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The Influence of the Work Environment on Entrepreneurial Learning of Small-business Owners

Final draft

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Abstract

Despite the widely acknowledged importance of entrepreneurial learning, research specifically addressing the question of *what fosters* this process is still in poor supply. In the present study entrepreneurial learning was conceptualised as a distinct type of workplace learning, emphasising the role of the work environment in performing entrepreneurial tasks by owner/managers. A qualitative study was conducted among a specific sample of 25 small-business owners in an innovative, successful sector in the Netherlands: greenhouse horticulture. In-depth semi-structured interviews were held focussing on critical incidents as they arose around a pursued business opportunity. Four factors were identified as being crucial in the entrepreneurial learning process, namely, support and guidance, external interaction, internal communication and task characteristics. Furthermore, the results show that different types of business opportunities present different dynamics for entrepreneurial learning. Finally, the results suggest a two-layered interaction between learner and work environment. Entrepreneurial learning is influenced by the work environment, which is in turn shaped/defined by the entrepreneur.

Keywords: learning, entrepreneurship, small business, work environment

Introduction

Small and medium-sized enterprises are often referred to as the engines for economic development because of their diversity and flexibility, and the fact that, together, they account for a large portion of gross national product and employment: 92% of all European enterprises have less than 10 employees (Observatory of European SMEs, 2003). Due to its size, a small firm's decision making, innovation, and business strategies are, to a large extent, dependent on the entrepreneurial behaviour of the owner/manager¹ (Man *et al.*, 2002; Sadler-Smith *et al.*, 2003). Learning and the possibility to learn are at the heart of entrepreneurial activity: learning influences the opportunity recognition processes (Hinrichs *et al.*, 2004; Baron and Ensley, 2006) and the development of the skills, systems and cultures necessary to sustain innovative practices (Spicer and Sadler-Smith, 2006). Contemporary studies therefore suggest that studying the nature and conditions of learning in small businesses is essential to understanding how small firms innovate, survive and grow in dynamic environments that are characterised by changing consumer patterns, globalisation, sustainability, and so on (Macpherson and Holt, 2007). The importance of entrepreneurial learning is clearly reflected in the increase in studies on the topic (Cope, 2005; Rae, 2006). However, despite this importance, research specifically addressing the question of *what fosters* entrepreneurial learning in small businesses, is still in poor supply (Cope, 2003). Only some preliminary work in this area has been reported in the literature, mostly from a start-up point of view (Van Gelderen *et al.*, 2005; Fenwick, 2003).

In this article we argue that entrepreneurial learning refers to a distinct class of workplace learning derived from the owner/manager performing entrepreneurial tasks and activities (i.e. the entrepreneurial role). Working and learning in this role are not only embedded in existing organisational processes. Instead, entrepreneurial learning means recognising and acting on opportunities (Rae, 2006), which implies that learning shapes direction, sets the tone of the overall business (Young and Sexton, 2003) and creates legitimacy (Aldrich and Fiol, 1994). It is characterised by direct responsibility and therefore risk, personal as well as judicial liability. Furthermore, it has a strong external orientation (Van Gelderen *et al.*, 2005), it is independent of human resource departments, hierarchal structures and is not influenced by superiors in the organisation (Young and Sexton, 2003).

To contribute to current understanding of entrepreneurial learning we looked particularly at the role the *work environment* plays in stimulating it. This focus originates from the notion of 'the invitational character' of work environments (in the broadest sense) in terms of fostering learning (Gibson, 1979; Billett, 2002). The research approach is rooted in the literature on workplace learning, which studies the learning embedded in the everyday work practices of professionals, emphasising the work environment as an important learning site (Fenwick, 2006). The underlying assumption is that the learning potential of a specific work environment can be recognised, guided, and better exploited through analysing existing activities, processes and characteristics that currently shape the work environment. The research took place in small businesses in greenhouse horticulture, an innovative, growth orientated and successful sector in the Netherlands. Although literature on workplace learning has a strong qualitative and quantitative research tradition in a wide range of sectors, its focus has been primarily on learning in non-entrepreneurial work settings like police stations, schools and factories (e.g. Doornbos, 2006; Eraut *et al.*, 1998; Raemdonck, 2006).

This paper starts by unfurling the concept of entrepreneurial learning and continues to discuss the work environment factors that influence entrepreneurial learning as they are central to this study. Subsequently, we describe the results of our study and the implications for future research and practice.

Entrepreneurial learning

The 'entrepreneurial' part in entrepreneurial learning suggests learning that is interrelated with entrepreneurship. One of the first challenges in discussing this concept is the absence of a solid definition of entrepreneurship. Many authors argue that the notion of identifying and pursuing opportunities represents the dominant view of entrepreneurship. We follow Shane's definition (2003) that entrepreneurship entails activities that involve the identification and development of '*new goods, services, ways of organising, market processes and raw materials through organising efforts that previously had not existed*' (Shane, 2003, p.4). We define therefore entrepreneurial learning as learning connected to these specific activities (Corbett, 2005; Rae, 2006). It is learning by venturing². Since small businesses depend mainly on the owner/manager for their management, this implies that learning is connected with performing tasks and activities in the entrepreneur's role (Chandler and Jansen, 1992): particularly learning before, during and after the process of identifying and pursuing business opportunities. In the present body of entrepreneurship literature, the issue of entrepreneurial learning has been theorised predominantly in models drawn from (reflective) experiential learning (building further on the work of Kolb, 1984); emphasising the importance of a reflective individual (Clarke *et al.*, 2006), the significance of critical incidents (Cope and Watts, 2000), and the importance of individual action and learning strategies (Corbett, 2005; Mulder *et al.*, 2007). This makes sense since entrepreneurial learning takes place in everyday experiences, in the contexts and activities of work. Although we do agree that it is important to study individual characteristics in researching entrepreneurial learning, entrepreneurial learning is also influenced by the strong relationship between the learner and the work environment (e.g. the business, Cope, 2003). What seems to be key here is that learning is not only embedded in existing organisational processes but rather entails shaping (or reshaping) the work environment, gaining legitimacy, acquiring and exploiting resources (Aldrich and Fiol, 1994). In the literature on the learning in organisations the type of learning that has a larger 'magnitude' is often referred to as 'developmental' (Ellström, 2001), 'strategic' (Kuwada, 1998), or 'innovative' learning (Fenwick, 2003), in contrast to more adaptive forms of learning. Developmental or innovative learning results in changes which go beyond the adaptation of processes or practices and will typically challenge existing practices, leading to a re-design of existing routines, values, principles and starting points. What is more, entrepreneurial learning takes place without the direct influence of human resource driven objectives or superiors (Young and Sexton, 2003) and involves relatively high levels of risk and uncertainty (Gibb, 2002); characteristics which are, in general, not exemplary for the learning of managers or employees in large organisations (Fenwick, 2003).

Therefore, to further conceptualise, understand and possibly enrich the concept of entrepreneurial learning as it is brought into play in entrepreneurship and small business research, it is important to consider the broader work environment in which the learning takes place, for instance, the importance of interacting with competitors, customers, clients, colleagues and employees (Rae, 2006). As Fenwick clearly (2006) notes: contemporary research on work-related learning should also carefully consider aspects such as divisions of labour, power relations, environmental affordances, cultural disciplines and language. Investigating learning solely as an individual action of knowledge construction neglects the multiple dimensions of learning that are of interest and must be considered in order to fully understand and foster learning in workplaces (Rae, 2006; Fenwick, 2006; Illris, 2007; MacPherson and Holt, 2007).

Environmental factors influencing entrepreneurial learning

The described nature of entrepreneurial learning emphasises the importance of the work environment as a learning space, simply because it is the most important environment these learners engage in and, moreover, typically the result of earlier decisions taken by the entrepreneur. It is reported frequently that education and training are rarely 'engaged in' by small-business owners (Ehrich and Billett, 2004; Lans *et al.*, 2004).

Many different terms are used in the literature to refer to the work context as an important learning environment such as workplace learning, work-based learning, work-related learning and on-the-job learning. When talking about entrepreneurial learning, we prefer to use the term learning in a certain work environment, instead of terms like learning in 'workplaces' and 'on-the-job', because these might evoke a rather narrow, static, view of the entrepreneur's workplace (e.g. only his physical workplace, the firm). With the term work environment we allude to the complete working and learning arena of the small-business owner, including, for instance, the supply chains and (peer) networks the owner engages in.

Work environments differ in the way they invite workers to learn. For instance, in environments in which there is guidance and support, the scope of what will be learnt is larger (Billett, 2003). Research on work environment factors that foster learning can roughly be divided in terms of the nature/organisation of the tasks, and cultural and social relations that characterise the work environment (Doornbos, 2006). Concrete examples of task-related factors that are frequently mentioned in the literature on managerial learning are, for instance, task novelty, freedom to innovate, responsibility and complexity (McCauley *et al.*, 1994). The relation between the complexity of a task or job and the learning potential of the job has been studied quite extensively within the domain of workplace learning. There is, for instance, empirical evidence that task *variation*, task *autonomy*, work *pace* and growth *potential* are factors that influence learning (either measured in output or process) (Doornbos, 2006; Raemdonck, 2006). Furthermore, literature suggests that collegial availability (Doornbos, 2006), guided learning (Billett, 2003), possibilities for feedback, evaluation and reflection (Ellström, 2001), engagement with colleagues (Hinrichs *et al.*, 2004) and availability of a mentor (Van Gelderen *et al.*, 2005) provide direct possibilities in the work environment for learning. Kilpatrick and Johns (2003), for instance, found that the success of small-farm holders in the development towards new markets depended, among other factors, on the level of interaction with other team members on the farm. Although most of the studies focus on collegial support within the organisation, the (learning) context of the small-business owner also includes the external environment of the small business (Van Gelderen *et al.*, 2005). Contacts with peers, professional bodies (e.g., unions, suppliers, buyers) and other stakeholders, as well as contacts with the neighbourhood, relatives and friends, all provide opportunities for learning (Lans *et al.*, 2004; Skule, 2004). Skule (2004) also found that more exposure to demands from customers, buyer groups or supply-chain partners resulted in more learning. These types of interactions tend to be much more informal, more ad hoc and more implicit with respect to learning than the interactions in the guided-learning context. From a network-theory perspective these interactions can be labelled as 'weak' links, which are known to be vital to the creation of new business opportunities (Elfring and Hulsink, 2003). Also from other contexts there is empirical evidence that interaction with weak links fosters innovative learning. Hinrichs *et al.* (2004) found that work environments of small-farm holders that invited the owner to engage with end users (i.e. consumers) resulted in more innovative practices than work environments that only invited the owner to engage with colleagues.

Finally, organisational-learning theory suggests that organisation structures might influence entrepreneurial learning. Although Spicer and Sadler-Smith (2006) did not find direct support for this hypothesis in small businesses, research executed in larger

organisations suggests that a highly developed communication structure within the organisation promotes a favourable learning climate (Kessels, 2001). The work of Raemsdonck (2006) on the self-directed learning of lower-educated employees indicates that participation policy significantly enhances the self-directedness of the learners. In other words, a company policy that is characterised by high participation levels of workers (e.g. room for suggestions, asking each others' opinion, possibility to address problems directly) and decentralised management has a positive influence on the learning processes of individuals.

To sum up, exploring entrepreneurial learning in small businesses is mainly focused on the characteristics and learning activities of the individual (entrepreneur) learner. Although we do not challenge the importance of researching learning from this perspective, we argue in line with Rae (2006) and MacPherson and Holt (2007) that to gain better understanding of entrepreneurial learning in a small business it is important to consider the broader work environment in which the learning takes place. This requires a focus on tasks, cultural and social relations as well as possible (small business) organisational structures (as summarised in Table 1) that invite learning before, during and after the process of identifying and pursuing business opportunities.

Therefore, the following overarching research question leads this paper:

Which factors in the work environment of small businesses, as perceived by the owner/managers, contribute specifically to entrepreneurial learning?

Table 1 Examples of work environment factors mentioned by different authors that influence learning on the job

Nature of tasks		Cultural and social relations	
Transitions	McCauley <i>et al.</i> (1994)	Collegial availability	Doornbos (2006)/ Kilpatrick and Johns (2003)
Responsibility	McCauley <i>et al.</i> (1994)	Guidance	Billett (2003)
Authority	McCauley <i>et al.</i> (1994)	Engagement with colleagues	Hinrichs <i>et al.</i> (2004)
Variation	Doornbos (2006)	Engagement with customers	Hinrichs <i>et al.</i> (2004)
Autonomy	Doornbos (2006)	Demands from customers, group or chain partners	Skule (2004)
Work pace	Raemsdonck (2006)		
Growth potential	Raemsdonck (2006)		
Obstacles	McCauley <i>et al.</i> (1994)		

Methodology

The agri-food context

Since the focus of our study was on a specific sector, greenhouse horticulture, it is important to consider this specific work environment. Seven out of ten flowers that cross national borders world-wide originate from Dutch greenhouse horticulture (Van Kooten, 2005). The sector is, at present, dominated by fast growth, strong competition, innovations in logistics, energy-saving technology (e.g. 'underground aquifer'), production and harvesting techniques (e.g. 'walking plant systems') and globalisation (e.g. new companies in Spain, Ethiopia, Kenya and Uganda). The greenhouse horticulture sector is an international player that does not receive any support from the European Union's Common Agricultural Policy. Moreover, the 'flowers and food' sector was selected by the Dutch government as a key innovation area for the near future, and provides, therefore, a unique venue for researching entrepreneurial learning in small business. The advantage of researching a specific well-defined sector is that it minimises the effects of external factors beyond our scope, like economic, institutional, demographic and cultural factors on national level (Wennekers, 2006).

Participants

Dutch horticulture in heated glasshouses consists of two major groups: vegetables under glass and flower production, which together accounted for approximately 5600 businesses in 2006. Two-thirds of these enterprises are involved in flower production, and one third in vegetable production. The most active small businesses³ were recruited for this study, namely those run and controlled by the small-business owners who participated in the national committees of the Agriculture and Horticulture Organisations Netherlands (AHON) (LTO Groeiservice). There are about twenty of these committees (such as for cucumbers, peppers, tomatoes, pot plants, cut flowers) comprising about 200 members in total. These members are committed to their sector and represent their sector or subsector's interests in the national context. In addition, they are typically involved in policy-making, internationally oriented, and well informed about EU policy. In this study 25 of these small-business owners were interviewed. Consistent with the overall distribution, 17 flower companies (2/3) and 8 vegetable companies (1/3) were selected.

Instruments and procedures

In this study we used the same approach to investigate entrepreneurial learning as was used by Mulder *et al.*, (2007). It is an approach that has its roots in the critical incidents technique (CIT), originally set forward by Flanagan (1954), and is used in a wide range of settings. It appears to have particular relevance in the field of workplace learning (e.g. Billett, 2000), but has also been applied in the field of entrepreneurship (Cope and Watts, 2000). In their research on entrepreneurial learning, Cope and Watts (2000) highlighted the importance of critical incidents in high-level learning related to entrepreneurial tasks and problems in the workplace. Billett (2000) emphasised the instrumental value of using critical incident interviews to get rich, grounded responses related to actual events and situations.

The interviews conducted for this study focussed on the central aspects of entrepreneurship, i.e., the identification and pursuit of business opportunities. The starting point of the interviews was a business opportunity pursued by the small-business owners. Consequently, the owners were asked specifically about critical incidents related to this pursued business opportunity within their businesses.

The following questioning structure was adopted. Interviewees had to recall a business opportunity they had recently pursued. To focus on critical incidents in the process of the development of these business opportunities, the following questions were addressed:

1. Where did the idea for this business opportunity come from?
2. What went well and what went wrong in pursuing this business opportunity?
3. Looking back, who or what could have provided the necessary assistance to make the pursuit of this opportunity more successful?
4. What were the consequences of this business opportunity for the enterprise?

Furthermore we asked some basic background questions about the interviewees' education, age, prior work experience, experience outside their own businesses, and the size of their staff, since it is known that these variables can influence entrepreneurial behaviour in general (Shane, 2003).

Analysis

The interview transcriptions were analysed for themes using QSR-N6 software. The first step was clustering the business opportunities based on the early work of Schumpeter (Shane, 2003; Schumpeter, 1934). The 25 interviews were assigned to 4 'types' of

opportunities: new products, new methods of production, new (geographical) markets, and new ways of organising business processes.

The second step was to analyse the 25 interviews with respect to the occurrence of a broad range of work environment factors described in the literature (Table 1). The analysis of the work environment factors resulted in 8 initial clusters and 71 underlying items (i.e. specific features). The next step was to bring this set back to manageable units again. This was done on the basis of two criteria:

1. Factors that were incidental were left out of the final analysis. These included bankruptcy, clients that leave the business and price developments (e.g. gas prices). Although these factors may stimulate learning, they are difficult to influence.
2. Factors that were only mentioned a few times in very specific cases were left out, or aggregated at a higher level. An example was ‘value for learning at work’, which in the first instance appeared to be a separate category, but could be added to the category task characteristics (appreciation of the entrepreneurial task).

The final analysis resulted in 4 factors, with 35 underlying features. The results are described below.

Results

The average age of the owner/managers who were interviewed was 40 years with 17 years of work experience as owner/manager. They employed on average 7 workers (between 0 and 26), and almost two-thirds (64%) had work experience outside the sector of their current businesses. Among the business opportunities these owner/managers had recently pursued, ‘new methods of production’ was the most common (mentioned in 13 of 25 interviews). These refer predominantly to the development of new (or second) businesses at new locations equipped with all the latest technologies, however usually focussed on the same products. All of these new businesses were established less than five years before the interviews. The category ‘new markets’ represents a group of opportunities concerning the development of new markets and was a topic of discussion in five cases. Examples included the switch to the production of organic flowers, the development of new supply chain concepts to deliver to niche markets, or the formation of regional clusters to attract other buyers such as larger retailers, or garden centres. ‘New products’ refers to the development of new products such as a more exclusive, attractive or tasteful variety, or just a completely new product, which was the topic of the interview in four cases. Finally, three cases were about ‘new ways of organising’ business processes, which comprise opportunities related to the development of new routines, usually within the existing businesses. This can encompass new ways of organising labour, logistics (e.g. track and tracing systems) or transportation.

Work environment factors

The content analysis of the data eventually resulted in four distinct work environment factors. The most frequently mentioned factor was *support and guidance*. A sparring partner is crucial for entrepreneurial learning. In the interviews, internal as well as external support were discerned. Where internal support is provided by family, co-workers or business partners, external support comes from peers, coaches and so-called ‘linking pins’. Table 2 provides an overview of the different types of support and the specific features of each mentioned by the small-business owners.

Table 2 Support and guidance (47%)*

Component	Features
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Internal Support	- Critical co-worker(s), who think on the 'same level'
	- Family that thinks together
	- Business/sparring partner with financial interest in the company
External Support	- Personal coach
	- Distinguished specialist
	- (Temporary) study groups outside one's own sub-sector
	- More experienced colleagues (role models)
	- Competitors who are used as a reference point on which to base benchmarks
	- Linking pins that bridge structural holes (e.g. salesmen, students)

* percentage of the total number of elicited factors as recalled by the small-business owners

The second most frequently noted factor for learning appeared to be the extent of *external interaction*. This differs from external guidance and support in the sense that the learning objective of these interactions is less direct. Especially during the preliminary stages of business opportunity development, the small-business owners learn a lot from interaction with all sorts of stakeholders in their business environments. Table 3 presents, in more detail, the specific interactions that were said to contribute to entrepreneurial learning. Obviously, external interaction with different stakeholders has different characteristics and these features do not necessarily have a positive influence on learning. For instance, conflicts with traders or buyers can influence learning positively (e.g. rethinking existing practices) and negatively (e.g. creating a non-productive environment for learning because of power and trust issues). Power, trust, reputation and reliability seem to be key here. Take, for instance, the case of organic flower production in heated greenhouses, which was so new that the small-business owner had to interact continuously with extremely sceptical customers, creditors, suppliers and other external parties, which was very problematic in his learning process.

Table 3 External interaction (24%)*

Component	Features
Interaction with traders/buyers	- Direct, personal contacts - Involvement - Power - Conflicts - Room to manoeuvre - Creation of win-win learning situations - Openness (e.g. client behind the client) - Diversity
Interaction with consumers	- Access to 'overview' sources (people, media)
Interaction with suppliers	- Trust - Long-term relationships, maintaining contacts - Collective activities (e.g. doing research) - Room to manoeuvre
Interaction with experts	- Access to the right sources (e.g. scientists)

* percentage of the total number of elicited factors as recalled by the small-business owners

The third prominent factor in our data was *internal communication*. This concerns the communication structures within the company that foster entrepreneurial learning. In short, the workplace should invite employer and employees to interact with each other. The power of communication as a way to stimulate learning in the process of business opportunity development is especially poignant in businesses that have more permanent employees and are predominantly at the stage of opportunity exploitation and evaluation. In some cases it appeared that the small-business owner was unable to close the 'gap' between his ideas and the work floor, which led to misunderstandings, high turnover of staff and production

problems. In one particular case the owner started a new second company with the same product, but with the aim of supplying to a new market, the British retail sector. Although the hardware was state-of-the-art, his staff was not prepared to produce for this particular market, which led to a temporary decrease in the quality of his product and its turnover. Internal communication can be formalised and/or informal. Both are important but are not always present. Formal internal communication, such as regular team meetings, can stimulate internal learning, and lead to better involvement of others in the work environment and consequently in the learning process of the owner. Informal communication moments, such as possibilities to give feedback to the business owner, are also crucial. What was mentioned frequently in reference to this specific factor was the fact that many of these businesses employ foreign workers (e.g. from Poland or Turkey). Employers can either treat them as ‘hired hands’ or invest in them and benefit from them as a learning source (e.g. for working out ideas for a new business in their country of origin). Table 4 provides an overview of the underlying components and characteristics of internal communication.

Table 4 Internal communication (18%)*

Component	Features
Formal internal communication	- Regular team meetings
	- Clear, direct communication lines
	- Transparency (internal/external)
Informal internal communication	- Possibilities to ask/give feedback
	- Attention to cultural differences
	- Trust (see also external interaction)

* percentage of the total number of elicited factors as recalled by the small-business owners

The last factor elicited was labelled *task characteristics*. Entrepreneurial learning requires ‘space’ for learning and development in the entrepreneurial role, rather than in the craftsman and/or managerial role. Since these businesses are small, the owner really has to create his/her own space to identify the business opportunity and exploit it in his/her organisation. Room to manoeuvre can be gained both formally (by transferring/delegating tasks to others, or by providing ‘learning money’) and informally (by creating a culture in which conducting entrepreneurial tasks is also considered as ‘working’). See Table 5 for an overview.

Table 5 Task characteristics (11%)*

Component	Features
Formal	- Right people in the right place
	- Transfer of tasks (flexibility in tasks)
	- Possibility to specialise in tasks
Informal	- Available ‘learning money’
	- Appreciation for ‘entrepreneurial tasks’
	- Available reflection moments

* percentage of the total number of elicited factors as recalled by the small-business owners

Table 6 displays the distribution of the identified work environmental factors over the types of business opportunities. What becomes clear from Table 6 is that the most frequently named work environment factor in all the types of opportunities was ‘support and guidance’. Furthermore, the relative perceived importance of external interaction as well as internal communication in particular varies between the different types of pursued business opportunities.

Table 6 Distribution of work environment factors by types of business opportunities (n=25)*

	Support and guidance	External interaction	Internal communication	Task characteristics	Total
New methods of production	47% (58)	19% (24)	20% (25)	14% (17)	100%
New (geographical) markets	48% (19)	18% (7)	23% (9)	13% (5)	100%
New ways of organising	50% (9)	33% (6)	11% (2)	6% (1)	100%
New Products	46% (13)	46% (13)	4% (1)	4% (1)	100%
Total	47% (99)	24% (50)	18% (37)	11% (24)	100%

* Between brackets: absolute number of times the factor was recalled by the small-business owners

Furthermore, the results show many examples of the interaction between the different types of work environment factors and the small-business owners. For instance, in one case, the business had many different products, which resulted in many external interactions with different suppliers, different buyers and end-users. In terms of external interaction this work environment scored high. However, the owner used these external contacts only when there were problems, for instance in delivery or quality. Although the work environment provided many opportunities for getting external feedback as input for his entrepreneurial learning, the owner did not exploit its possibilities simply because he was not aware of their potential. He did not benefit from this external network in terms of reflection; he did not ask what his external contacts thought of his business, whether they saw new developments within the markets, etc. A second example illustrates that not utilising favourable work environment factors can also be a conscious choice. In one work environment the owner deliberately, in his internal communication, avoided topics that had to do with the new strategy of the business. He did not ask for feedback on his ideas of expanding the business (he considered his staff unqualified to discuss these issues), thereby increasing the distance between his decision making and the processes taking place on the work floor. Eventually external parties assigned him a mentor (guidance and support) to help him close this gap and learn not only to recognise this business opportunity but also to exploit it. A third example illustrates the power of the individual learner to shape and design the learning potential of his work environment. The small-business owner deliberately designed a focus group, consisting of end-users of his product, to bridge the gap between his own business and the end-users of his product. This focus group, consisting of housewives, met a few times a year at his business to discuss the colours in the new household trends. In this way, the owner knew exactly where he should search for added value for his product the following year. Since he did not get this type of feedback from his direct buyers (traders), he bypassed them and initiated external interaction with end-users himself.

Discussion

In this study we examined learning characteristics of the work environment that foster the core of entrepreneurial learning: recognising and acting on business opportunities. Concerning our central research question, four factors with underlying components and features have been identified as being crucial to the entrepreneurial learning process, namely support and guidance, external interaction, internal communication and task characteristics. Although these four factors are also reported in management learning literature in large organisations (e.g. McCauley *et al.*, 1994), they do show some features which might help the further theorising of entrepreneurial learning. Firstly, the role external interaction plays in learning is complex, due to the extreme heterogeneity of external environments (e.g. different stakeholders) and the uncertainty involved. External interaction seems to function as a double-edged sword. On the one hand, these external interactions provide new ideas either directly from customers or via buyers or traders. On the other, it is very difficult to engage these contacts further because of issues of power, trust and reliability. Why should these contacts 'trust' the small-business owner, and, conversely, how can a small-business

owner be sure that a new idea proposed by an external contact will work out in a way that is beneficial for both parties?

Secondly, the results suggest that some internal communication structures are necessary to foster entrepreneurial learning. Contrary to the rigidity and formality of larger organisations, small organisations are characterised by informality and horizontal structures. Due to these characteristics, communication lines are short, and hence flexibility should be high. However, small scale, informality and proximity do not always guarantee knowledge sharing and learning. The small-business owners' inherent close involvement in day-to-day operations, coupled with the fact that the staff of a small business is typically lower educated, engenders a serious risk that the distance between owner and staff may become too large. Examples of this, with serious consequences to the performance of the business, were present in our sample. Therefore, a lack of pre-defined moments for discussion with staff on new ideas, long-term objectives, and future strategies may impede entrepreneurial learning processes as well as hindering the step to organisational learning.

Finally, entrepreneurial learning requires, to a certain extent, that the owner be freed of other tasks and responsibilities, in order to guarantee time and appreciation for searching and engaging in new networks. A major challenge in the context of small-business owners is that, contrary to managers, tasks are completely person dependent. Rather than complying with a pre-defined task description or profile, small-business owners design, for the most part, their own tasks and responsibilities. The question, therefore, is not so much what the actual challenges of the tasks are, but more what the actual possibilities are for small-business owners to orientate themselves towards how to deal with the entrepreneurial role. Two major issues are at stake here: first of all the working culture, in terms of the interaction between the owner and his/her employees; and secondly, time and money, or available 'slack' to experiment and learn. It has been suggested from studies on innovative and environmental behaviour of small businesses that discretionary slack allows firms to experiment and engage in reflection and learning (Lepoutre and Heene, 2006).

Furthermore, the breakdown of work environment factors by business opportunities also seems to suggest that the four different types of business opportunities present different dynamics for learning. The differences between the four opportunity development contexts described above lie primarily in the level of unfamiliarity with the new situation. The 'new methods of production' context represents predominantly the development of a new (or second) business, usually with the same product. In terms of origin and degree of development, market needs are defined and the general specification for the product is also known (Ardichvili *et al.*, 2003). Furthermore, networks already provide strong relationships to support experimentation and learning, and the legitimacy to produce a certain product. By contrast, in pursuing business opportunities for which problems and solutions are both unknown, new knowledge has to be created, new resources have to be established and legitimacy has to be gained. Since we are dealing here with established family businesses, often inherited by sons from their fathers, the question is which of these types of business opportunities will provide the most long-lasting learning effect on the business in terms of future growth and survival.

Accordingly, the examples illustrate a two-layered interaction effect between the business owner and the work environment. Entrepreneurial learning is influenced by the work environment the learner engages in. At the same time, the work environment is (partly) (re)shaped by the entrepreneur and, therefore, indirectly affects entrepreneurial learning. This means that the richness of the work environment is not a static reality but is actively influenced by the business owner. These observations seem to fit well with the theoretical concept of 'affordances' as invented by Gibson (1979). According to Gibson (1979) an affordance is no more or less than what the environment provides, contributes or fosters (for

the good or the ill) to the kind of interaction that occurs (Gibson, 1979; Greeno, 1994). However, affordances are always related to something. Greeno (1994) suggested using the term ability to refer to what the agent constructs in this interaction. In this specific context ability refers mainly to the small-business owner's interest in and willingness to engage with staff, clients, buyers, consumers and experts to generate ideas and evaluate practices. The examples not only stress the importance of 'perception' of affordances (Norman, 1999), but also indicate the influence of conventions (i.e. rule or principle), which prohibit certain activities and encourage others. A concrete example was the work environment in which the owner used external interaction only when there were problems, for instance in delivery or quality. The small-business owner did not recognise the affordance, since it was associated with a different action (i.e. a cultural convention: 'you do not use these contact moments for feedback and learning').

This study also has limitations. The strong focus on a relatively homogeneous sector, greenhouse horticulture, raises the question of whether the data can be generalised to reflect other sectors. Although we have the impression that the collected evidence is not unique, the fast developments and continuous pressure on performance in greenhouse horticulture may provide extra incentives for business owners to develop themselves or discontinue their businesses – incentives which might not be so eminently present in other sectors. Moreover, the question remains, does a richer workplace environment in terms of the four identified factors really lead, eventually, to more business success, for instance in terms of firm growth and survival? Is a maximum, minimum or an optimal mix of factors required? These considerations are interesting areas for additional further research.

Conclusion and implications

Despite the widely acknowledged importance of entrepreneurial learning, empirical work that specifically addresses factors of work environments influencing the process of entrepreneurial learning of small-business owners is limited. We tried to contribute to theory on learning in small firms by introducing a work environment perspective into the emerging field of entrepreneurial learning.

In our opinion, the research has implications for agencies that are engaged in entrepreneurship education. The entrepreneur is not only the creator of a business, but also the creator of his or her learning environment. Besides a strong focus on business plans, managerial skills, creativity, etc., entrepreneurship education should encourage students to add a learning lens to their work practices, rather than just a technical or managerial lens. Furthermore, the observation in this study that much of the entrepreneurial learning takes place in informal, on-the-job, settings, should be an impulse for formal educational institutes to design new learning environments with special attention given to entrepreneurial learning. These learning environments should include interaction and learning in multi-stakeholder learning settings, which are quite well developed in other educational settings, such as in education for sustainability.

Notes

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¹ When we use the word 'owner' in the rest of the text, we refer to the owner/manager.

² There is no English verb for ‘entrepreneurship’ to specify learning by doing in a specific context, unlike in French, ‘apprendre en entreprenant’, or Dutch ‘leren door (te) ondernemen’).

³ Small businesses comprise in this research what the EU defines as micro (0-9) and small-sized enterprises (10-49).

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