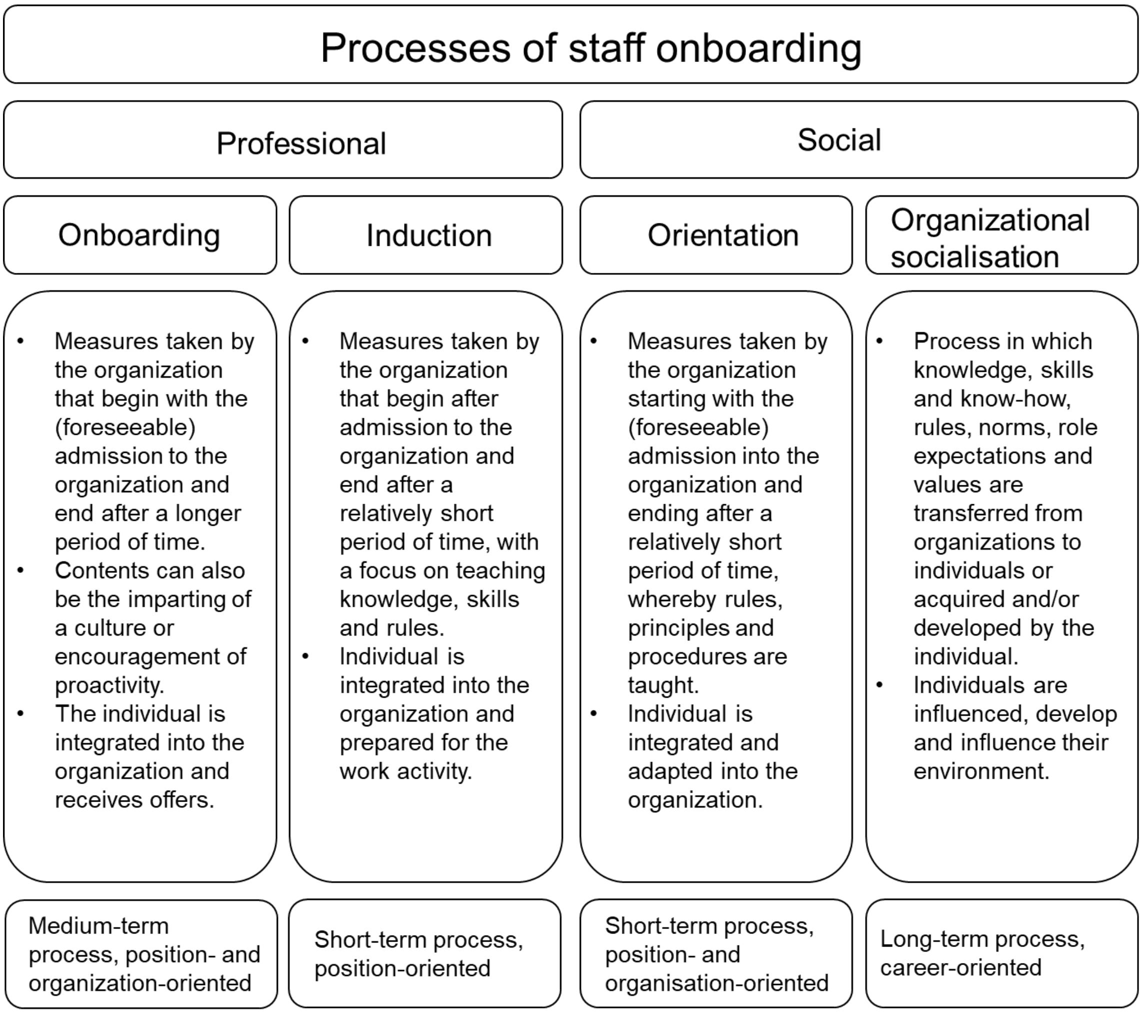
In light of the prevailing shortage of skilled workers, strategic talent management focuses an organization's activities on a candidate's talent (Trost, 2014). A relationship with desirable talents should be built over the entire "human resource cycle" (Stulle, 2018, p. 1) and represent companionship. It includes both the recruitment of external talents and performance agreement systems with internal talents. To better understand professional and social staff onboarding, onboarding and induction need to be distinguished from orientation and organizational socialization. Graph 2 serves this purpose:

Onboarding is frequently equated with the term socialization in the literature. Klein and Polin (2012, p. 268) state that onboarding is "all formal and informal practices, programs, and policies implemented or operated by an organization or its agents to help newcomers adjust." An effective onboarding process should enable new employees to gain access to information, materials, and tools necessary to perform the job (Snell, 2006). The responsibility for taking appropriate action lies on the part of the organization. The process must recruit, welcome, assimilate and accelerate new team members (Bradt & Vonnegut, 2009). Another important theoretical perspective is the learning theory (K. Becker & Bish, 2021; Klein & Heuser, 2008). This takes into account the individual capacity and ability to learn and unlearn existing things such as routines. This is particularly relevant when changing jobs within an industry, as it influences the assimilation of activities and identification with the new company.. Since onboarding is one of the first relevant points of contact with the new company and its success has a major influence on satisfaction and the willingness to change, it should be designed to be as promising as possible (Rubenstein et al., 2018).

Based on the previous statements, the sub-aspects of onboarding and induction of the staff onboarding process shown in Graph 2 form the professional process of staff onboarding according to the understanding of this thesis. It begins before the new job starts and is primarily managed by the organization.



Graph 1. Classification of the process of staff onboarding within a basic model of strategic talent management
Source: Own illustration based on Enaux (2019, p. 110) after Enaux & Heinrich (2011, p. 35)



Graph 2. Onboarding versus orientation and organizational socialization

Source: own illustration based on Moser et al., (2018, p. 4)

In the context of organizational socialization, some authors focus on employees integrating and adapting to their new job, role, and culture (Fisher, 1986; Klein & Polin, 2012; Van Maanen & Schein, 1979). The employees primarily do this in interaction with the offers of the organization. According to Bauer & Erdogan (2011), organizational socialization is a process through which employees move from being organizational outsiders to organizational insiders. It is crucial to provide new employees with a subjectively perceived successful entry into the company to lay the foundations and course for attitudes towards work content, other employees, superiors, and the employer (Schmidt-Pfister, 2014). Furthermore, employees should become aware of their role expectations. Complementary to the above-mentioned technical staff induction is the social staff induction, which is covered by the sub-aspects of orientation and organizational socialization.

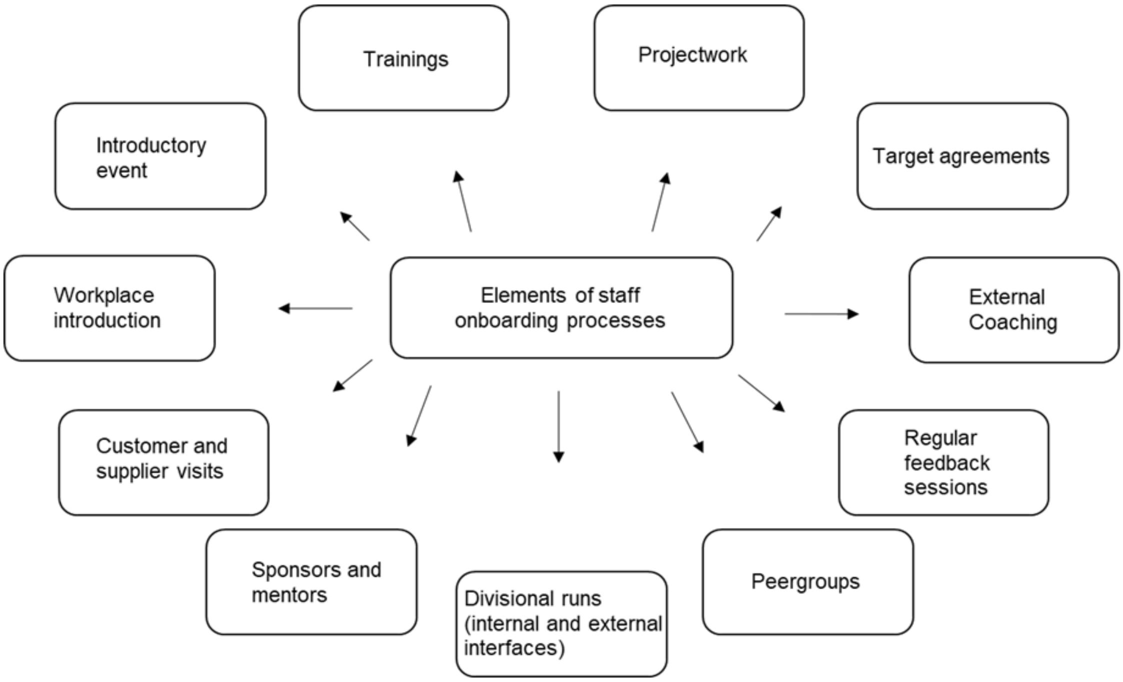
Table 1. Professional integration/ familiarisation vs. social integration/ familiarisation

Professional integration/ familiarisation	Social integration/ familiarisation
Job-related familiarisation Goal: rapid and successful mastery of the work task	Integration into the team and the organization Goal: Adopt the corporate culture, feel welcome, remain in the company

Source: own illustration based on Becker (2004) and Lohaus & Habermann (2016, p.15)

Within the framework of a structured onboarding process, professional and social induction come together to form a unified overall picture that guides new employees before, during, and after they join an organization.

Initiatives and actions are linked and aligned with organizational goals to ensure the fit between corporate strategy and operational actions. Induction should be a process, reinforce the culture, be seen as team success, take advantage of technology, and provide newcomers with a sense of purpose and feedback channels (Klein & Polin, 2012). To illustrate the specific elements of the process of staff onboarding, see Graph 3.



Graph 3. Elements of the process of staff onboarding

Source: own illustration based on Brenner (2014)

2.2. Processes and methods of staff induction

Conceptually, the literature suggests that there are four key overarching principles for the development of an appropriate process of staff onboarding that should be considered in any design and development process (Büsch, 2019): clarity, which here means transparency and knowledge of all stakeholders regarding set goals and measures; resources, which means the adequate selection of only the necessary resources to support efficiency; consistency, which should be considered within the measures used; and commitment, which is required from all those involved in the process.

An onboarding process represents the first step towards excellence in an application within an organization (Büsch, 2019). To achieve it, literature describes four different levels at which a staff onboarding process can be designed (Nalband, 2017). The different levels are hierarchical and build on each other as follows:

Graph 4. Four levels of staff induction

Source: own illustration based on Nalband (2017, p. 32)

Accordingly, staff training should begin with the lowest level, "Compliance." It includes providing basic knowledge about legal and political regulations. This is followed by clarifying what is expected of employees in terms of their activities.

Following this, the familiarization with the organizational culture takes place. The last and highest level is the connection level. This is about interpersonal relationships and networks that need to be created inside and outside the company.
Based on the distinction between professional and social familiarization, it can be seen that levels one and two focus more on methods of professional familiarization, while levels three and four reflect social familiarization and integration.
In addition to the four levels of onboarding listed, the authors (Cable et al., 2013) also refer to four principles of a correct onboarding process.
These include:

- Breaking out of the traditional employment trap (putting people first, not work).
- Helping newcomers to recognize their authentic strengths
- Facilitating introductions for other members of the organization (getting to know them in a structured way to show themselves)
- Ask newcomers to consider how their authentic strengths can be transferred to the job

Based on these four principles, the literature suggests actual behavioral measures for organizations during the transfer of information and knowledge. At this point, more aspects of social familiarization are presented in the literature. In contrast to technical familiarisation, social familiarisation has played a more significant role in research to date (Bauer et al., 2007; Bauer & Erdogan, 2011; Klein & Heuser, 2008; Wanberg, 2012).

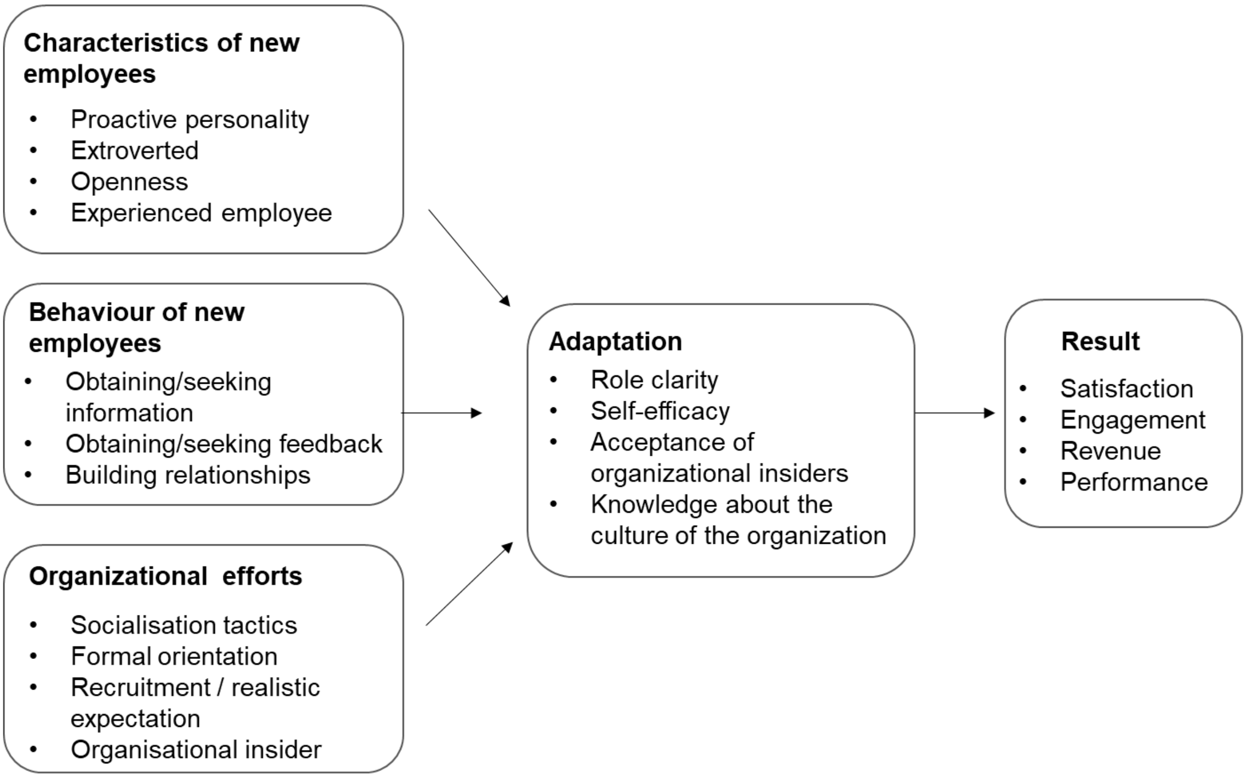
Whether social familiarization is successful can be assessed using three socialization indicators (Bauer et al., 2007; Schreiner & Schmid, 2015) or also three success characteristics (Lohaus & Habermann, 2016):

- Role clarity of all participants within the process and the company.
- Self-efficacy: High self-confidence of the employees in their abilities and thus having necessary resources at their disposal and the ability to draw on them.
- Social acceptance in the team or also integrated into the work group

These three variables are considered indicators of newcomer adjustment and their implementation as a recommended measure of social induction (Bauer et al., 2007). The socialization process within an organization is increasingly concerned with the uncertainty avoidance of those involved (Berger, 1979).

The previously mentioned indicators should support this. Communicated tasks result in orientation being offered to participants. Thus, the thesis is put forward that: "Employees who are clear about role expectations are more likely to perform well, and those who believe they can accomplish their tasks tend to have greater goal accomplishment" (Bauer et al., 2007, p. 710). Furthermore, it is found that those who meet with social acceptance in the team have higher performance levels within their job. Social acceptance is seen as a kind of social capital (Bauer et al., 2007). High self-efficacy here means, above all, high self-confidence of employees in their abilities, which can lead to them being able to accompany the adaptation of new employees into the organization. But new employees with high self-efficacy can also support a successful adaptation based on confidence in their abilities and targeted behavior (Faber & Riedel, 2014). Research has shown a positive link between the personal skills of new employees and their rapid adaptation to an organization (Bauer & Erdogan, 2011). The fact that social familiarization usually depends on an interplay of different factors and that the proactive involvement of employees also plays an important role beyond the integration process

(Bauer & Erdogan, 2012; Biemann & Weckmüller, 2014) is illustrated in Graph 5. This process model of socialization complements the research of Bauer et al. (2007) with three aspects that influence the adaptation of new employees into an organization:



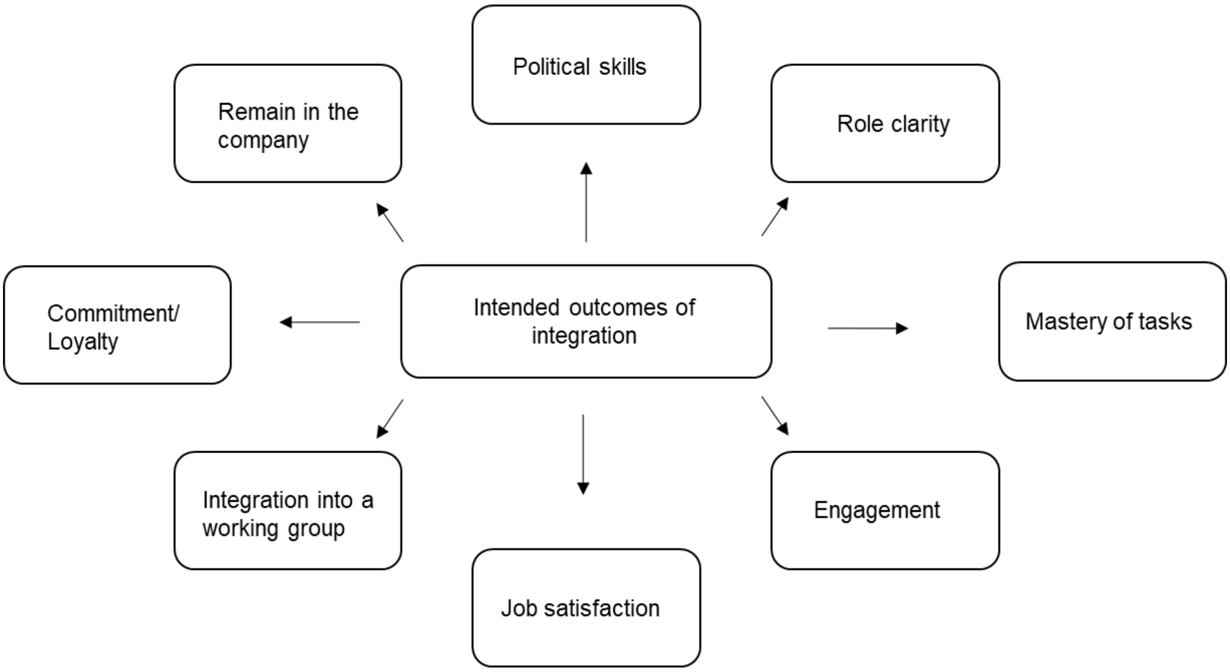
Graph 5. Socialisation process model

Source: own illustration based on Bauer & Erdogan (2012, p. 52)

Mutually dependent success criteria can be established as the desired results of staff onboarding and, in particular, of social integration. These are listed in Graph 6 and have both a content-related and a temporal orientation (Lohaus & Habermann, 2016).

2.3. Processes and methods from literature

All new employees are introduced to the company. It is irrelevant whether the induction process is carried out consciously and systematically (Stein & Christiansen, 2010). To prevent an uncoordinated onboarding process, the literature provides different processes and methods that serve as guidelines for a staff onboarding process to be established. Due to the scope of this paper, the following analysis of processes and methods for staff induction described in the literature is limited to a few selected ones. Graph 7 provides an overview of the analysis.



Graph 6. Criteria for success in integrating new employees

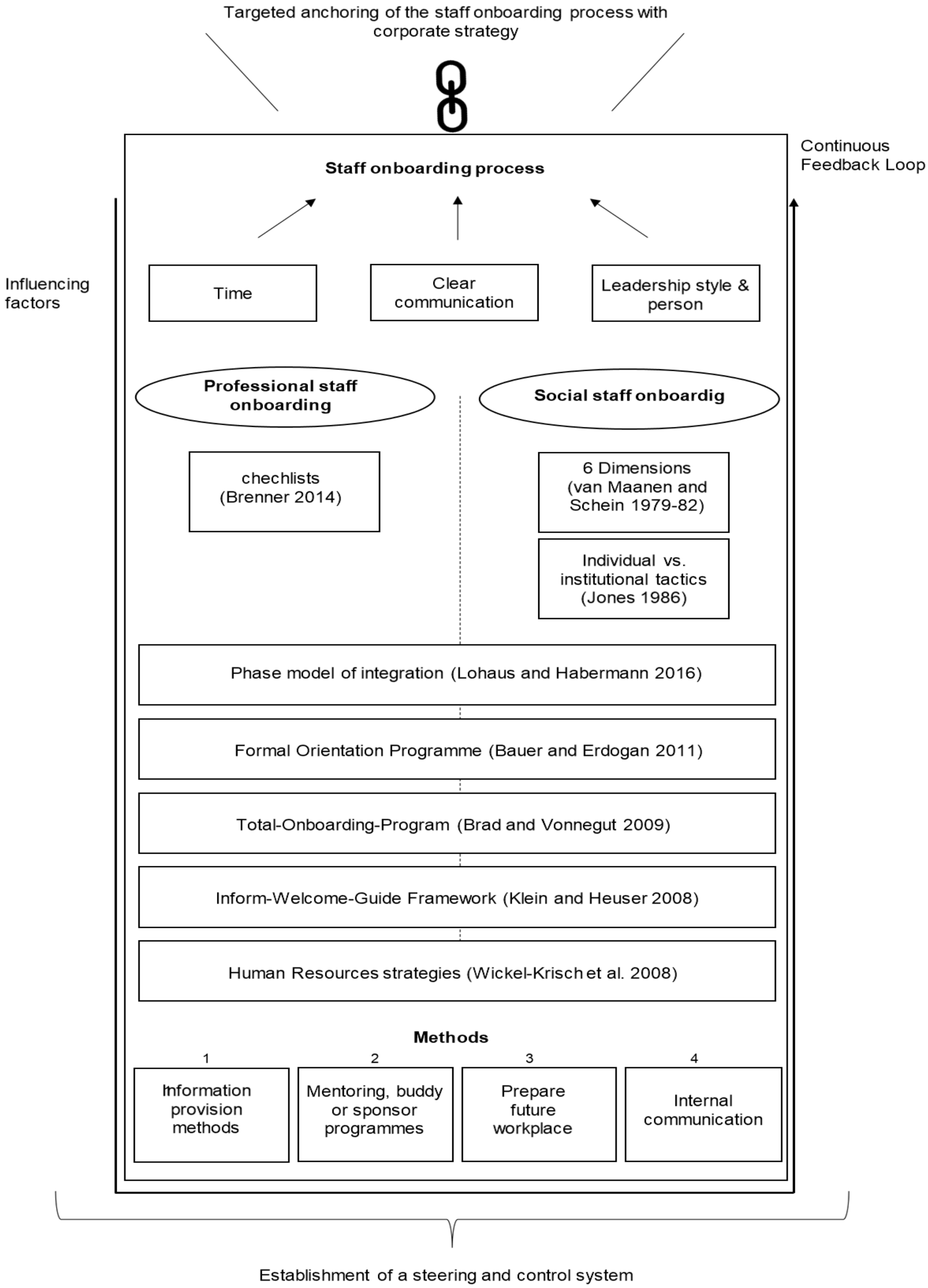
Source: own illustration based on Lohaus and Habermann (2016, p. 29)

The previous chapter discussed that a basic prerequisite of a strategic process of staff onboarding is anchoring the process with the corporate strategy. It allows stringency between the two and goals to be achieved through operational actions that fit.

Building on this fit, the literature identifies influencing factors that affect the process of staff onboarding and should be taken into account during implementation and realization. In this paper, three factors will be discussed in more detail:

- Time
- Clear communication
- Leadership person and style

Time is both an influencing factor and a challenge within the process. The integration process begins at the latest when the employment contract is signed (Lohaus & Habermann, 2016). In terms of time, it is continuously relevant how long the employees' knowledge transfer and integration are dealt with during the company life cycle. The criticism is that this often lasts only a week or a day, whereas it can also take place throughout one to two years (Jokisaari & Nurmi, 2009). It can depend on the experience and qualifications of the new employees to be inducted and the position to be filled (Lohaus & Habermann, 2016). Particular emphasis should be placed on the first day of employment, perceived as crucial in a wide range of literature (Bauer & Erdogan, 2012; Brenner, 2014; Snell, 2006). Cable, Gino and Staats (2013) recommend that employees introduce themselves to other employees on the first day. It should enable them to increase their self-confidence and place themselves in their best interest (Cable et al., 2013).



Graph 7. Processes and methods analyzed in the literature
Source. Own illustration

According to the literature, the allocation of tasks and responsibilities within the process is a relevant aspect of a functioning onboarding process (Bauer & Erdogan, 2012; Bradt & Vonnegut, 2009; Brenner, 2014; Nalband, 2017). Clear communication and transparency are necessary to ensure an optimal process flow and provide orientation for all involved. Here, a link can be drawn to the established role clarity as a socialization indicator (Bauer et al., 2007; Schreiner & Schmid, 2015). Responsibility in the process can be borne by sponsors, mentors or other participants such as the leader.

Based on the above, the selection of the leaders involved and their leadership styles can influence (Schreiner & Schmid, 2015). They decide to what extent the new employees' entry is facilitated within the process. They are also seen as having many characteristics. They act as coaches and disciplinary supervisors in the process, taking responsibility and agreeing on goals with new employees (Brenner, 2014). Furthermore, supervisors are responsible for developing measures and the distribution of tasks within the team (Brenner, 2014).

In addition to these influencing factors, the literature shows both social and professional induction processes - many address both aspects simultaneously. Checklists can be used to support the induction process. These are found in diverse literature and are structured chronologically according to induction (Bradt & Vonnegut, 2009; Brenner, 2014; Klein et al., 2015). An accommodation checklist (Bradt & Vonnegut, 2009) provides an overview of the work environment to be created and the related administrative aspects for the new employee. It is intended to prevent inadequate preparation for new employees by the organization and promote that employees are empowered to do their job on the first day of work (Bradt & Vonnegut, 2009). Brenner (2014) also clarifies that induction begins before the first day of work. Brenner also presents a checklist that must be completed before the employee starts work.

One model of social induction frequently found in the literature is van Maanen and Schein's (1979) six dimensions of socialization tactics. Based on these, organizations and their approaches to integrating new employees are distinguished. The authors define the following dimensions:

Table 2: Six dimensions of socialization tactics

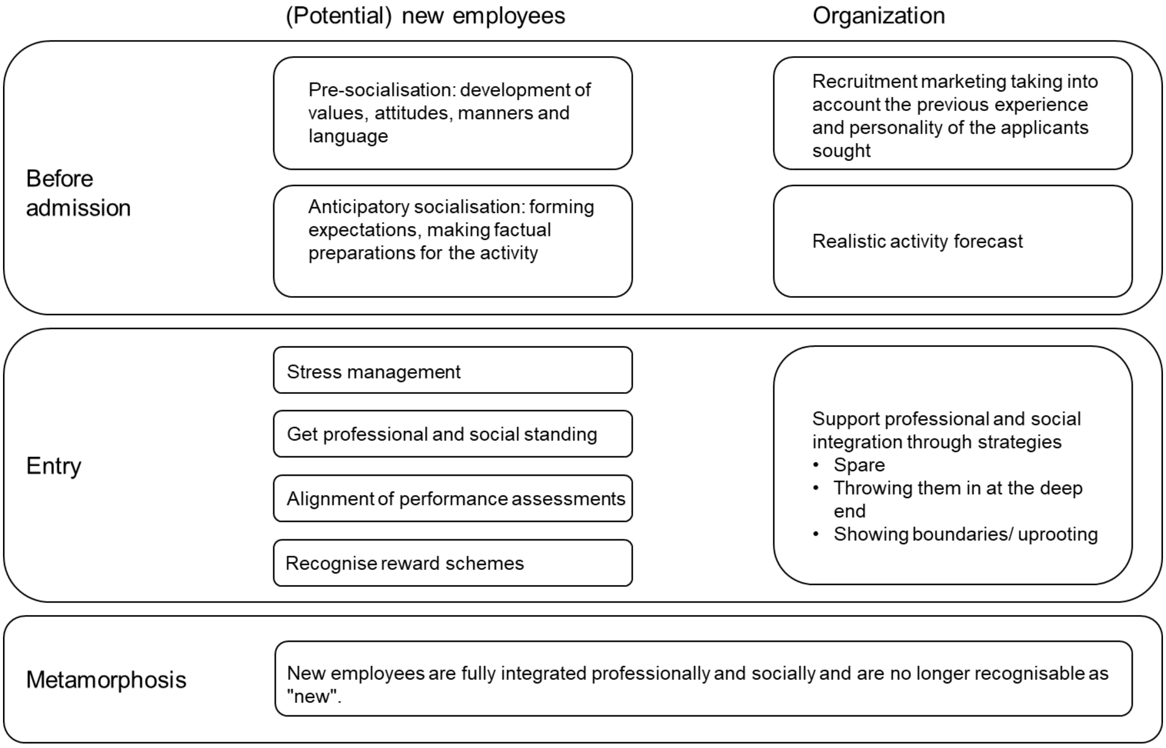
Dimension	**Meaning**
Collective versus individual socialization	Collective or isolated Gathering experiences
Formal versus informal socialization	Separation from or integration with regular members of the organization throughout the socialization
Sequential versus random training steps of socialization	Precisely defined steps of integration or randomly selected training steps
Fixed versus variable training sequences	Orientation to a specific timeline or no defined time frame
Serial versus disjoint tactics	Socialization by experienced employees or socialization without role models
Investiture versus divestiture	Confirmation of existing identity and personality of new employees or disentanglement from previously existing identity

Source: own illustration based on van Maanen and Schein (1979) and Saks et al., (2007)

These six dimensions can be used to create different processes of staff onboarding and promote the adaptation of new employees (Saks et al., 2007). Following these tactics, (Jones, 1986) distinguished between individual and institutionalized. In organizations that use individualized tactics, new employees have the opportunity to influence the onboarding process on their own.

Institutionalized tactics provide clear process guidelines through which new employees are gradually familiarised with the new organization (Bauer & Erdogan, 2012; Jones, 1986). A structured onboarding process provides support and facilitates the overall process (Schreiner & Schmid, 2015). Integration through organizational measures appears to be more effective than individual measures by new employees (Bauer et al., 2007).

To optimally address the needs of new employees in terms of both professional and social induction, Lohaus and Habermann (2016) set up a three-phase model of integration, shown in Graph 8. The activities of both the organization and the new employees are considered:



Graph 8. Phase model of integration with the content focus of the different phases
Source: own illustration based on Lohaus and Habermann (2016, p. 75)

In general, it is helpful for the whole process and thus for professional and social on-boarding to have a formal orientation program (Bauer & Erdogan, 2012). It includes video material, written documents and instructions or lectures.

Many integrations and onboarding processes do not provide clear information about the period of the process and its application. To address this issue, Bradt and Vonnegut (2009) have designed a "Total Onboarding Programme" that considers the time factor. It intends to increase the organization's effectiveness throughout the entire process. A distinction is made between a "Total Onboarding Programme Plan", which is primarily set up by the organization to integrate new employees, and a "Personal Onboarding Plan". The latter must be designed in cooperation with the new employees.

At the same time, the "Total Onboarding Program Plan" is a process that applies to the entire company and should be followed during the onboarding process (Bradt & Vonnegut, 2009, p. 9). The steps shown in Graph 9 are defined as the framework of the Total Onboarding Program Plan:

In addition to this program, the "Inform-Welcome-Guide-Framework" is another onboarding process (Klein & Heuser, 2008). Individual onboarding activities are classified here into three categories: "Inform", "Welcome" and "Guide". The first category, "Inform", includes activities that provide new employees with information and materials to enable them to succeed in their new jobs (Klein & Polin, 2012). Activities within this category are divided into communication, resources and training. The second category, 'Welcome', is concerned with recognizing and welcoming new employees. This creates appreciation towards the newcomers (Klein & Polin, 2012). "Guide" as the third category includes activities

Total Onboarding Program (TOP)				
Align>	Acquire>	Absorb>	Assimilate>	Accelerate>
		Day 1	**IIII. Empower and inspire** Resources, support, follow-up (12) Accelerate key working relationships (11) Make positive first impressions both ways (10)	
		III. Big head start Get your employees ready and able to do real work on day one (9) Manage the announcement to empower new employees to succeed (8) Create a personalised onboarding plan with your new employees (7)		
	II. Recruiting Make the right offer and close the right sale in the right way (6) Assess candidates against the brief during pre-selling and pre-boarding (5) Create an optimal state of potential candidates (4)			
I. Preparation Create your timetable, write a recruitment letter and align your stakeholders with each other (3) Clarify your goal and message to candidates and the organisation (2) Understand the company-wide benefits of a Total Onboarding Programme (1)				

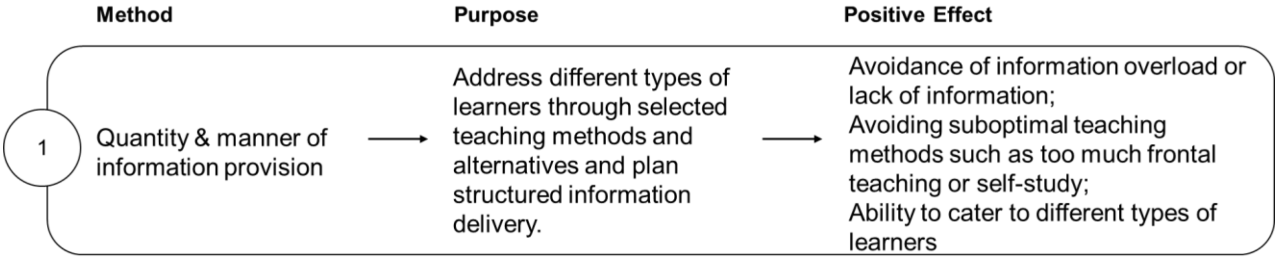
Graph 9. Total Onboarding Programm
Source: own illustration based on Bradt and Vonnegut (2009, p. 9)

to support new employees in their induction and integration. One such activity can be a "buddy" given to the new employees to support them (Klein & Polin, 2012, p. 10). Furthermore, the literature assigns a responsible role to the human resources department in the process of staff onboarding (Caldwell & Peters, 2018). It should identify and avoid induction errors using one of three strategies proposed and discussed in the literature, illustrated in Gaph 12 (Wickel-Kirsch et al., 2008). However, these strategies are not optimal for addressing the individual needs of employees.

"Protection strategy"	"Throw-in-the-Cold-Water-Strategy"	"Uprooting strategy"
• Few requirements for new employees • New employees are given simple tasks • Are prepared for tasks through training • There is little feedback, so it is unclear whether demands on employees match their skills	• Employees are assigned heavy tasks with high responsibility right from the start • These tasks correspond to their future jobs	• Represents the increase of the "throw-in-the-cold-water strategy • Assigned tasks are hardly solvable for new employees • New employees are fully dependent on their new environment to cope with tasks

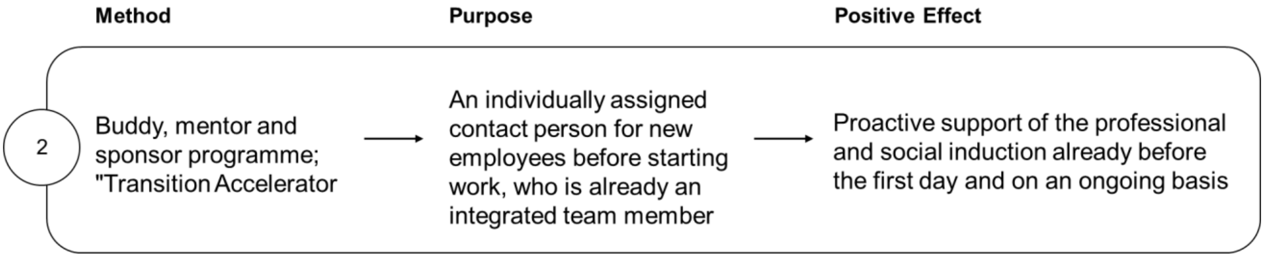
Graph 10. Strategies of the human resources department within the onboarding process
Source: own illustration based on Wickel-Kirsch et al. (2008); Klimecki & Gmür, 2005); Lohaus & Habermann (2016)

In addition to the suggested programs and processes in the literature, specific methods of staff onboarding are also listed. Graphs 13,14,15 and 16 show a selection:



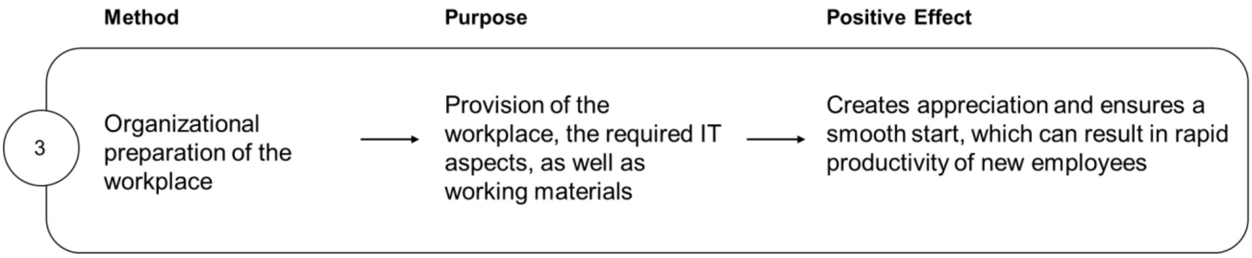
Graph 11. Method 1 of staff induction

Source: own representation based on Büsch (2019); (Schmidt, 2018); Lohaus and Habermann (2016); (Pawlowsky, 1998); (Stang, 2001)



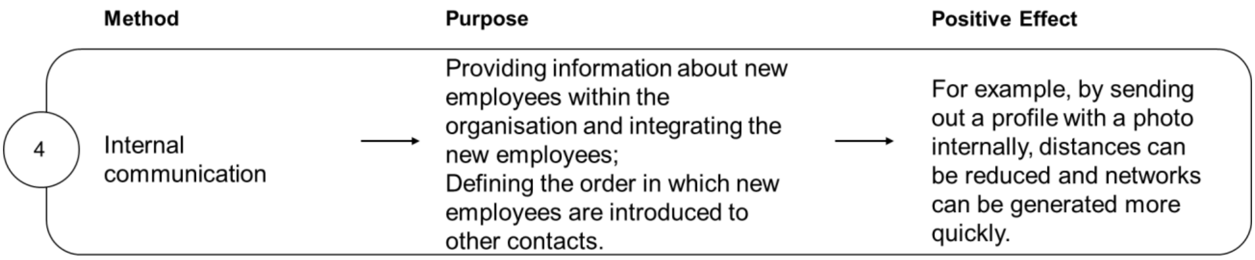
Graph 12. Method 2 of staff induction

Source: own illustration based on Bradt & Vonnegut (2009) and Schreiner & Schmid (2015)



Graph 13. Method 3 of staff induction

Source: own illustration based on Bradt & Vonnegut (2009) and Brenner (2014)



Graph 14. Method 4 of staff induction

Source: own illustration based on Bradt & Vonnegut (2009)

Concluding the analysis of existing processes and methods of staff onboarding in the literature, the deliberate planning, implementation, coordination and control of the process should be emphasized at this point. It can ensure that new employees are introduced and integrated into the organization individually and through tailored methods. It requires the development of a corresponding management and control system on the part of the organization.

Feedback should address the entire process and be supported by individual dialogue (Kieser et al., 1990). According to the current state of research, the evaluation of the individual integration progress occurs, but the insights gained rarely flow into the different ongoing process designs (Hiekel & Neymanns, 2011).

Motives for using structured processes of staff onboarding in the SCM of industrial companies

Knowledge and skills are essential factors in maintaining competitiveness in supply chain networks (Attia & Essam Eldin, 2018; Blome et al., 2014; Christopher, 2012; Hult et al., 2007; Ogulin et al., 2020). Therefore, it is essential to impart in-depth professional knowledge about an appropriate process of staff onboarding.

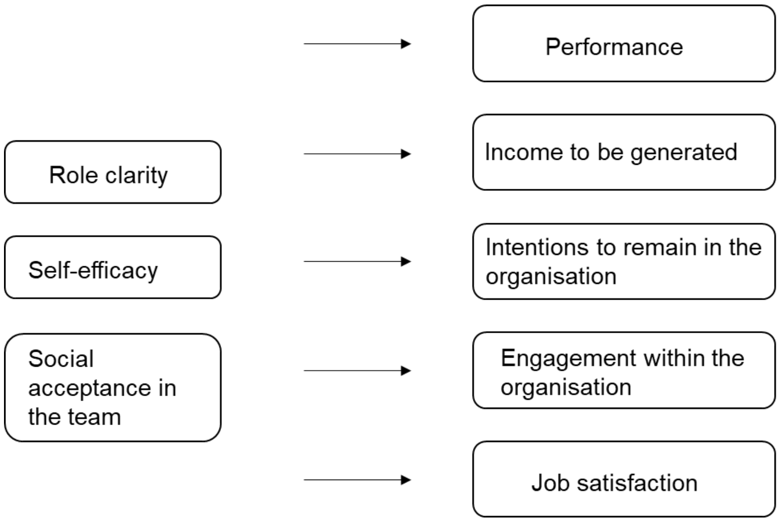
This subsequently provides the basis for further development of employees and their skills, affecting their job performance (Schreiner & Schmid, 2015; Snell, 2006). Therefore, employees should be developed to ensure organizational effectiveness (Winterton & Winterton, 1999).

Since in an increasingly competitive environment, it is becoming increasingly necessary to share information and knowledge within a supply chain (Wang & Hu, 2020). One motive can be defined as integrating new employees into this network as quickly as possible through targeted staff training. Assuming that efficient onboarding enables new employees to gain performance quickly and imparts knowledge about the company, its processes, and corresponding goals (Brenner, 2014), an improvement in innovative capacity can also be achieved (Wang & Hu, 2020). It contributes, among other things, to ensure the competitive position and to achieve sustainable success, which is also relevant for industrial companies, such as chemical groups (Krawczyk et al., 2004; Springer, 2004).

It should be emphasized that the process of staff onboarding involves aspects of knowledge management since it is through this process that knowledge is transferred to new employees for the first time. The extent to which those to be inducted can or should bring knowledge into the organization themselves depends not only on their competence or level of knowledge of the new employees but also on the respective organizations themselves. However, if one considers the statement of Du et al. (2007), then the sharing of knowledge represents one of the essential aspects of knowledge management and should therefore be striven for to achieve advantages within the supply chain. Transfer and sharing knowledge from the beginning of an employment relationship can be highlighted as a unique feature for SCM.

Laurano (2013) defines a centralized onboarding process as another success factor of staff induction. The critical point here is for organizations to follow the concept of "think global and act local" (Laurano, 2013, p. 19) to respond to individual requirements of subsidiaries. Against the background of the complexity of SCM, these individual requirements are manifold and therefore have to be taken into account in the induction process. For this purpose, according to Saks (2007), a structured but flexible process of staff onboarding with selected methods and tactics must be established for this purpose. However, it should be noted that many companies have an organization-wide standardized onboarding process, which does not allow for much flexible employee-oriented design (Hiekel & Neymanns, 2011).

In addition, research by Cable, Gino and Staats (2013) suggests that companies that benefit from successful staff onboarding can also generate financial benefits. Thus, reducing the time needed to recover the human resource investment through employee productivity can generate a financial benefit. It supports the approach that organized induction helps to promote and accelerate employee efficiency. Furthermore, integration from a professional and social perspective can help organizations remain adaptive and agile (Cable et al., 2013). Organizations should be open to the values that new employees bring (Cable et al., 2013). This will support the adaptability of the organization to a changing environment. The SCM sector, in particular, needs sufficient agility to cope with the prevailing complexity (Kaviyani-Charati et al., 2022; Schrempf & Schwaiger, 2019; Zobel, 2005). The previously listed socialization indicators, according to Bauer et al. (2007) refer to different results of a successful social adaptation of new employees to an organization. Thus, as simplified derived and presented, the following results of the three indicators and thus potentials for success can be identified:



Graph 15. Results of adaptation of new employees during organizational socialization

Source: own simplified illustration based on Bauer et al. (2007: 713)

In addition, Stein and Christiansen (2010) show the desired outcomes of a strategic onboarding through the improvement objectives and corresponding influences on the organization, as shown in Table 3:

Table 3: Results of strategic onboarding

Improvement targets	Influences on the organization
• Knowledge transfer • Engagement levels • Employment brand • Automation • Consistency of (positive) experience • Organizational transformation (business and/or cultural) • Accountability - roles and responsibilities	• Depreciation • Time to productivity • Productivity level • Ability to meet demand for emerging talent • Competitive position • Recruiting costs • Labor costs • Onboarding administration costs

Source: own illustration based on Stein & Christiansen (2010)

3. Methodology

To understand the contexts and circumstances of staff induction against the philosophical research background of "interpretivism", the research questions are examined using two parallel approaches. Through this approach, the research design appears as a qualitative multi-method.

Firstly, the information available in the literature on the topic is compiled using a deductive, descriptive investigation (Christer Karlsson, 2016; Saunders et al., 2019; Yin, 2017). Deductive in this context means that conclusions are drawn from the general to the specific. Theses that have been established accordingly are to be verified or falsified (Saunders et al., 2016). Utilizing a literature review, theoretical perspectives are identified, and detailed insight into the research topic is provided (Adams et al., 2007). Original assumptions about the research topic can thus be adjusted in an accompanying iterative process, and the active research can be made more targeted (Saunders et al., 2016). The literature review also serves to adjust research questions and objectives and uncover gaps in the literature so that these can subsequently be addressed using one's research (Galletta, 2012).

Moreover, an inductively oriented case study (Karlsson, 2016; Yin, 2017) is carried out in multiple data collection. The way this takes the form of a focus group (Saunders et al., 2016) is explained in more detail in chapter 3.2. The case study approach can be used to shed light on topics that have not yet been sufficiently researched about their natural environments (Yin, 2017).

Moreover, the approach is very valuable to give answer the about the "how" and "why" of the pheonomenom. It may be done using one or more case studies (Voss et al., 2016). In addition to its advantages, this approach naturally has the disadvantage that only a limited generalization of the results is possible. Examined extreme cases can lead to wrong conclusions and due to the qualitative approach often only subjective data are available. In the analysis, causal relationships can also only be established to a very limited extent. To counteract this to a degree the present work examines five company cases in data collection. The focus is on investigating the specific application situations and practices of industrial companies within the framework of an explorative approach (Saunders et al., 2016), and not on the generalisability of the results (Bryman & Bell, 2011; Yin, 2017).

Due to the subject of the research and the scope limitation of this thesis, the approach taken is cross-sectional interpretive research (Bryman & Bell, 2011; Saunders et al., 2016). It allows the research to look at the issue within a snapshot (Saunders et al., 2016) therefore focusing on contemporary issues. Changes that may have had or will have an effect on the phenomenon due to internal and external circumstances cannot be taken into account directly. For this purpose, longitudinal studies would have to be consulted, which are not the focus of this work. The data collection is followed by an evaluation using qualitative structured content analysis (Mayring, 2015; Mayring & Fenzl, 2019).

3.1. Data collection and participant selection

The case study approach is particularly suitable as a research methodology at this point, as a specific situation needs to be investigated rather than general characteristics or features of a topic. Nevertheless, quality criteria such as reliability and validity must be taken up at this point and already implemented and observed within the research design to ensure compliance during data collection and analysis (Saunders et al., 2016). Validity refers to whether data collection and measurement measure what they are supposed to measure and produce credible results based on this (Saunders et al., 2016). Reliability refers to how the data collection and measurement provide reliable results. This is measured by whether equivalent results can be obtained when the research is conducted repeatedly (Saunders et al., 2016).
The selection of the number of cases for the case study approach used and the relevance of each are essential to the research (Yin, 2017). The research gap presented in the literature indicates a lack of examples of the practical implementation of staff onboarding processes in industrial companies. The case selection of this thesis takes this, particularly into account.

All enterprises are large, internationally active industrial groups, with around €3 billion annual turnovers. Four of the five can be assigned to the chemical industry. However, all have an SCM division within the company.

Table 4: Selected enterprises

Enterprise	Employees	Umsatzvolumen (2019)
A	117.000	59 Milliarden Euro
B	8.110	2,93 Milliarden Euro
C	14.300	6,8 Milliarden Euro
D	3.900	3 Milliarden Euro
E	22.000	50,8 Milliarden Euro

Source: own illustration

A focus group as an instrument for data collection represents "a moderated discourse procedure [in which] a small group is stimulated to discuss a specific topic through an information input". (Schulz et al., 2012, p. 9). This methodology is suitable for analyzing the diversity of opinion (Dürrenberger & Behringer, 1999). Thus, focus groups offer the opportunity to uncover different perspectives through an exchange (Tausch & Menold, 2016). Furthermore, they offer the advantage "that with comparatively little work, a moderate time frame and manageable costs, profound knowledge of group-specific perceptions, interpretations and value judgments on certain topics and stimuli can be obtained [...]". (Schulz et al., 2012, p. 25). Due to the current "Covid 19 pandemic" and the accompanying crisis for many companies, it is, on the one hand, a challenge to recruit participants for a group discussion (Yin, 2017), who are also interested in the topic and have an affinity for it (Dürrenberger & Behringer, 1999; Schulz et al., 2012). On the other hand, it is crucial to select suitable participants to comply with the research design (Saunders et al., 2016). Nevertheless, these 5 cases can of course not be as representative. To counteract this, other cases can be added to the focus group or several focus groups can be interviewed in order to find commonalities and differences and to strengthen the validity of this work.

To ensure the highest possible validity of the data collection, it is specified that the research will focus exclusively on the practices of staff onboarding processes in the SCM of industrial companies. Furthermore, it is vital to examine the processes and methods from the organization's perspective. It opens up the necessity of only admitting participants responsible for the relevant processes (Karlsson, 2016). The homogeneity of the focus group must also be taken into account.

If the group is too heterogeneous, comparability must be questioned, and problems of understanding and communication can arise (Pelz et al., 2004). Therefore, the focus group consists of participants in leading positions in the SCM of industrial groups. This restriction is intended to ensure homogeneity in terms of their background experience, responsibilities, and perspective on induction processes (Vogl, 2014) and to guarantee comparability.

To fully comply with and pursue the quality criteria, it makes sense to collect data from a comparison group when conducting surveys through a focus group (Schulz et al., 2012). Due to the limited number of willing participants, this is not done in the context of this thesis.
The focus group aims to address the research questions regarding best practice examples from industrial companies on methods and processes of induction. The following key points are to be taken up in both areas and discussed accordingly:

- Selected measures over time
- Areas of responsibility within the process and involved departments/ employees
- Reflection on the status quo of the process of staff onboarding

Due to the current "Covid 19 pandemic", a virtual focus group discussion will be conducted via video call. This allows all participants to participate without physically meeting. The online format has some advantages as well as disadvantages. First of all, it saves time and money and is an advantage for the participants (Bloor et al., 2001; Gnambs & Batinic, 2011).

The participants are free to switch on the camera, as this is not a necessary condition for collecting data. Only verbal communication is taken into account. The individual participants are in an anonymous, and familiar environment increases the probability of open responses to applied processes (Gnambs & Batinic, 2011; Prickarz & Urbahn, 2002). To counteract the potential disadvantage of an online discussion in the form of "parallel discussions", targeted moderation and guidance by the researcher is required. Furthermore, care must be taken that the chosen online format does not negatively influence the group dynamics. Considering the above aspects, an exchange of discussion among the participants is made possible (Gnambs & Batinic, 2011). During the focus group discussion, care should involve everyone equally in the conversation (Saunders et al., 2016). During the focus group discussion, orientation is provided by a previously developed guideline, found in the appendix. This ensures that the aim of the data collection is continuously pursued and possible deviations from the research topic are prevented.

3.2. Analysis approach

The research aims to highlight commonalities, differences, and specificities within the collected data using a qualitative data analysis (Mayring, 2015).
Key categories are identified and defined to create an appropriate starting point and thus a basis for analysing the data (Miles et al., 2013). According to these, on the one hand, the guiding questions posed in the focus group and subsequently the data and insights gained from the focus group can be assigned. This enables a structured analysis of the data and allows an interpretation of the categories after transcription. The following categories are deductively formed in advance from the research questions:

- Processes and methods before joining the organization
- Processes and methods on day 1 of employment
- Processes and methods for technical induction
- Social induction and integration processes and methods

As it is limited by time constraints to deal with all predefined categories in the personal exchange of the focus group, the participants are sent open questionnaires in advance concerning two of the four categories. These can be analyzed separately and compared due to the identical questions (Saunders et al., 2016). The discussion will be conducted semi-structured to obtain the most detailed and in-depth answers possible within the focus group (Schulz et al., 2012). Open guiding questions will be asked (Mayring, 2015; Thomas, 2003).

To evaluate the qualitatively collected data according to the content structuring according to Mayring (2015), the collected data should be structured in such a way that content can be extracted from the material. This enables the identification of text passages and strands of argumentation (Hilpert et al., 2012). Since the research gap addresses the practices used in practice, it is essential to include staff onboarding in the categorization. The focus group will investigate which processes and measures are used for the corresponding categories. On this basis, processes used at each stage can then be presented. In addition, an exchange of views on the challenges of the different phases and selected processes will occur. This will then enable a discussion on which processes can be defined as best practices within the case study at which point in time.
In this paper, both the results and contributions of the focus group, which are already available in written form and those of the questionnaires handed out in advance, will be evaluated. For this purpose, they have to be written down for evaluation. The discussion will therefore be recorded and then transcribed.

4. Analysis

Material on the categories "Processes and methods for professional staff induction" and "Processes and methods for social staff induction and integration" was collected in a focus group discussion with five practitioners conducted in August 2020.

The participants' length of service, position and activity within the organization should ensure that their statements conclude about best practice examples. The participants in the focus group all come from areas of the corporate groups that are currently based in North Rhine-Westphalia. This can influence the subsequently derived statements on best practice examples. After this work, it must be further examined whether it is merely a matter of location-specific processes and methods.(table5)

The focus group discussion dealt with the main topics to obtain information on the professional and social onboarding processes. The following questions were posed in the focus group discussion:

Selected measures over time:

- Which staff induction measures do you consider valuable and take place in your company, at what time and why?

Areas of responsibility within the process and involved departments/ interfaces/ employees:

- What roles, responsibilities and scope do other employees and departments involved in the process have in your company, and why do they have them?

Reflecting on the status quo of the process of staff onboarding

- What do you find particularly positive/negative about the current process and what challenges does the onboarding process face in your area? What are the current weaknesses?

The transcript of the focus group discussion can be found in appendix A.

4.1. General conditions and introduction

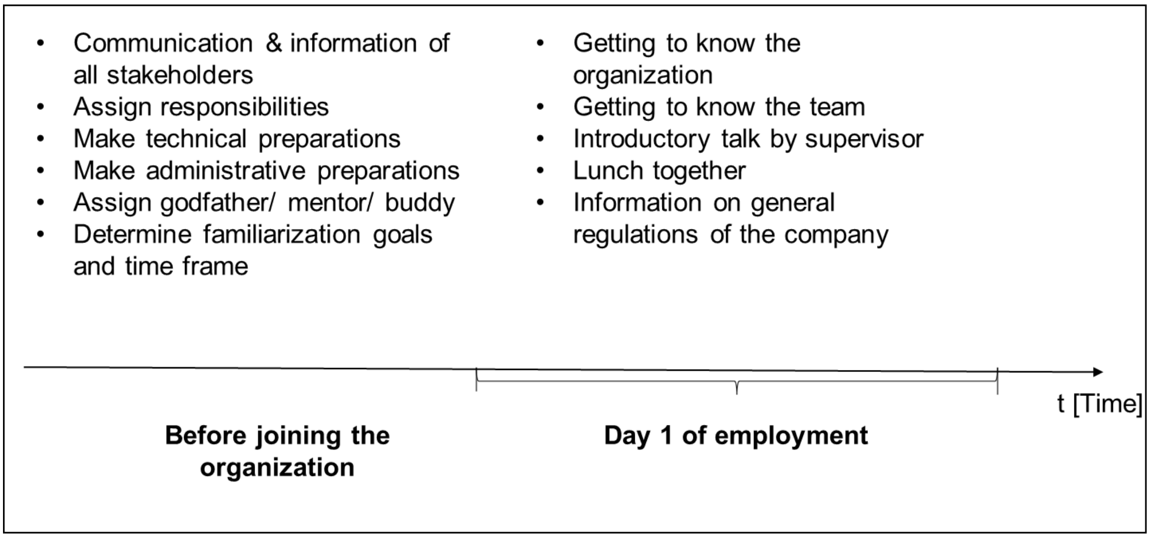
Figure 16 provides an overview of the processes and methods for staff induction before joining the organization and on day 1 of employment listed in the focus group discussion.

This was created according to Mayring's (2015) summary based on the results from the questionnaires. To look at the findings of the individual categories, they are analyzed separately after the figure.

Table 5: Participants in the focus group discussion

Participant	Enterprise	Responsibilities	Consecutive denomination
T1	Chemical enterprise D	Performance management for the largest business unit	Teamleader Supply Chain Performance Management
T2	Chemical enterprise C	Supply chain management for the "SK plant" that produces rubber for tire production	Supply Chain Specialist
T3	Chemical enterprise A	Small customer distribution in the area of supply chain, logistics, product stewardship and quality management	Director Material Management
T4	Multi-technology enterprise	Demand Planning/ Forecasting for specific product areas in the Central Europe Region	Teamleader Business Logistics Services
T5	Chemical enterprise B	Global controlling and supply chain management for material flow and co-products	Vice President Controlling & Supply Chain Management

Source: own illustration



Graph 16: Processes and methods before joining the organization and on day 1 of employment

Source: own illustration

The analysis and presentation of the relevance of processes and methods before entering the organization introduce a condensed evaluation of the questionnaire:

Table 6: Analysis of the frequency of application of processes and methods before entering the organization

Measure	**Accomplished**
Maintain contact with the new employee (regularly)	4/5
Communicate information to those involved/colleagues, stakeholders, etc. (if necessary, prepare information on the intranet).	4/5
Draw up an induction plan with defined activities, which employees will be shown.	5/5
Checklist for induction exists	4/5
Allocation of responsibilities within the process (defined for each measure)	4/5
Involved parties are informed about the first day shortly before the start of the process.	5/5
New employees receive information about the first day (time, contact person, procedure, map, meeting place)	5/5
Arrange appointments for introductory talks	4/5
Create a "welcome package" / online document with key information for new employees	3/5
Assigning a sponsor, mentor, coach	3/5
Contact the sponsor, mentor or coach in advance with new employees	0/5
Workstation set up (desk, chair, cupboard, PC, printer, telephone, laptop, screen, name badge, key, personnel number)	5/5
Technical equipment provided (software, user ID, access to necessary systems)	4/5
Organisation of a welcome gift	0/5
Inclusion in necessary distribution lists for information	4/5
Training goals set in advance with a corresponding time frame	4/5

Souce: own illustration

Using this as a basis, it can be seen that the case study companies have a lot in common within this category and that there are only a few differences. Communication between all those involved and the associated provision of information is a process that all case study companies have established. Both internally involved employees and the new employees are informed about induction and the first day. Internally, this can be done via a "one-pager" or an email. In this, information about new employees is presented. Furthermore, an induction plan is drawn up in advance in all five companies, but only four are goals, and a time frame for the induction is defined. In most companies, responsibilities are also assigned for individual measures in the induction plan.

Furthermore, it can be noted that most of the companies arrange appointments for introductory talks with new employees before they join the company.

In addition to communication and information, administrative preparation for new employees is carried out in all companies before joining. Checklists for induction are used in four out of five companies. Administrative preparation primarily concerns setting up the workplace. In addition to administrative preparation, technical equipment is also a process before joining the organization in four companies. Access to critical systems is provided in advance. The most significant deviation of the companies analyzed within this category concerns the assignment of a sponsor, mentor or buddy before starting the employment relationship. In three companies, the assignment takes place in advance. In the multi-technology group, it only takes place after entry into the organization. In chemical group D, such a companion is only used after the onboarding process for further personnel development. However, in none of the companies, this person makes contact with the new employees in advance.

To conclude the analysis of this category, it should be pointed out that none of the companies studied uses a welcome gift for new employees as a method of induction. The collection of data on processes and methods on day 1 of the employment relationship was collected using keyword responses from the case study companies.

It should be emphasized that the welcome and getting to know the organization and the company location are essential components of all the companies studied. Therefore, it can be interpreted as best practice. Supervisors, colleagues and interfaces are made known in the same way as special regulations of the company. In addition, a focus of the case study company on day 1 is the introduction to the workplace and the IT equipment of the company. This comprehensive introduction to the organization occurs in chemical company A through an assigned buddy, in the other companies increasingly through the supervisors.

For the introduction on day 1, familiarisation talks with the supervisors are used in all companies. In these talks, safety instructions are given in all companies and an agreement on expectations and goals of the induction. It should be emphasized here that chemical company A hands out a "Welcome Package" to new employees on day 1. A final agreement of the processes in this category is a joint lunch. This takes place with the other employees to get to know them better and promote integration from day 1.

4.2. Technical process of staff onboarding

Following Mayring's (2015) content analysis, various processes and methods of professional staff induction can be summarised and analyzed from the focus group discussion. Individual aspects are described and analyzed here, one after the other.

Preparation
Preparation for the arrival of new employees is the basis of successful induction for all case study companies. In all companies, this is done by the supervisors. They ensure that before the start and on day 1 of the employment relationship the induction is prepared in such a way that it can begin immediately. A structure must be created to ensure that processes are not held up due to organisational barriers (Focus group discussion 2020). New employees are supported in their independence about their activities (focus group discussion 2020). Checklists are used in all companies for preparation and orientation.

Clear job specifications
To support and succeed in the induction process, job specifications are a method that is defined as best practice by all companies. These are defined by the organization and are kept, for example, in chemical company D in the form of "desk manuals" or also induction lists of chemical company B.

Role of the supervisor
The supervisors' responsibility within the framework of the technical training of personnel is mainly to accompany the training. In chemical company B and D, they check the technical staff induction carried out by other employees and intervene by assisting. They should also communicate the increased complexity of SCM within the technical induction (focus group discussion 2020).

Use of familiarisation plans
All of the companies studied have implemented the use of induction plans. Chemical company B uses induction lists for this purpose, whereas the SCM of chemical company A is the only department to have established a "tick box system". New employees can use this system to evaluate which processes they have already been taught and where they still need to catch up. The technical induction in the multi-technology group is supported by self-service training. These enable employees to acquire knowledge on their own. In addition, technical knowledge is often imparted via online tools. Chemical companies B and D do not currently use such advanced processes.

Timing of the process
None of the case study companies has a clear timetable for the onboarding process. Only two companies specify timeframes for sub-processes. The multi-technology company sets a timeframe for getting to know the interfaces of the first three to four months (focus group discussion 2020).
Chemical company A does not specify the same intensity but prioritizes getting to know the interfaces at the beginning of the process (focus group discussion 2020). Concerning the time frame of the induction, chemical company D states that the duration of this depends on many factors. These include the skills of the new employees and the complexity of the job to be performed (focus group discussion 2020).

Getting to know the interfaces

The companies have different approaches and methods of making interfaces known. In chemical company C, these are constantly introduced ad hoc when encountered during the technical induction. In chemical company D, potential interfaces are already made known on the job interview day. Furthermore, chemical company D notes the necessity to accompany getting to know interfaces by a contact person. Especially critical interfaces should be familiarised optimally. Chemical company A uses two different methods to make interfaces known. On the one hand, appointments take place during which different company areas introduce themselves and thus give new employees an insight. On the other hand, there is an exchange between new employees within the interfaces to get a brief insight into the other areas and their activities. Chemical company B is currently enabling such an insight into other cross-divisional interfaces as part of a pilot project. This takes place along well-known trainee programs and enables employees to gain a quicker technical understanding.

Meeting different learning types in the process

No case study company has a defined process or corresponding method for dealing with different learners within the technical induction process. However, chemical company A notes that different teaching types also influence the technical induction in addition to different learning types. The multi-technology company points out in the discussion that a flexibly designed process meets different learning types. Chemical group B, C and D agree with this process.

Using the individuality of the process as an advantage

The previously mentioned possibility of flexible process design is to be addressed as the last aspect of professional staff induction. The focus group discussion highlights this as an advantage. In this way, different learning types and other aspects of the process can be dealt with flexibly, and adjustments can be made at any time. The strengths and abilities of new employees can be addressed individually, which would not be possible in a process rigidly prescribed by the HR department (Focus group discussion 2020).

4.3. Social process of staff onboardings

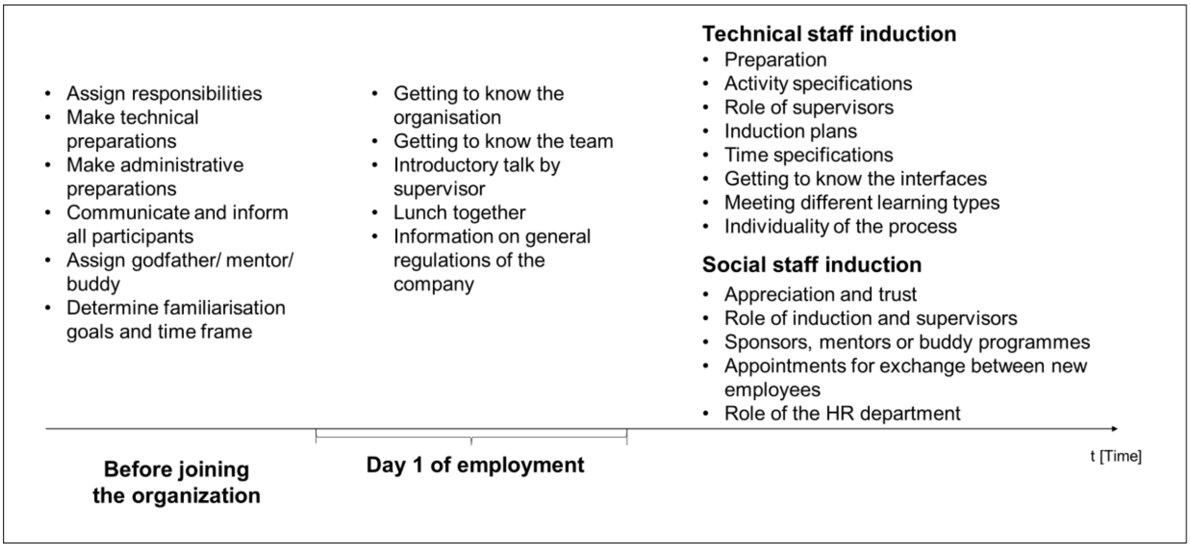
One aspect of social staff induction that all participating companies emphasized right at the beginning of the focus group discussion is the appreciation of new employees and the trust that has to be created from the start. This enables optimal integration. In addition, the onboarding person influences the entire onboarding process and integration.

This person decisively determines, for example, how expectations are communicated, the overall quality of the process, or the extent to which new employees are prepared and subsequently integrated (focus group discussion 2020). The supervisors primarily take on an intervening and integrating role within social induction. They are responsible for ensuring that new employees get to know the team and that enough time and space is created for integration (focus group discussion 2020).

Most companies surveyed cited supporting social induction and integration, a sponsor, mentor or buddy program. In contrast to all other companies that use such a program, chemical company A has a buddy program that consists of two different buddies (focus group discussion 2020). One buddy works in the same area and is responsible for technical support. The other buddy comes from a different area and serves as a contact person for social aspects.This division is intended to promote integration and networking throughout the company. This measure aroused interest and approval in all companies during the focus group discussion.

In addition to these methods, three of the five companies surveyed offer "get-to-know-you" meetings to exchange new employees. These include quarterly "lunch meetings" in the multi-technology group or so-called "round tables" in chemical group B, which new employees can attend.

Finally, the role of the HR department should be presented: In all companies except chemical company A and the multi-technology company, the HR department plays a passive role. The HR department is mainly responsible for clarifying general conditions and contractual matters in chemical company A. The multi-technology group also provides company presentations that can be used for self-disclosure by new employees. The presentation of the results obtained from the focus group on applied processes and methods of staff induction concludes the analysis.



Graph 17. Staff induction processes and methods identified from data collection
Source: own illustration

5. Evaluation

To understand the extent to which other industrial companies design their processes of staff onboarding according to the guidelines from the literature or show differences to them, the analyzed data are compared with the findings from the literature. Based on the four categories defined, a detailed table can be found in the appendix, in which the results of the comparison of literature and practice are presented. Specific aspects of the comparison are listed here and summarised in Table 7.

The first aspect of the comparison between literature and the practice of the industrial companies studied is the time factor. High relevance is attributed to this factor in the literature. Time sequences of individual personnel induction measures are shown, and the necessity of a time frame is made clear. However, the literature does not agree on a specific period for induction. In practice, there are also no concrete time frames for the process. It should be emphasized that a predefined time frame for processes and methods is not desired, as individual process design and adaptation are explicitly valued. This is also reflected in the fact that none of the industrial companies studied implements the holistic personnel induction concepts and plans provided in the literature. The practitioners see the integration of flexible process design options as challenging.

The successes that can be achieved in staff induction through holistic concepts need to be examined. In addition, it is pointed out in practice that induction is significantly influenced by those who carry it. The literature assigns a great deal of responsibility to supervisors. However, practice shows that supervisors usually do not conduct induction directly.

Other employees in the department are responsible for the concrete implementation. Supervisors primarily accompany the process and only intervene when necessary. However, due to the increasing complexity of the SCM area, they are increasingly responsible for ensuring that this is correctly communicated to new employees. The complexity of SCM is a challenge that both the literature and the participants in the focus group discussion address. Furthermore, the interviewees specify the complexity of industrial groups as equally challenging for the onboarding process. Both the transfer of knowledge about the structure of the organisation and the implementation of various interfaces of the organisation in the process of staff onboarding are complex.

The aspect of imparting knowledge also addresses the handling of different types of learning and teaching. In this case, too, the literature assists how these can be addressed using different methods of providing information. On the other hand, the industrial companies studied have not established any concrete methods to address different types of learning and teaching in the process. The individual and reactive adaptation of processes characterize the practiced ad-hoc approach. It is questionable to what extent it is possible to identify different learning and teaching types in advance to counter them with targeted methods and processes right from the start.

A common feature of the literature and the best practice from the findings of the case study companies is the use of sponsor, mentor or buddy programs. Although all companies do not implement this, they all rate it as a variable with a positive effect on socialization. One company deviates from the processes suggested in the literature by providing new employees with two buddies instead of just one. One aspect that the case study companies in particular emphasize relates to the appreciation and trust that should be shown to new employees right from the start. According to practical experience, this supports socialization in the organization and serves as an indicator of a successfully implemented onboarding process. Another common feature is creating and using checklists for both technical and social induction. The literature provides detailed checklists for this purpose.

In practice, however, these are rather individually designed than copied. They serve both as orientation and as preparation for the process. The preparation of the process is also given great relevance in the literature in industrial companies.

Structured communication supports the preparation of the process just as much as all processes and methods. The importance of clear communication is made clear in the literature, and different types and means of communication are presented. The industrial companies studied select some that are individually suited to the company.

The literature also lists a variety of different methods for welcoming new employees and offering joint appointments. The case study companies have significantly fewer of these. Only one company uses a welcome package. Some offer regular appointments for new employees. Others only use a personal welcome and introduction by the supervisor on the first day of employment.

Comparing literature and practice in terms of HR's influence on the process, it should be noted that the literature suggests different strategies for involvement. The literature assigns the HR department co-responsibility for staff induction and a high presence in the process. In practice, this only affects the process of staff onboarding in two of the industrial companies studied.

Finally, the individuality of the processes should once again be placed in the foreground of the evaluation. As we have already seen, this was rated as particularly important in practice. The choice of individual processes can be illustrated by the six dimensions of socialization tactics listed in the literature by van Maanen and Schein (1979). The following table shows that an individualized approach to socialisation is increasingly chosen in practice.

Table 7 Application of the six dimensions of socialization tactics in the case studies

Dimension	Application in practice
Collective versus individual socialization	Individual socialization
Formal versus informal socialization	Informal socialisation
Sequential versus random training steps of socialization	Randomly selected training steps of socialization
Fixed versus variable training sequences	Variable training sequences
Serial versus disjunctive tactics	Serial tactics
Investiture versus divestiture	Investiture

Source: own illustration based on van Maanen and Schein (1979); Saks, Uggersley & Fassina (2007)

The following summary concludes the evaluation of the findings from the literature and the data collected from the case study. Table 8 illustrates which aspects are addressed and which are applied in practice.

Table 8. Comparison of the literature with the research results from the practice of industrial companies

Aspect	Literature	Practice
Time frame	✓	x
Holistic staff induction concepts	✓	x
Complexity of the SCM area	✓	✓
Integration of interfaces	✓	✓
Responsibility of supervisors	✓	✓
Responsibility of other employees	x	✓
Application of sponsor, mentor and buddy programmes	✓	✓
Application of checklists	✓	✓
Different types/offers of communication and information transfer	✓	x
Integration of different types of learning and teaching	✓	x
Appreciation and trust	x	✓
Extensive methods of greeting	✓	x
Extensive range of joint appointments	✓	x
Integration/ involvement of the human resources department	✓	x

Source: own illustration

6. Discussion

6.1. Research questions

In addition to the processes and methods of staff induction identified in the literature, the practical implementation of the processes in the SCM of industrial companies was of particular interest. Following the investigation, analysis and evaluation, these questions are answered chronologically.

1) Which processes and methods for the induction of new employees exist in the literature, and are there any special features for industrial companies or supply chain management?

In the literature, a distinction is made between processes and methods for personnel's technical and social induction. In interaction, both form an optimal process. Various processes such as the "Total Onboarding Program" (Bradt & Vonnegut, 2009) or the "Inform-Welcome-Guide Framework" (Klein & Heuser, 2008) address both aspects.

They support the process of staff onboarding by providing orientation. Among other things, they provide concrete checklists for induction, taking into account the factor of time. In addition, the literature provides methods for organizational preparation for new employees and valuable communication methods and tools before and during induction. For social induction, supervisors' roles and leadership styles are highlighted. Complementary to this, sponsor, mentor or buddy programs are highlighted.

The literature does not provide a conclusive answer about how far special features exist for industrial companies or SCM and their onboarding processes. However, the transfer of knowledge is an essential aspect of productivity in SCM. This transfer should take place from the beginning of the employment relationship, if possible, to do justice to the complexity of SCM. Furthermore, it was shown that SCM is a relevant area in industrial companies based on their definition as production companies.

2) To what extent do industrial companies have best practice examples for processes and induction methods?

In the context of the induction of technical personnel, induction plans including defined goals of the process, checklists and job descriptions dominate as best practice examples in the industrial companies surveyed. These support the process insofar as they are used as guidelines by the person being inducted. The companies surveyed focus above all on trust and appreciation about social induction and integration. These can be generated by superiors and through sponsorship, mentoring, or buddy programs. The use of two different buddies also strengthens integration in the company.

To make the induction process as effective as possible, the industrial companies studied prepare it before the employment relationship begins. Above all, the future workplace is prepared administratively, and the necessary IT equipment and access are provided. The preparation is considered a best-practice example at this point. The use of a customizable process does not directly represent a staff onboarding process or a method. Still, it is cited by all case study companies as an optimal state and, therefore, best practice example.

6.2. Managerial implications

Based on the findings on staff induction processes and methods, the relevance of the interplay between technical and social induction must first be brought to the fore in practice. For technical induction to be successful, trust must be created from social induction, and appreciation must be shown towards the new employees (focus group discussion 2020).

Furthermore, it is necessary to consider staff induction as a sub-process of talent management in practice. Induction should be an integrated process in the operational life cycle and should already be considered in the application process (Stulle 2018). By integrating the process of staff onboarding and related methods, the onboarding process can be addressed immediately after hiring new employees. The preparation of the induction process is another essential aspect (Focus group discussion 2020). In this way, essential time can be saved, and suboptimal processes can be avoided (focus group discussion 2020). The use of checklists for induction and the written formulation of activities can be recommended as support for the technical induction of staff.

Regarding social induction, it can be concluded that sponsor, mentor or buddy programs help new employees during their integration into the new organization. These can promote the development of a network. They also serve as contact persons for the new employees. Furthermore, it is also recommended to attach importance to the fact that they work in other areas to enable a faster exchange within the organization (Focus group discussion 2020).

6.3. Limitations and avenues for further research

This study aimed to investigate staff induction processes and methods in the SCM of industrial companies. However, to subsequently achieve generalisability and representativeness of the study results, it should be noted that the research should be conducted in a larger sample size. Moreover, this study can only provide a contemporary sample of practices. To get a more holistic assessment, organizations and their onboarding processes should be examined over a longer period of time. The company level at which induction takes place should be considered in addition to the company sector whose processes and methods of personnel induction are being investigated. For example, this study found that induction is different for managers than for other hierarchy levels. In this way, a generalizable statement on best practice examples can be made.

In addition, the focus on SCM should be given more significant consideration. To provide a well-founded description of the unique features and complexity of the process of staff onboarding in the SCM of industrial companies, a comparison should be made with other corporate divisions. Although particular features of SCM were asked about in the data collection, these statements cannot be sufficiently generalized. So far, this study only argues inductively and analyses SCM processes of selected industrial companies. By comparing factors, circumstances and characteristics of other areas of industrial companies, special features can be differentiated. Another interesting question that arises in the context of generalizability is whether and in what way onboarding takes place with underrepresented employees and whether their differing needs also have an effect. This is still largely under-researched both in science and in practice. One could think here of refugees or people with disabilities.

Also, it might be interesting to look at how the onboarding process changed during the pandemic, what then carried over into the post-pandemic period, and what impact that has now.

The focus group discussion also drew attention to another issue. More and more staff onboarding processes and contacts in globally operating companies are taking place virtually. Especially in the current Covid 19 pandemic-related crisis, it can be an advantage to have processes already digitally and virtually aligned (Maurer, 2020). This can support agility in the company and its adaptability. The extent to which digital and, in this context, virtual staff training can be specifically designed and influence current processes is of particular interest (Brenner, 2020). In line with this, there is also a trend to implement new methods such as "gaming" in staff onboarding (Heimburger et al., 2020). The extent to which these or other processes and methods will be of interest for the process of staff onboarding in the future needs to be investigated.

To close the identified research gap in the form of a lack of knowledge on the practical application of staff onboarding processes, it may be necessary to accompany processes in companies over a more extended period. This allows it to counteract temporary influencing factors of particular situations, short-lived crises or exceptional situations.

7. Conclusion

The aim of the present research was to examine best practice processes and methods of onboarding in the supply chain management (SCM) of industrial companies by means of a qualitative investigation. The empirical findings were compared with each other and with the processes and methods suggested in the literature.

Above all, the investigation showed that the literature often provides a multitude of possible applications, of which only a few are implemented in practice. The individuality of the processes is vital to the industrial companies studied in practice. However, they fall back on individual processes and methods from the literature, such as a buddy program or checklists for professional induction. Implementing the holistic concepts and processes for staff induction given in the literature is considered desirable by industrial companies. However, it is pointed out that integrating the individuality of processes and methods is still desired. However, due to a shortage of time and personnel resources, the current application does not occur in any industrial companies surveyed.

If one takes up the relevance of communication and information transfer within induction, the literature here sets out precise requirements for adaptation to different types of learning and teaching. In practice, only methods are used reactively when unsuitable learning and teaching method is identified. Finally, the staff onboarding process focuses on the increasing complexity of SCM and the integration of digital change.

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