An exploratory study of factors influencing the participation in training and development of engineers in small businesses

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ABSTRACT: The provision of workforce training and development (T&D) has the potential to provide benefits to both employers and employees. However, employees in small businesses receive less access to T&D than employees in large businesses. Prior research into reasons for the relatively low levels of employee participation in formal T&D in small businesses has typically involved surveys of owner-manager opinions regarding ‘barriers’ to T&D. This study explored factors influencing employee participation in T&D from the perspective of employees. Data were collected through semi-structured interviews with 15 employees in small engineering businesses. Consistent with the main aim of exploratory research, the study produced (four) generalisations that are grounded in the interview data. These generalisations help establish the groundwork for future studies.

Key words: Training and development; Small business; Employees; Proactive behaviour; Australia.
As Tharenou, Saks and Moore (2007) note, “the knowledge and skills of an organization’s workforce have become increasingly important to its performance, competitiveness, and innovation” (p.251). However, studies in several countries have found that small businesses are considerably less likely to provide formal training and development (T&D) for their employees than large businesses (Bishop & Ritzen, 1991; Johnson, 2002; Kitching & Blackburn, 2002; Kotev & Folker, 2007; Storey, 2004). This discrepancy is attributable to several factors including the greater barriers to formal training and development faced by small businesses compared to their larger counterparts (Devins, Johnson & Sutherland, 2004; Kitching & Blackburn, 2002; Kotev & Folker, 2007). While several barriers are identified in the literature (e.g., Johnson, 2002; Storey & Greene, 2010), commonly mentioned barriers include: (1) the actual cost of training and development; (2) the opportunity cost to small businesses of training and development; (3) lack of suitable training and development opportunities for employees in small businesses; (4) owner-managers (OMs) fear that their staff will be ‘poached’ or that they will resign consequent on participation in training and development; and (5) OMs hold negative attitudes toward formal training and development.

The low level of participation in formal training and development in small businesses relative to large businesses is perceived as being problematic from several different perspectives. One such perspective is that neglect of formal, mutually supportive ‘bundles’ of HR practices that are aligned with business strategy might well hinder progress toward sustainable competitive advantage in small businesses (Kotev & Folker, 2007). It is also argued that lack of access to training and development opportunities hinders innovation in small businesses. For instance, many independent small businesses do not have the training resources and knowledge to develop their staff to exploit fully the opportunities that websites bring (Simmons, Armstrong & Durkin, 2008). Another perspective is that lack of access to training and development opportunities may have negative effects on HRM outcomes such as job satisfaction and organisational commitment (Pajo, Coetzer & Guenole, 2010; Rowden & Ahmad, 2000). From the perspective of small business employees, lack of access to externally-accredited training can weaken their employability and place them at a serious
disadvantage in the external labour market (Ram, 1994). Given the higher risk of failure of small businesses (Storey & Greene 2010), being competitive in the external labour market is critical.

We are not aware of other studies that have examined employees’ perspectives on the unresolved problem of low levels of small business participation in formal training and development. This is surprising, given that researchers and policy makers have invested considerable energy over a long period of time in trying to understand how small businesses can be encouraged to participate more in formal training and development (Billett, 2004; Bishop, 2011). Therefore the findings of this exploratory study has the potential to provide fresh perspectives on the phenomenon of employee participation in training and development in small businesses and lay the groundwork for future studies that employ a similar line of inquiry.

The aim of the current study was to investigate factors influencing employee participation in voluntary formal training and development opportunities from the perspective of employees in small businesses. This paper presents findings relating to selected research objectives. These are: (1) to identify factors in the immediate work environment that influence participation in voluntary formal training and development from the perspective of employees in small businesses; and (2) to explore the role that proactive behaviour plays in employee participation in voluntary formal training and development. Given the need to limit the scope of the study, a decision was made to explore the role of a single employee characteristic i.e. proactive behaviour. This is because findings of prior research suggest that employees in small businesses may lack development proactivity because of the constraints in their organisational settings (Coetzer, Redmond & Sharifizad, 2012). Additionally, it was thought that because proactive behaviour is an action-oriented construct it would lend itself to being examined in a qualitative way.

**FACTORS INFLUENCING PARTICIPATION IN TRAINING AND DEVELOPMENT**

Prior research into reasons for the relatively low levels of employee participation in voluntary formal training and development in small businesses has typically involved surveys of OM opinions
regarding ‘barriers’ to training. To illustrate, in Marlow’s (1998) study a total of 28 owners or current
directors were asked: ‘What are major reasons why this firm has not utilised training/development
initiatives?’ The most common reasons were time and money. In Matlay’s (1999) study, face-to-face
interviews were conducted with 200 owner/managers in which they were asked about factors affecting
actual provision of training. Three of the most important factors were cost of training, time constraints
and lack of trainee cover. Kitching and Blackburn (2002) used a telephone survey to ask 1005
respondents their reasons for not wanting to provide more training for their workforces. Lost working
time while workers are being trained and the financial cost of external training were the most
important reasons. Mitchell (2007) conducted interviews and focus groups with small business
operators, training providers, business advisors, researchers and government administrators in
Western Australia (WA). Participants were asked about the reasons for the lack of uptake of training
by small business personnel in WA. Major reasons were the preference of small businesses to learn
informally on the job and the tension between the extended time needed to undertake an accredited
course and the preference of small business for just-in-time training to satisfy immediate needs. These
four studies illustrate the predominant approach to studying reasons for the relatively low levels of
employee participation in training and development in small businesses and highlight the lack of an
employee perspective on the barriers to participation.

The literature also suggests that that several individual characteristics such as age, self-efficacy beliefs
and attitudes toward training and development are important predictors of engagement in voluntary
training and development opportunities (Maurer, Weiss & Barbeite, 2003). Importantly in the context
of the current study, Major, Turner and Fletcher (2006) showed that proactive behaviour was linked to
participation in development activity. Proactive people are thought to be more likely to take part in
voluntary training and development opportunities to maintain their employability within both their
current organisations and the external labour market (Bertolino, Truxillo & Fraccaroli, 2011).
Bateman and Crant (1993) view proactive behaviour as a dispositional construct that identifies
differences among people in the extent to which they take action to influence their environments.
Thus individuals with a proactive disposition take action to influence their environments, for example,
through identifying training and development opportunities and acting on them (Bateman & Crant 1993; Bertolino et al., 2011; Crant, 2000). Drawing on the literature that examines proactive organisational behaviour, it could reasonably be argued that small business employees who have a propensity for proactive behaviour are likely to have higher levels of participation in voluntary training and development activities than employees who are inclined to behave passively toward their situations.

DATA COLLECTION AND ANALYSIS

To accomplish the overall aim and specific research objectives, an exploratory qualitative methodology was employed involving data collection via site visits and in-depth semi-structured interviews. An exploratory qualitative methodology was appropriate as there has been limited research into factors influencing small business participation in training and development from an employee perspective. Taking into account the need to limit the number of sampling dimensions, a decision was made to focus on engineering small businesses, rather than attempt to look at small businesses from all sectors. It could reasonably be assumed that employee access to training and development opportunities would be particularly important in such small businesses. Employees in these organisations must ensure that they remain abreast of current practices, technologies and regulations. A focus on engineering small businesses should therefore provide information rich cases.

A database of small businesses from which the participants were recruited was developed using an existing public business directory (i.e., Yellow Pages). To recruit study participants, contact was made with the OM of the firm and a request was made that he or she allow the researcher access to employees in the firm with the view to recruiting voluntary participants. If the OM was reluctant to allow his/her employees to participate in the study, then this firm was removed from the database and additional small businesses were contacted until 15 participants were found who met the selection criteria; the firm had a maximum of 30 employees; the participant had been with the firm for at least 6 months and was a professional engineer. (Demographic information about the sample is in Table I.) The most appropriate method of contacting employees about the study was discussed with those OMs
who agreed to provide access to their employees. Each firm in which one or more employees agreed to participate in the study was visited by a researcher. The employee was taken through a semi-structured interview schedule. Each interview lasted between 45-60 minutes and (with the permission of the participants) the interviews were digitally recorded and later transcribed. In addition to the participant recruitment procedures outlined above, snowball sampling was also employed, whereby participants informed the researcher about other potential participants.

As soon as the transcript of an interview was available for review, it was checked for accuracy and carefully examined repeatedly by the researchers. As recommended in the research literature, (Miles & Huberman, 2002; Patton, 2001) reflective remarks were recorded in the margins. Content analysis was used to analyse the interview data (Silverman, 2011). Teasing out themes (e.g. recurring instances of factors influencing participation in voluntary training and development) in the data was the main tactic for drawing meaning from the data (Patton, 2001).

[FINDINGS OF THE INTERVIEWS]

**Research objective relating to proactive behaviour:** Two thirds of participants had not requested access to employer-sponsored training and development. An array of reasons was provided, including: (1) managers knew their capabilities and would propose training and development if it was needed; (2) their resource-constrained employers would have to incur substantial financial costs; (3) they would lose working time while undertaking the training and development; (4) their knowledge and skills gaps could be addressed through other modes of learning, such as learning through interactions with colleagues and searching for information using the Internet; and (5) they expected that their request would be declined. Participants indicated that this expectation was shaped by their experiences while working in other small businesses. Additionally, in their current workplaces they
had not observed other employees, including their immediate managers, request access to external training and development events. These observations had also helped form their expectations.

“...I think that it is always something that company would prefer to avoid, in a way. So the feeling is that when you are asking, you are asking for something and I don’t feel encouraged in asking that... So it’s not really approval....if you ask something that can be approved or not, it’s just a matter of asking something that is not a priority of the company”. (Participant 8)

A minority of the participants had requested access to employer-sponsored training and development. Their reasons for making such requests were broadly that access to the training and development event was necessary to do their jobs or to improve their work performance. However, in each instance the request was declined, usually because the decision maker thought that the requested training and development event was not necessary for the participant to satisfactorily perform in their current job.

A small number of participants reported that they actively sought information on training and development opportunities. Their reasons included the desires to keep abreast of the latest developments in the field and to capitalise on networking opportunities that attendance at external training and development events provided. A majority of participants indicated that factors such as workload pressures and the expectations that their requests would be declined were reasons for not actively seek information regarding training and development opportunities. Participants also believed that OMs would take the initiative and provide them with information about training and development courses or suggest appropriate training and development courses in other ways. Interestingly, some participants noted that their organisations only employed people who already had the competencies to perform in their jobs and therefore additional training and development was not required.

A minority of participants reported undertaking self-funded education/training. They stated that this education/training would benefit their careers and provide self-development. Participants that did not undertake self-funded education/training cited reasons that included a lack of tangible benefits, no felt need for additional education/training and their existing time commitments. When these participants were asked how they maintained currency in their field they mentioned approaches such as searching
for information on the Internet, participating in online forums and learning through interaction with their colleagues. Younger participants (20-40) indicated that even though they were interested in self-funded education/training opportunities, the courses were too expensive. Many participants believed that the company should sponsor training and development if managers perceived a need for training among staff. In addition, suppliers often provided specialised training in relation to their products thereby alleviating the need to self-fund training.

**Research objective relating to factors in the immediate work environment that influence participation in training and development:** A majority of the participants were sure that their organisation did not have an explicit *policy on employee learning and development*. The other participants were less certain, reporting that they were unaware of the existence of such a policy. One participant noted that for an organisation to be a member of the Australian Institute of Engineers it had to have an explicit training policy. However, even though her organisation was a member of the Institute, it had not met this requirement since she had joined the company about 2 years ago. Similarly, a majority of the participants firmly believed that their organisation did not have a *training budget*, while the other participants indicated that they were unaware whether their organisation had a training budget.

About half the participants reported having a *personal development plan*, but all of these participants noted that the plans were typically informal and not documented. In most cases participants’ personal development plans were discussed with their organisation’s managing director/owner only and did not involve participants’ immediate workplace supervisors. The discussion of participants’ personal development plans usually occurred within the context of the annual performance review. The performance review typically focussed on the areas in which the participants were performing satisfactorily (i.e. strengths) and areas in which they needed to improve (i.e. weaknesses). As illustrated in the quotation below, within the performance review discussions limited consideration was typically given to the participants’ personal development plans.
“As a part of the performance management, there is one question – where do you want to be in five years’ time? So once a year that question gets asked, and that’s about it”. (Participant 5)

Regarding the process of requesting access to external, company-sponsored training and development events, a large majority of the participants reported that the request had to be approved by the managing director/owner. Even in cases where participants reported to an intermediate manager, the final decision regarding access to a requested training and development event would still be made by the managing director/owner of the business. The intermediate manager merely communicated the participant’s request to the managing director/owner.

“I guess it would be the engineering manager and I guess he would need approval from currently our CEO”. (Participant 7)

All participants reported that the process of requesting access to training and development was informal. It usually involved making the request during a casual conversation with their immediate manager or sending the request by email as well as providing a training brochure and a brief justification for wanting to attend the course. A majority of participants supported an informal approach because in their view it required less time and effort to make a case for the request than a formal approach would. However, as one participant pointed, a formal approach would also have benefits, such as providing evidence of a strong learning orientation:

“It’s good to have it formal I think. In terms of these training courses, so you at least have a record of what you ask for, or what you’ve been rejected. So at least it shows that you are trying to get some training externally, so that this shows you are keen on learning”. (Participant 2)

In the opinion of the participants, the most common barriers to participation in company-sponsored training and development opportunities were high workloads and the associated lack of time, costs of training and development events, management attitudes toward T&D and lack of an explicit policy on T&D. In particular, high workloads and the associated lack of time were perceived as preventing employees from attending T&D courses. Several participants indicated that they had to work on one
project and then move straight onto the next without any time to attend training and development courses. In their view, project completion rather than knowledge and skill acquisition was the company’s priority. Often the project timeframes were short, lasting between 3–4 days. When tendering for projects, the company’s tender had to be cost competitive. This meant that employees had to complete each project as quickly as possible as each additional day spent on the project eroded the company’s profits. Participants explained that in a small company each employee has a specific role and responsibility and if an employee were to attend a training and development event his or her absence from the workplace created a knowledge and skills gap that would constitute a major stumbling block to timely project-completion.

“...So obviously the employee has to attend the session at working hours. And being a small company, each of us has some task that only the person can do. So sometimes not having the person in the office can be critical”. (Participant 8)

**DISCUSSION**

This study employed an exploratory research design to: (1) explore the role that proactive behaviours play in employee participation in voluntary formal training and development; and (2) identify factors in the immediate work environment that influence participation in voluntary formal training and development. According to Stebbins (2001, 2008), the production of inductively derived generalisations about the phenomenon under study is the main goal of exploratory research. Consistent with this goal, four generalisations emerged when findings from the interviews were holistically considered. These emergent generalisations are discussed in the context of extant literature in the following paragraphs.

**Generalisation 1: Norms constrain employee proactive behaviours regarding access to training and development.** Findings from the interviews suggest that employee proactive behaviours regarding access to training and development were constrained by norms that prevailed within the organisations studied. Norms are the informal rules and shared expectations that groups adopt to regulate group members' behaviour (Feldman, 1984). Although norms are infrequently made explicit, they often have
a powerful and consistent influence on group members' behaviour (Ehrhart & Naumann, 2004). Norms can cover several aspects of group behaviour, including performance, appearance and resource allocation (Robbins & Judge, 2014). Given that resource paucity, including reliance on usually limited internal sources of finance has been identified as a common feature of small businesses (Storey & Greene, 2010) one might reasonably expect resource allocation norms to be strong in small businesses. In the current study several participants commented that they had not requested access to training and development because they had formed the expectation that such requests were likely to be declined. This expectation had been shaped through their experiences of working in other small businesses (i.e. carry-over behaviours from past situations) and through processes of observational learning. These findings are consistent with findings of prior research (Coetzer et al., 2012) which suggests that employees in small businesses may lack development proactivity because of the constraints in their organisational settings.

**Generalisation 2: Employees are learning oriented and projects serve as their primary vehicle for learning.** While participants’ proactive behaviours regarding access to training and development seemed constrained by resource allocation norms, findings from the interviews suggest that employees in the sample did nevertheless exhibit a high work-domain learning orientation (Garofano & Salas, 2005). Furthermore, in the opinion of participants, projects served as the primary vehicle for their learning and the process of acquiring work-related knowledge and skills was mainly informal and self-directed. This finding corresponds with the consistent view in the literature that novel and challenging job assignments can be a primary source of learning for employees (Ortega, 2001) and that limited reliance on structured training does not necessarily mean that learning is also limited (Field, 1998). As Billett (2002, p.4) notes, “engagement in work activities incites change in individuals’ capacities: learning.” In any event, given that the engineers mainly executed specialised technical tasks, it is unlikely that timely training courses that addressed their specific learning needs would be available.

**Generalisation 3: Employees perceive that high workloads and the associated time constraints are the major barriers to their engagement in training and development.** Participants’
perceptions of the barriers to their participation in T&D partially overlap with the barriers that have been identified in the extant literature. Some barriers that have been frequently mentioned in the literature, such as OMs’ fears that skilled staff will be poached (Panagiotakopoulos, 2012), were absent from the findings of this study. This is surprising, given the strong labour market demand for engineering skills in WA. Furthermore, from the perspective of participants, high workloads and the associated time constraints seem to be the most significant barrier to employee participation in training and development, as opposed to other factors (e.g. the cost of training and development events). These findings suggest that larger-scale studies involving both employees and OMs are likely to uncover significant differences in their perspectives of the nature and significance of the barriers to participation in training and development.

**Generalisation 4: Decision making processes regarding access to training and development act as a barrier to employee engagement in training and development.** Findings from the interviews with employees in several organisations suggest that access to training and development was often initiated by managers rather than employees. As previously noted, norms regarding resource allocation seemed to make employees reticent about requesting access to training and development. Furthermore, usually the managing director/owner made the final decision regarding employee access to training and development. Generally, the employees’ direct manager did not seem to have much influence on these decisions. The centralised nature of decision making regarding employee access to training and development is understandable, given that many small businesses face severe resource constraints (Patel & Cardon, 2010) and that organisational decision makers are often not sure to what extent employees will perform differently once back on the job (Blume, Ford, Baldwin & Huang, 2010). Nevertheless, such an approach to decision making regarding access to training and development may serve as an additional barrier to employee engagement in training and development because an employee’s direct manager is likely to have a more thorough understanding of his or her learning and development needs than a more distant managing director/owner.
Limitations: This study has limitations that tend to be commonly found in exploratory studies, such as the small sample size, the use of convenience sampling and the wide scope of the study. However, as noted, the main aim of exploratory research is merely to lay the groundwork for future studies that focus on prediction and confirmation (Stebbins, 2001, 2008). In such future studies these limitations should be corrected.

CONCLUSION

We have argued that research into reasons for the relatively low levels of employee participation in formal training and development in small businesses is deficient because it has typically involved surveys of predominantly owner-managers (OM) opinions regarding barriers to formal training and development. This study is novel in that it does not merely add to the momentum created by existing voices (OMs), but rather seeks to generate new insights not articulated by prior voices (i.e. employees) (Colquitt & George, 2011). Consistent with the principal aim of exploratory research, the current study produced four generalisations that are grounded in the employee interview data. Using these generalisations as stimuli, future research may productively address such questions as: (1) How do workgroup norms influence employee behaviour in regard to accessing training and development?; What learning strategies do employees use to compensate for lack of access to training and development?; (3) How do employees and OMs differ in their perceptions of the nature and significance of barriers to training and development?; and (4) How do OMs make decisions regarding employee access to formal training and development opportunities that are at least partially funded by the firm? Such future work could help to (dis)confirm findings of our exploratory study and contribute to a more nuanced understanding of the phenomenon of employee participation in training and development in small businesses.
Table 1: Demographic Data

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Position</th>
<th>Duration of Employment</th>
<th>Company (no. of years in business)</th>
<th>No. of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30-40</td>
<td>Mechanical engineer</td>
<td>1 year</td>
<td>A (3 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>2</td>
<td>20-30</td>
<td>Electrical engineer</td>
<td>1.6 years</td>
<td>A (3 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>3</td>
<td>30-40</td>
<td>Process engineer</td>
<td>2 years</td>
<td>A (3 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>4</td>
<td>30-40</td>
<td>Civil engineer</td>
<td>8 months</td>
<td>A (3 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>5</td>
<td>50-60</td>
<td>Software engineer</td>
<td>5 years</td>
<td>B (25 years)</td>
<td>25-30</td>
</tr>
<tr>
<td>6</td>
<td>50-60</td>
<td>Software engineer</td>
<td>3 years</td>
<td>B (25 years)</td>
<td>25-30</td>
</tr>
<tr>
<td>7</td>
<td>30-40</td>
<td>Software engineer</td>
<td>4 years</td>
<td>B (25 years)</td>
<td>25-30</td>
</tr>
<tr>
<td>8</td>
<td>30-40</td>
<td>Software engineer</td>
<td>5 years</td>
<td>B (25 years)</td>
<td>25-30</td>
</tr>
<tr>
<td>9</td>
<td>30-40</td>
<td>Electrical engineer</td>
<td>3 years</td>
<td>C (20 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>10</td>
<td>30-40</td>
<td>Electrical engineer</td>
<td>2 years</td>
<td>C (20 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>11</td>
<td>30-40</td>
<td>Electrical engineer</td>
<td>4 years</td>
<td>C (20 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>12</td>
<td>40-50</td>
<td>Electrical engineer</td>
<td>1 year</td>
<td>C (20 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>13</td>
<td>30-40</td>
<td>Electrical engineer</td>
<td>3 years</td>
<td>D (10 years)</td>
<td>15-20</td>
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<td>14</td>
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<td>Electrical engineer</td>
<td>7 years</td>
<td>E (20 years)</td>
<td>15-20</td>
</tr>
<tr>
<td>15</td>
<td>30-40</td>
<td>Civil engineer</td>
<td>2 years</td>
<td>F (5 years)</td>
<td>15-20</td>
</tr>
</tbody>
</table>
REFERENCES


