Understanding organisational learning from an integrative perspective: the relationships between inward and outward organisational learning and organisational outcomes

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Abstract: The present study examines the concept of organisational learning from an integrative perspective that includes two distinct categories: inward organisational learning and outward organisational learning. The research model suggests that a positive relationship will exist between each of the learning categories and organisational outcomes, which in turn comprise two aspects: organisation-focused outcomes (organisational performance and innovation) and employee-focused outcomes (professional development and intention to leave). To examine the model, data on 104 multi-professional early childhood organisations were collected from two sources. The results of an SEM analysis showed that inward organisational learning was positively related to the employee-focused outcomes (professional development and intention to leave), but no significant association was found with the organisational-focused outcomes. For outward organisational learning, positive correlations were found with the organisational-focused outcomes (performance, and innovation) as well as with the employee-focused variable of professional development (but not with intention to leave).

Keywords: organisational learning; organisational innovation; organisational performance; professional development; intention to leave.

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1   Introduction

The concept of organisational learning has been widely addressed by the organisational literature, particularly in the last three decades (e.g., Cummings and Worley, 2014; Watkins, 2017). Although a wide variety of typologies and dimensions can be found with respect to the concept's structure, most models refer to organisational learning as the descriptive adaptive behaviour of organisations to various conditions and circumstances; a mechanism that changes the 'collective brain' of the organisation by means of dialog and investigation (Edmondson, 2002; Popova-Nowak and Cseh, 2015; Schön and Argyris, 1996). The intensive interest of researchers in the concept was mainly due to the accumulation of empirical evidence regarding its contribution to organisational success (Wolff et al., 2015). Research shows that organisational learning is positively associated with organisational outcomes, such as performance and innovation (e.g., Alegre and Chiva, 2013), and that it is one of the main organisational tools that an organisation can apply to adapt effectively to the current complex and dynamic environment (e.g., Cummings and Worley, 2014; Watkins, 2017).

Nevertheless, reviewing the literature published to date revealed that most models refer to learning as a process that takes place within the organisation, whilst ignoring the crucial aspect of the mutual relations between the organisation and its external environment and their role in developing the mechanisms of learning (Choi, 2002). Organisations do not operate in a vacuum; rather, they function in the context of interdependent relationships with their external environments (Drach-Zahavy and Somech, 2010). The entities in the external environment provide the organisation with necessary information, knowledge, and ideas that are crucial for promoting learning (Choi, 2002). For example, communications with external stakeholders such as suppliers, shareholders, and regulators may provide the organisation with crucial knowledge to better cope with complex challenges (Merkel and Seidel, 2018). This approach, which integrates external and internal processes, was developed in a different realm of research, namely the study of boundary activities (Ancona and Caldwell, 1992; Faraj and Yan, 2009). The literature on boundary activities distinguishes between internal activities, which are defined as behaviours aimed at managing the internal processes that take place within the boundaries of the organisation, for example, gathering information in relation to the needs of the organisation and protecting organisational resources from competing with external demands (Faraj and Yan, 2009), and external activities, which are defined as behaviours aimed at managing the organisation's external environment, such as acquisition of resources and information and management of relationships with external stakeholders (Yamaguchi et al., 2018). The main argument of this approach is that to promote organisational effectiveness, organisations should simultaneously engage in both internal and external activities (Dey and MP, 2017). The literature on knowledge management similarly differentiates between organisational actions of exploitation, which refer to seeking knowledge within the organisation to develop new knowledge, and actions of exploration, which refer to scouting for new knowledge in the external environment of the organisation (Wang et al., 2014). Yamaguchi et al. (2018) found, for example, that sharing inter-organisational knowledge raises the level of entrepreneurship in organisations.

To fill these voids in the organisational learning literature, the present study has two objectives. First, to the best of our knowledge, this is the first systematic attempt to expand the concept of organisational learning to processes that take place outside the

organisation. The present study proposes an integrative model in which organisational learning comprises two main categories: inward organisational learning and outward organisational learning. Inward organisational learning is defined as promoting the development of new knowledge and adaptation that support organisational improvement through an accumulative set of systematic intra-organisational processes, which include the creation of an organisational memory, discourse, and dialog within the organisation, alongside an assessment component. Outward organisational learning is defined as fostering the development of new knowledge and adaptation that assist organisational improvement through an accumulative set of systematic extra-organisational processes, which include the acquisition of external information and extra-organisational communication while interfacing with entities in the organisation's environment.

Second, by adopting this theoretical approach, the present study seeks to examine the implications of each category on organisational outcomes. Specifically, the research model examines the relationship between the two categories of organisational learning and organisation-focused organisational outcomes (organisational performance and innovation) on the one hand, and employee-focused organisational outcomes (professional development and intention to leave) on the other hand (see Figure 1).

Figure 1   Organisational learning – the research model
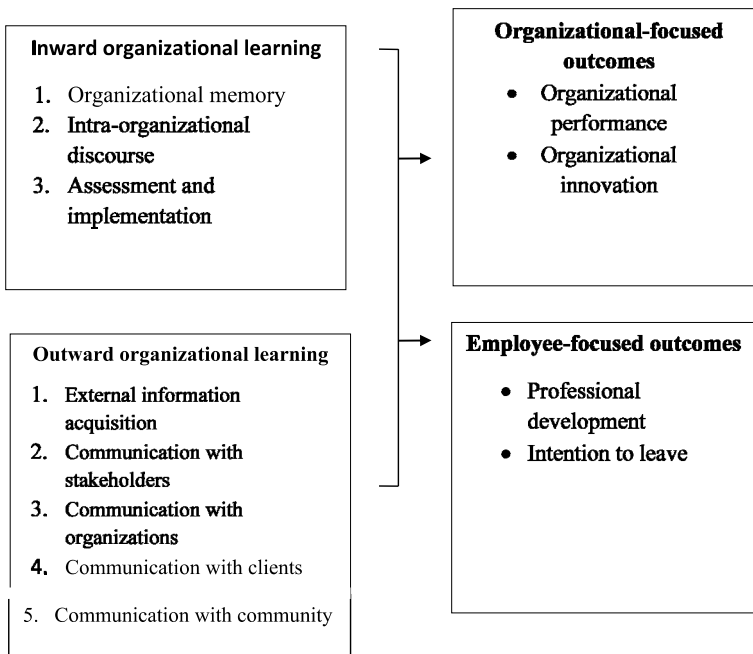
2   Theoretical background and hypotheses

Organisational learning was first defined by Cyert and March (1963), who used the term to describe the adaptive behaviour of organisations to various conditions and circumstances. To date, however, no agreed definition has been proposed for this

concept, with gaps evident also in the description of the various dimensions (İpek, 2019). Popova-Nowak and Cseh (2015) suggested organising the existing definitions of organisational learning according to four paradigms: functionalist, constructivist, critical, and post-modernist. According to the functionalist paradigm (behavioural-cognitive), the purpose of organisational learning is to achieve organisational outcomes, such as enhancing organisational performance and adapting to changes in the environment, through changes in the organisation's behaviour (Lant and Mezias, 1992; Levinthal and March, 1993). According to the constructivist paradigm (structural radical), organisational learning involves both collective thinking patterns and collective actions. Similar to the tacit nature of cultural knowledge, organisational knowledge is tacit and is captured in artifacts that are situated in organisational culture (Cook and Yanow, 1993). The two remaining paradigms, the critical paradigm, and the post-modernist paradigm, are less studied compared with the functionalist and constructivist paradigms (Deetz, 1996). According to the critical paradigm, organisational learning is a function of political processes and part of the advancement of different interests within the organisation, including employees who arrange their reality according to personal interests, which are not always in accord with the collective interest (Grant et al., 2009). The post-modernist paradigm perceives organisational learning as an outcome of processes that aspire towards a social order and include patterns of disagreement and discourse (Law, 1994). The post-modernist view of organisational learning focuses on knowledge, language, and collective discourse so that the individual's learning draws its collective meaning through texts and narratives (Levina and Orlikowski, 2009).

Although scholars acknowledge that organisational learning is crucial for coping with complex and dynamic environments, most models focus on intra-organisational processes (e.g., Nonaka, 1994; Watkins, 2017). These models refer mainly to mechanisms and processes that take place within the organisation's boundaries (Cummings and Worley, 2014; Edmondson, 2002). Huber (1991), for instance, proposed a typology with four dimensions: information acquisition, information distribution, information interpretation, and information storage in the organisational memory. This typology was expanded by other researchers who added additional components to it, such as the construction of procedures and methods (Schön and Argyris, 1996) or the assessment of successes and failures (Serrat, 2009). Reference to the external environment, as part of the learning process, can be found mainly in models that included the component of the introduction of new information into the organisation (Huber, 1991). Mena and Chabowski (2015), for instance, referred to the relationship with stakeholders as being significant to the organisation's success, while Chesbrough (2003) referred to relations with clients as significant to organisational performance.

A major area of research, which developed in parallel to the research of organisational learning, and referred simultaneously to intra- and extra-organisational processes, is the area of boundary activity research (Ancona and Caldwell, 1992). Ancona and Caldwell's pioneering research (1992a) showed that teams that invest in interacting with the external environment, collecting information, and obtaining resources were more effective than teams that focused only in managing the internal environment. We follow this approach and suggest an integrative model that claims that organisational learning should be regarded as comprising two distinct categories: inward organisational learning and outward organisational learning.

2.1   Organisational learning: an integrative approach

The integrative approach for understanding the concept of organisational learning proposes that organisational learning comprises two broad categories of learning: inward organisational learning and outward organisational learning; both of which are required for learning and contribute to improving organisation effectiveness.

Inward organisational learning refers to an assemblage of systematic intra-organisational processes that are arranged according to three components:

1   *Organisational memory* – the identification, mapping and management of existing information that is organised, managed, and stored in the organisation for future use (Garvin, 1993; Sinkula, 1994).

2   *Intra-organisational dialog and sharing* – a major component in inward organisational learning, which refers to the principle of the collective discourse within the organisation. Intra-organisational learning requires communication and mutuality since it takes place through discussions, dialog, and sharing of experiences and experiencing (Nonaka and Takeuchi, 1996).

    This category includes

    a   Addition of information and its integration into the organisation. Management of existing information and its exploitation alongside the introduction of new information and its integration into the organisation (exploitation and exploration) (March, 1991).

    b   Dissemination of information. A process in which information from various sources is disseminated among organisation members and leads to new understandings (Huber, 1991; Garvin et al., 2008).

    c   Information sharing. A series of behaviours that involve information exchange or assisting others (Connelly and Kevin Kelloway, 2003).

    d   Information interpretation. A process in which information is given an interpretation that is relevant to the organisation (Huber, 1991), turning the information into valuable knowledge (Schwandt, 1977).

    e   Knowledge implementation and its assimilation in the organisation. Connecting theoretical knowledge and technical-experiential knowledge (Crossan et al., 1999) and its integration into the organisation memory during which it changes the collective behaviour (Crossan et al., 1999; Wang et al., 2014).

3   Assessment – includes a set of mechanisms for the comprehension of the outcomes of the organisational activity and improvement of the organisation's effectiveness (Cook, 2014). The process includes drawing of conclusions, assessing performance, and examining the change and the achieved improvement (Edmondson and Moingeon, 1998; Ayoubi, et al., 2015).

Outward organisational learning refers to an assemblage of systematic extra-organisational process that are arranged according to five components:

1 *External information acquisition* – refers to the flow of new relevant information and expansion of existing information from external sources to the organisation such as clients, consultants, suppliers, and competitors (Salter et al., 2015).

2 *Information collection and interfacing with external stakeholders* – refers to communication processes with external stakeholders, individuals and groups that influence the organisation's decisions, policies, and functioning, despite not being part of the organisation itself (De Chernatony and Harris, 2000). Communications with external stakeholders such as suppliers, shareholders, organisations, and regulators, are significant for the survival of the organisation in the community in which it operates and the encounter with them can affect organisational perceptions (Ferrell et al., 2010).

3 *Communication with other organisations* – refers to coordination, collaborations, and learning. The importance of sharing information among organisations has been recognised as effective due to the ability of organisations to learn new skills and innovations that they could not create by themselves (Rathi et al., 2014). For example, research that examined inter-sectoral collaborations from an organisational learning perspective found that inter-organisational sharing is an important and effective tool in the coping of organisations with complex challenges (Merkel and Seidel, 2018).

4 *Communication with clients* – includes learning their needs, listening to complaints and feedback (Sveiby, 1996). The concept of the 'client' has changed greatly with time and today clients are partners to thinking and creating of new ideas. It was found that learning from clients affects both performance and innovation (Taherparvar et al., 2014).

5 *Communication with the community* – refers to the community-environment context, to dialog with the external environment as a vital source of information and deep understanding of needs (Klein and Shapira-Lishchinsky, 2016).

This study proposes a both/and approach and claims that both learning categories – inward organisational learning and outward organisational learning – are required to promote organisational effectiveness. While the external processes provide the organisation with necessary resources and information, the internal processes enable the organisation to translate them into collective knowledge that helps the organisation improve itself over time. The present model examines the link between the two categories of organisational learning with two groups of outcomes: organisation-focused outcomes (organisational performance and innovation) and employee-focused outcomes (professional development and intention to leave).

2.2   The relationship between organisational learning and organisation-focused outcomes

2.2.1   The relationship between organisational learning and organisational performance

Organisational performance is defined as the degree to which the organisation achieves its goals and reaches expected or desired results (Chatman and Flynn, 2001).

The relationship between inward organisational learning and organisational performance

As mentioned, inward organisational learning includes three components: organisational memory, discourse and dialog in the organisation, and assessment. In general, research has shown that these systematic processes support the success of the organisation due to the change that takes place among individuals in terms of skills, improved action patterns and thinking patterns that are related to the organisation's area of activity and goals (Cacciattolo and Leic, 2015). These ongoing processes lead to the accumulation of expertise in the organisation and as a result to enhanced performance (Kiessling et al., 2009). Intra-organisational learning means that the organisation emphasises processes that make information accessible to employees, processes of idea sharing and dissemination, as well as assessment and conclusion drawing processes. Such processes enable the processes of development and adaptation to the organisation's environment in an ongoing manner (Kiessling et al., 2009). The organisational memory makes accumulated and documented organisational knowledge accessible to employees (Argote and Guo, 2016), contributes to performance by streamlining the search for effective solutions based on experience, and partially prevents the damage incurred when skilled employees leave the organisation (Ton and Huckman, 2008). The dialog in the organisation contributes to the exchange of view, joint thinking, and the making of collective and informed decisions, process that have been found to contribute to improved performance (James, 2003). Moreover, research has shown a relationship between employee participation in information dissemination and their satisfaction, commitment and involvement in decision-making processes, positions that increase the effort they invest in organisational goals (Robbins, 2001; Somech and Bogler, 2002).

Hypothesis 1a   A positive correlation will be found between inward organisational learning and organisational performance.

The relationship between outward organisational learning and organisational performance

This research proposes that outward organisational learning, which was defined as promoting the development of new knowledge and adaptation that assist organisational improvement through an assemblage of extra-organisational processes, will contribute to improving the organisational performance. Systematic interaction with the external environment includes external information acquisition and extra-organisational communication, while interfacing with entities in the organisation's environment such as other organisations, clients, stakeholders, and the community. This interaction enables the organisation to develop and strengthen the organisation's expertise and to identify and understand the current market needs, requirements, and trends (Ancona and Caldwell, 1992; Hargadon, 1998). The acquisition of external information (courses, reading, specific consultation, and so on) contributes to the expansion of the organisation knowledge and to the introduction of new ideas (Kuah et al., 2012). These, in turn, lead to the development of expertise in the organisation, to its adaptation to the forces in the environment, and hence to enhanced performance (Hu et al., 2014). Dialog with stakeholders is mentioned in the literature as key to a competitive advantage and as an augmenter or organisational effectiveness (Steinfield et al., 2015). High levels of communication and of coordination that focus on various stakeholders enhance the

organisation's performance thanks to understanding the needs of the stakeholders and exposure to new ways of thinking (Mena and Chabowski, 2015).

Hypothesis 1b   A positive correlation will be found between outward organisational learning and organisational performance.

2.2.2 The relationship between organisational learning and organisational innovation

Organisational innovation includes two components: creativity which is expressed by the proposing of new ideas regarding new processes, new products or new procedures, and the implementation and assimilation of the innovative ideas, which aim to enhance organisational effectiveness (West and Farr, 1989).

The relationship between inward organisational learning and innovation

The claim that inward organisational learning will contribute to organisational innovation assumes that exposure to new information that is disseminated in the organisation, shared thinking, brainstorming, drawing of conclusions, and assessment will lead to mutual stimulation among organisation members, which will encourage the proposal of new ideas and the promotion of innovative processes (Young et al., 2017; Ghasemzadeh et al., 2019). Support for this claim can be found in a study that found that expanding the organisational information leads to the accumulation of new understandings among employees which in turn promote creating thinking and the implementation of new products and processes or improvement of those that already exist (Steinfield et al., 2015; Tian et al., 2020). This is true because an environment with a regular supply of knowledge and access to knowledge and information is fertile ground for new ideas and for thinking that encourages innovation (Prahalad and Krishnan, 2008).

Hypothesis 2a   A positive correlation will be found between inward organisational learning and innovation.

The relationship between outward organisational learning and innovation

Learning through varied communications with the environment enables to encounter new knowledge and new interpretations of reality and promotes new ideas that lead the organisation to adapt to its environment (Flores et al., 2012). The ongoing dialog with external stakeholders expands the knowledge, exposes the organisation to up-to-date information, and expands the organisation's perspective, all of which are essential components for increasing creativity in the organisation (Perry-Smith and Shalley, 2003). In addition, interaction with the external environment enables to enlist support and gather resources to promote the implementation of the innovative ideas (Somech and Khalaili, 2014). Research indicates a positive correlation between activities, such as searching for new information, collecting data from multiple sources, and maintaining relations with external entities and organisational innovation (Martínez-Román et al., 2017). Studies conducted on boundary activities showed a positive relationship between the degree to which the organisation communicates with its environment and innovation (Ancona and Caldwell, 1992). Other studies likewise showed that coordination of the organisation with other entities enhances the level of innovation in the organisation, due to their potential to

increase awareness and exposure to other kinds of thinking and other areas of expertise (Rhee et al., 2010). As for learning processes, Sibarani (2017) showed that external consulting firms that conducted informal learning activities in organisations, helped those organisations develop innovative solutions.

Hypothesis 2b   A positive correlation will be found between outward organisational learning and innovation.

2.3   The relationship between organisational learning and employee-focused outcomes

2.3.1   The relationship between organisational learning and professional development

Professional development is defined as a process in which knowledge and skills are expanded, practices are adopted, and work methods and thinking are improved following experiencing and the development of new approaches and tools (Clarke and Hollingsworth, 2002). Professional development was found to be one work motivator in Western societies (Harter et al., 2003), and as one of the main factors in the prediction of long-term organisational profitability (Hammond and Churchill, 2018).

The relationship between inward organisational learning and professional development

The present research posits that a positive relationship will be found between inward organisational learning and the professional development of employees. Support for this claim is provided by studies that examined the collective aspect of organisational learning and found that organisational learning that includes group processes such as brainstorming, discussions, and reflection constitutes an opportunity to expand knowledge and expertise, and thereby fosters the professional development of employees (Tatto et al., 2016). For example, Melhem (2018) demonstrated a positive link between professional development and the tendency of organisations to invest in learning by integrating learning principles within the workplace. Other studies similarly showed that mechanisms of dialog, feedback, and assessment reinforce and amplify the employees' sense of self-efficacy, a feeling that enhances the experience of personal and professional development as well (Kontoghiorghes, 2001).

Hypothesis 3a   A positive correlation will be found between inward organisational learning and professional development.

The relationship between outward organisational learning and the professional development of employees

Components of outward organisational learning, such as the encounter with new information and dialog with stakeholders, were found to encourage professional development thanks to the opportunity to acquire new skills, the access to new knowledge and new information sources, and the need to cope with new challenges and new discoveries (Laschinger et al., 2001). The claim presented in this study is that outward organisational learning brings the individual in contact with new information,

new languages of thinking, and other ways of action that challenge the individual and thereby lead to professional development.

Hypothesis 3b   A positive correlation will be found between outward organisational learning and professional growth.

2.3.2 The relationship between organisational learning and intention to leave

Intention to leave is a term that expresses the employee's propensity to leave the organisation (Walsh et al., 1985).

The relationship between inward organisational learning and intention to leave

In general, the research claim is that inward organisational learning is perceived by employees as concern for their needs on the part of the organisation, and so assists in adaptation and in the alleviation of pressures at the work place (Quick, 1990). Hence, learning will be negatively correlated to intention to leave (Hsu, 2009). It was found that collective learning processes that include group discussions and in which employees feel like active partners in decision-making processes, increase the employees' feeling of belonging to the organisation, and thus decrease their propensity to leave (Louis, 1980; van Maanen and Schein, 1979). Similarly, proper accessibility of information to all organisation members' increases employees' confidence regarding the clarity of the instructions for the execution of tasks and was found to be negatively correlated with intention to leave (Hellman, 1997; Walsh et al., 1985). Furthermore, research has shown that intra-organisational learning processes increase employee satisfaction and motivation, factors that contribute to their perseverance at the workplace (Egan et al., 2004).

Hypothesis 4a   A negative correlation will be found between inward organisational learning and intention to leave.

The relationship between outward organisational learning and intention to leave

Like the positive influence of inward organisational learning on employees' motivation and commitment to the organisation, our research hypothesis is that opportunity for interaction with and exposure to the external environment enriches and varies the professional experience of the employees and thus reduces their desire to leave the organisation. Studies that examined the relationship between knowledge expansion, achieved through training and interaction with extra-organisational experts, and employee intention to leave the organisation revealed that the correlation is negative (Trevor, 2001). The researchers explained that encounters with entities in the external environment enhance satisfaction, thus decreasing the propensity to leave. It was also found that when employees were encouraged to share inter-organisational information as part of a learning process, satisfaction increased, as did their commitment to improve performance due to the meaning attributed to the sharing of inter-organisational information, which contributed to the desire to persevere at the workplace (Mugisha, 2018).

Hypothesis 4b   A negative correlation will be found between outward organisational learning and intention to leave.

2.4   Method

2.4.1   Research population

Data were gathered from 152 non-profit childcare centres that cater to children aged birth to six years, their parents, education staff members, and other staff members that care for the children. Employees were characterised by professional heterogeneity and included education professionals, para-medical therapists (occupational therapists, speech therapists, and physical therapists), and emotional therapists (social workers, psychologists, and expression therapists).

The final sample comprised 104 childcare centres (32% rejection). In total, 701 staff members and 104 organisation managers participated in the study. Centre size, in terms of staff members, ranged between 4 and 30 (average 7 employees, SD = 3.8) and centre 'seniority' (years of operation) ranged between one and 25 years (average 13.8 years, SD = 9.48).

Employees

Of the organisation employees, 93.5% were women and 6.5% were men (658 and 46, respectively). In terms of professions, 60% of participants were para-medical professionals (occupational therapy, communications, physical therapy; n = 421), 24% were emotional therapists (social work, psychology, expression therapy; n = 152), and 16% were education professionals (n = 111). Twenty percent of them were also coordinators of some kind (team guidance, professional coordinators, etc.; n = 140). In terms of education, 4.4% were high school graduates (n = 31), 55% had a bachelor's degree (n = 386), 40% had a master's (n = 280), and 0.9% had a PhD (n = 6). Employees ranged in age between 23 and 70 years (average 37, SD 9.27), in experience between one and 38 years (average 7.2, SD 6.4) and in seniority in the organisation between one and 37 years (M = 5.21, SD = 4.9).

Managers

One hundred and four (104) managers participated in the study, of them 91.5% were women (n = 96) and 8.5 were men (n = 9, of which 6 were Arabs). Seniority in management ranged between 2 and 35 years (M = 9.52, SD = 8.74) and seniority in the organisation ranged between one and fifty years (M-13.68, SD = 9.89).

2.4.2   Research variables

To avoid one-source bias, employees first completed a questionnaire on outward and inward organisational learning and on professional development and intention to leave. About three months later, the managers completed questionnaires on organisational performance and innovation. All research questionnaires (except the performance questionnaire) applied a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Organisational learning

To investigate organisational learning as a variable with two categories – inward organisational learning and outward organisational learning – we developed and validated a questionnaire. To validate the structure of the measure, we first conducted exploratory factor analysis on a sample of 344 employees, using SPSS 23. We analysed the covariance matrix using principal-component analysis with a varimax rotation. In general, the loading factor exceeded .40, items loaded on more than one factor at 0.30 and above, and those loaded lower than 35 were removed from the final scale. In addition, items that significantly reduced the internal consistency of the subscale (Cronbach's alpha coefficient) were removed from the final questionnaire. The results identified five sub-categories of outward organisational learning: acquiring knowledge, cross-border learning, client-side learning, stakeholder learning, and community-based learning, as well as three sub-categories of inward organisational learning: organisational memory, discourse and dialog within the organisation, and assessment and implementation. Next, we conducted a confirmatory factor analysis (CFA) on another sample of 344 employees, using the Amos software. The overall CFA results showed a reasonable and acceptable fit with the data (χ^2 / df = 3.32, CFI = .90, TLI = .90, IFI = .90, RMSEA = 0.06). The final version of the questionnaire comprised 58 items (see Appendix 1).

1   Inward organisational learning (22 items; α = .97):

   a   Organisational memory (five items). This dimension refers to the amount of information and experience an organisation has, which is stored in the organisation for future use. For example: 'Our organisation stores detailed information about work procedures' (α = .92).

   b   Discourse and dialog within the organisation (14 items). This dimension deals with collective processes that enable the organisation to turn information into valuable knowledge. For example: 'Our organisation has way of disseminating knowledge among its employees' (α = .93).

   c   Assessment (three items). This dimension refers to mechanisms for measuring strong points and weaknesses to understand the outcomes of the organisational activity. For example: 'In our organisation we have an ordered and consistent process of drawing conclusions' (α = .89).

2   Outward organisational learning (36 items; α = .89):

   a   Acquisition of external knowledge (five items). This dimension refers to the extent to which the organisation acquires professional knowledge outside of the organisation. For example: 'In our organisation we often exchange professional knowledge with other organisations' (α = .84).

   b   Learning beyond the organisation through information gathering and contact with other organisations (11 items). This dimension examines the openness to learning from other organisations. For example: 'In our organisation we collect information from other organisations' (α = .93).

c Learning through relations with clients (five items). This dimension refers to employee assessment of the extent to which the organisation is in contact with its clients. For example: 'In our organisation, the clients play an integral part in the development process of a new service' ($\alpha = .91$).

d Relations with the community (six items). This dimension examines the employee assessment of the extent of learning that takes place through dialog with the community. For example: 'My organisation works together with the external community to meet its needs' ($\alpha = .88$).

e Learning through contact with stakeholders (nine items). This dimension examines the employee's assessment regarding the extent of attention and learning that takes place through contact with stakeholders. For example: 'In our organisation we hold multi-profession meetings to discuss developments in the needs of our stakeholders' ($\alpha = .88$).

Organisational performance

In order to adapt the performance dimensions to the characteristics of the organisations we studied, a performance questionnaire was developed for the purpose of the present study. The questionnaire examines the extent of change over the past three years, in percent, for the following organisational parameters:

1 budget

2 number of employees at centre

3 number of children who received over ten sessions a year

4 number of children who underwent screening processes

5 number of parents who persevered in guidance or therapy for more than ten sessions a year

6 number of extra-organisational staff members who were trained by the centre.

Managers were requested to rank the questionnaire statements on a scale between 1 (decreased by over 80%) to 9 (Increased by over 80%) ($\alpha = .70$). For example: 'The number of staff members who are not part of the centre/unit and who received training by the centre/unit in the past three years' or 'The number of independent referrals of parents in the past three years' or 'The number of children who received guidance/therapy/activity in the past three years'.

Organisational innovation

Organisational innovation was measured using a questionnaire developed by Skerlavaj et al. (2010) and comprises 6 items, for example: 'In our organisation we look for new ways of doing things' ($\alpha = .87$).

Professional development

Professional development was measured on a five-item scale developed by Short and Rinehart (1992). A sample item: 'I was given the opportunity to continue my studies' ($\alpha = .87$).

Intention to leave

Intention to leave was measured on a five-item scale developed by Walsh et al. (1985). A sample item: 'I'm beginning to ask friends about other job opportunities' ($\alpha = .92$).

Control variable

Years of organisational operation served as the control variable for the study. Development and institutionalisation of learning are ongoing processes. Crossan et al. (1999) described organisational learning as developing from initial intuitive learning to institutionalised learning. Therefore, the 'seniority' of the organisation (years of organisational operation) can influence the relationship between organisational learning and outcomes.

2.5   Level of analysis

The research model refers to the organisation level, as does the analysis unit. Outcome variables (organisational performance and innovation) were assessed by the organisation managers, whereas organisational learning variables, as well as outcome variables – employees (professional development and intention to leave) were analysed after aggregation of the employee responses to an organisational level. To justify aggregation, a high degree of homogeneity in employees' responses must be demonstrated. All Rwg values obtained in our research exceeded .7, and averages were as following: organisational memory .89, intra-organisational discourse .97, implementation and assessment .89, organisational learning beyond organisation boundaries .96, outward learning via clients .91, outward learning via external knowledge acquisition .92, outward learning via the community .92, outward learning via stakeholders .95, professional development .83, and intention to leave .94.

ICC1 and ICC2 values were, respectively: organisational memory .02 and .66, intra-organisational discourse .02 and .64, implementation and assessment .02 and .67, professional development .03 and .72, intention to leave .01 and .57, organisational learning beyond organisation boundaries .03 and .75, outward learning via clients .03 and .75, outward learning via external knowledge acquisition .02 and .71, outward learning via the community .03 and .74, and outward learning via stakeholders .02 and .71.

As is evident, average Rwg and ICC2 values for all variables are within a range that justifies aggregation. As for ICC1, although the values are in the low category of the measure (.01–.10), aggregation may be performed due to the effect of the group size (Bliese, 1998; Woehr et al., 2015). Therefore, based on these findings, aggregation of the variables to the organisation level was performed.
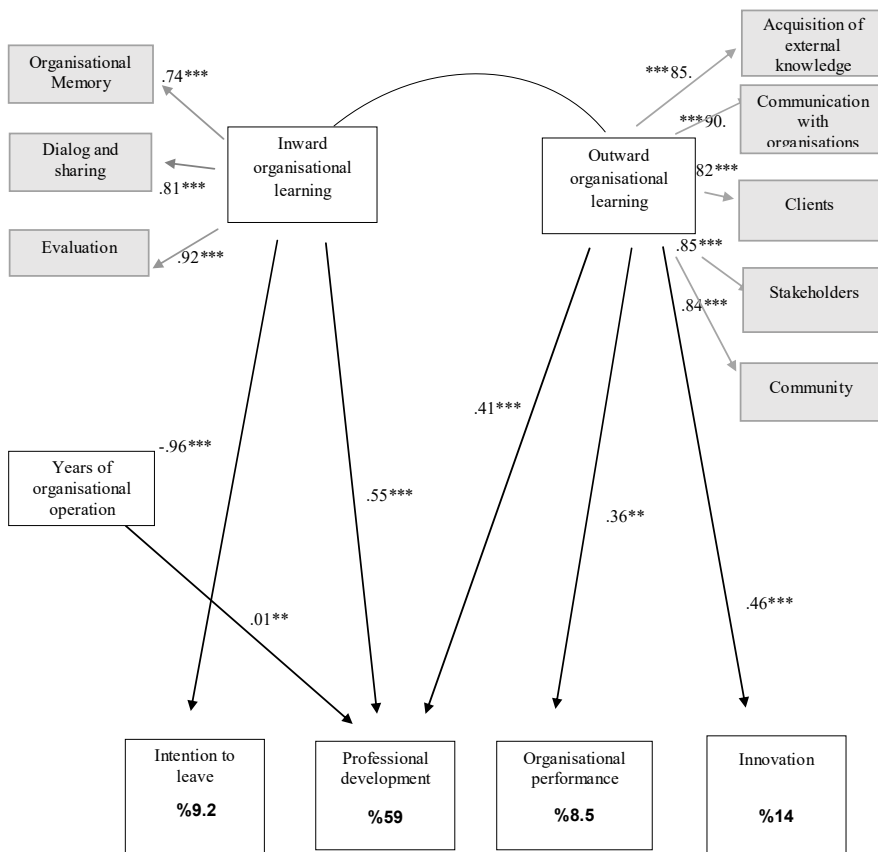
2.6 Results

Table 1 presents the averages, standard deviations, and correlations for all study variables.

Table 1 Means, standard deviations, and correlation matrix of study variables

	M	SD	1	2	3	4	5	6	7
1 Inward organisational learning	4.56	.55	1.00						
2 Outward organisational learning	3.60	.62	.72**	1.00					
3 Organisational performance	4.01	.74	.29*	.34**	1.00				
4 Organisational innovation	4.56	.75	.24*	.38*	.48**	1.00			
5 Professional development	4.70	.68	.70**	.66**	.31**	.21*	1.00		
6 Intention to leave	1.74	.53	.30**	.22*	.27**	.10	.45**	1.00	
7 Years of organisational operation	13.84	9.85	−.1	.14*	.19*	.1	.15	.11	1.00

Notes: N = 104; * p < .05; **p < .01

Figure 2 Results of SEM analysis for the study model (N = 104)

*p <.01; ***p <.001

Structural equation modeling (SEM) was used to test the research model. Analysis of the fit quality measures for the studied model yielded good results – CFI = .99, χ^2/DF = 1.05, RMSEα = .24, and IFI = .99 – which attest to the statistical significance of the model (see Fig. 2). The analysis findings show that professional development accounts for 59% of the variance, innovation accounts for 14.5%, intention to leave for 9.2%, and organisational performance accounts for 8.5% of the variance.

The analysis reveals no significant correlation between inward learning and the organisational outcome variables (organisational performance and innovation) ($p > .05$), hence Hypotheses 1a and 2a were not supported. Regarding the correlation between inward learning and the employee-focused outcome variables (professional development and intention to leave), the findings indicate that inward learning is significantly and positively correlated with the professional development of employees ($\beta = .55$, $p<.001$) and significantly and negatively correlated with intention to leave ($\beta = .31$, $p<.001$). Hence Hypotheses 3a and 4a were supported.

Findings on the correlation between outward learning and the two outcome variables indicate significant positive correlations with both organisation-focused outcomes, organisational performance ($\beta = .36$, $p<.01$) and innovation ($\beta = .46$, $p<.001$). In other words, Hypotheses 1b and 2b were supported. As for the correlations between outward learning and the employee-focused outcome variables (professional development and intention to leave), the results indicate that outward learning is significantly and positively correlated with professional development ($\beta = .41$, $p<.001$); no significant positive correlation was found between outward learning and intention to leave ($p > .05$). Hence, Hypothesis 3b was supported but Hypothesis 4b was not.

2.7   Discussion

What causes one organisation to succeed and another to fail in their attempt to adapt to the dynamic and changing environment? The findings presented herein support the notion that organisational learning is a critical component of success and adaptation (Watkins, 2017). By presenting an integrative approach to the concept of organisational learning, which regards it as a bi-dimensional concept (inward organisational learning and outward organisational learning), the present study contributes to the literature in several ways.

First, in this study, a new typology of organisational learning was constructed that integrates inward processes, i.e., mechanisms that refer to collective learning that takes place within the organisation's boundaries, and outward processes, i.e., components of learning that stem from the encounter between the organisation and its environment. The study identified three elements of inward organisational learning: organisational memory (procedures, knowledge and information stored in the organisation), dialog and discourse (interpretation, dissemination and internal discussions), and evaluation processes (lessons learned, control and recommendations for implementation). As for outward organisational learning, we identified five elements: external information acquisition, information collection and interfacing with external stakeholders, communication with other organisations, communication with clients, and communication with the community. This comprehensive conceptualisation expands and deepens the existing definitions of the concept of organisational learning by integrating different components that, heretofore, have been investigated separately and in an inconsistent and incoherent manner (Edmonstone, 2015; Thomas and Vohra, 2015).

Second, the study findings reveal that the relationships between the two dimensions of organisational learning and organisational outcomes are differential, highlighting the importance of the bi-dimensional conceptualisation in understanding the way in which it contributes to the organisational outcomes (Dahiyat, 2015). This both/and approach responds to a call in the organisational behaviour literature for researchers to shift from an either/or to a both/and approach, thus making it possible for us to assess the unique contribution of each dimension (Lewis et al., 2002). Indeed, our findings show that although inward learning, the aspect that has received intensive research attention (Novak, 2017), is positively associated with employee-focused outcome variables (professional development and intention to leave), no link was found with organisation-focused outcomes (performance and innovation). On the other hand, our findings reveal that outward learning contributes mainly to organisation-focused outcomes (performance and innovation), but also to the employee-focused outcome professional development.

Regarding the implications of inward organisational learning on organisational effectiveness, the research findings showed that this kind of learning contributes mainly to those outcomes that focus on employees. Specifically, we found that inward organisational learning is positively correlated to the professional development of employees and is negatively correlated to their intention to leave. This finding is supported by other research that indicated that learning enables the development of work capabilities and skills and constitutes the basis for professional development, which in turn enables the employee to find meaning and challenge in the work world (Watson et al., 2018). Research has shown that employees perceive learning as an expression of the organisation's concern and caring for their needs (Eisenberger et al., 1990; Islam et al., 2015). This perception reinforces positive attitudes toward the organisation, increases motivation, and enhances employee-organisation relations.

Nevertheless, the research findings did not support the hypothesis that inward organisational learning is positively associated with performance and with innovation. This finding is not in line with previous studies that showed that intra-organisational learning fosters performance (Robbins, 2001; Tan and Wong, 2015) and innovation (Prahalad and Krishnan, 2008). One possible explanation for this discrepancy could be the lack of clear distinction between the two categories in existing models of organisational learning (Flores et al., 2012). Many models, despite focusing primarily on intra-organisational processes, sometimes also integrated components that may be identified as directed toward the external environment. For example, the study of Vargas-Hernández and Jiménez (2017) that investigated the relationship between organisational learning and survivability and organisational development, described organisational learning mainly through intra-organisational processes, but at the same time referred also to external knowledge components such as behaviour analysis of competitors and clients.

As to the contribution of outward organisational learning, the research findings indicate a positive correlation with both organisational performance and innovation. The results reinforce the idea that organisations that gather information from external sources and develop relations with varied stakeholders improve their effectiveness, which is expressed in an increase in organisational performance and innovation (Garay et al., 2017). While discussions and reflections that take place within the organisation are based primarily on internal knowledge and skills of the organisation members, the organisation's interfaces with the knowledge, experience, and expertise of entities in the

external environment expose the organisation to the surrounding reality, expand its perspectives, language, and expertise and thus improve its organisational effectiveness (Castillo, 2013). These findings are supported by studies that present positive correlations between sources of external knowledge and organisational performance (Leiponen and Helfat, 2010) and innovation (Rodriguez et al., 2017). For example, an analysis of 408 tourism companies in Catalonia (Spain) showed that the assimilation and exploitation of external information promoted organisational innovation (Garay et al., 2017). The literature on boundary activity also indicated that the penetrability of boundaries and the ability to cross them are positively correlated with innovation (Dibble and Gibson, 2017), since employees who cross the organisation boundary and return with new ideas, experiences, and information assimilate them in the organisation (Paula and Silva, 2017). Collaborations with external organisations enrich the organisation's knowledge repository, which in turn foster creativity and innovation (Frankort, 2016).

As for the relationship between outward organisational learning and employee-focused outcomes, the research results indicate a positive correlation with the professional development of employees. These findings support the claim that employees nowadays seek more than just agreeable wages and employment benefits and good retirement plans from their place of work; they are looking for a sense of meaning, interest, and variety (Sosik et al., 1999). It seems that opportunities to interact with experts in various areas and with stakeholders in the external environment create opportunity for professional and personal enrichment, which in turn lead to professional development (Tomozumi Nakamura and Yorks, 2011). Nevertheless, it is important to note that the results showed no correlation between outward learning and intention to leave. This finding is surprising and warrants an examination of factors that might influence this lack of relationship. For instance, it is possible that for employees with certain personality traits (e.g., neurosis), the need to interact with external stakeholders might arouse stress and anxiety, leading to a decrease in satisfaction and willingness to remain in the organisation (Drach-Zahavy and Somech, 2010). Another explanation suggests that for some employees, outward learning, which leads to professional development, might lead to new aspirations. In other words, exposure to the extra-organisational reality might open new professional horizons that the employees may be interested in exploring.

2.8 *Limitations, future research, and practical implications*

The present research, like all research, has several limitations. The present research methodology raised some causality issues. It is a correlational study, and so its findings do not indicate the directions of the relations with any certainty. It is possible that for some of the relations founds, the direction of relationship could be the opposite, or it could indicate a mutual relationship between the variables. A longitudinal study could, therefore, validate the relationship directions. Another limitation refers to the organisation type. The present study focused only on one kind of organisation, and we recommend that future research validates our findings for a wider variety of organisations. Furthermore, the present model focused on the differential implications of two categories of organisational learning on organisational outcomes. It is important that future research will examine the impact of the interaction of the two learning categories (inward and outward) on organisational outcomes; as well as will identify the antecedents that affect each of the two learning categories.

Finally, our research results may also make a practical contribution. More than ever, organisations today are concerned with the question of how to construct learning mechanisms that will foster effectiveness. The present findings may constitute a basis for the development of mechanisms and structured processes for establishing organisational learning, as a systematic and comprehensive tool (Odor, 2018). As mentioned, inward organisational learning includes the building of an organisational memory, dissemination and distribution of knowledge by sharing and conducting dialogs, assessment, and implementation. To develop outward organisational learning, structured mechanisms for gathering information from external stakeholders, such as clients and competitors, must be developed, as well as structured mechanisms for dialog with competitors, other organisations, and the community. This perception highlights the approach according to which organisational learning is a combination of internal and external processes that complement each other and thus promote organisational effectiveness (Louise Mors et al., 2018).

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Appendix 1

Organisational learning: questionnaire items

a   Outward organisational learning

    1   External knowledge acquisition

- In our organisation, the employees participate in extra-organisational seminars and study days.
- In our organisation, the employees read professional theoretical material.
- In our organisation, we commonly exchange professional knowledge with other organisations.
- In our organisation, employees are provided with professional knowledge on other areas in the organisation or in other similar organisations.
- In our organisation, there is an ordered and consistent process for gathering professional knowledge.

    2   Information gathering and learning via contact with other organisations

- In our organisation, we look for ideas by checking out what other organisations are doing.
- In our organisation, we gather information from other organisations.
- In our organisation we coordinate activities with external groups.
- In our organisation, we resolve design problems with external groups.
- In our organisation, we find out what competing firms or groups are doing on similar projects.
- In our organisation, we negotiate problem solving and procedures with other organisations.
- Organisation members learn and acquire information, resources, skills, etc. for the organisation from other organisations.
- In our organisation, we 'talk up' the team to outsiders.
- In our organisation, we obtain the support of other organisations.
- Our organisation examines and critics its work together with other organisations.
- In our organisation, we acquire resources (e.g. money, new members, equipment) for the team.

3   Learning through communication with clients

- In our organisation, we consult major customer early in the design efforts for the new product.
- In our organisation, we partner with major customer for developing new product.
- In our organisation, major customer is an integral part of the design effort for the new product.
- In our organisation, we have continuous improvement programs that include our major customer.
- In our organisation, we gather data regarding customer satisfaction on an ongoing basis.

4   Gathering information and interfacing with external stakeholders.

- In our organisation, we meet with our stakeholders often to find out what they will need in the future.
- In our organisation, we are fast to detect changes in our stakeholders' preferences.
- In our organisation, we often review the likely effect of changes in the business environment on our stakeholders.
- In our organisation, we have inter-unit meetings often to discuss stakeholder trends and developments.
- In our organisation, when one unit finds out something important about our stakeholders, it is fast to alert other relevant units.
- For one reason or another we never ignore changes in our stakeholders' needs.
- Our organisation has a great deal of knowledge about our stakeholders.
- Our organisation has a great deal of familiarity with our stakeholders.
- Our organisation has a great deal of experience with our stakeholders.

5   Communications with the community

- My organisation works together with the external community to meet its needs.
- Exchanging information with other organisations is extremely important.
- Putting a lot of effort into becoming recognisable to as many potential customers as possible is an important practice.
- Our organisation is always willing to get involve in joint tasks or projects with other organisation if it improves our performance.
- Our top management has many businesses connections with other top management of other organisations.
- Out top management has many business connections with top management in industries other than credit.

b   Inward learning

    1   Organisational memory

- We make strong efforts to preserve information.
- We have an effective mechanism to store information.
- Our company stores detailed information for guiding operations.
- When employees need specific information, they know where to find it.
- Company files and databases are available to provide needed information to do our work.

    2   Discourse and dialog within the organisation

- In our organisation, employees from different areas tend to share their experience and knowledge with others.
- Our employees from different areas share experiences and/or knowledge.
- Our company has processes for exchanging knowledge between individuals.
- Our employees, as individuals, are prepared to rethink decisions when presented with new and relevant information.
- Our employees seek to deeply understand issues and concepts.
- Our employees do not hesitate to question things they do not understand.
- Our employees, as individuals, are interested in knowing not only what to do but also why we do things.
- We discuss issues until we arrive at a shared understanding.
- Top management integrates information from different organisational areas.
- We seek to achieve consensus by dialog and reasoning.
- Our company stresses sharing and trying to understand management vision through communication with colleagues.
- After error and failure analysis, we change the work order.
- In our organisation, there is an ordered and consistent process of assimilating the accumulated knowledge into the work processes.
- Our employees meet regularly to resolve issues and concerns.

    3   Assessment and implementation.

- In our organisation, we hold meetings to analyse and improve the work process.
- In our organisation, we compare the results of every task or project executed with past performance.
- In our organisation, there is an ordered and consistent conclusion drawing process.