Developing SMEs through Interaction with Science

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Abstract
Dichotomy between scientific outcomes and their practical application has been discussed at length not only in business-related disciplines. This study focuses on the effects of coaching small and medium enterprises by business researchers. Our unique three-stage methodology, registered as industrial design with the Czech patent and trademark office, assisted SMEs in identification of their own problems and gaps and motivated them to address those deficiencies. The study approached 31 small and medium enterprises in the Czech Republic in 2006-2008. Coaching proved to be a viable tool for developing learning capabilities of SMEs and assisting them in overcoming self-identified weaknesses, hence contributed to their increased competitiveness.

Keywords: SMEs, coaching, enterprise development, experiment.

Introduction
Small and medium sized enterprises (SMEs) are important players in the European economy. SMEs represent 99 percent of all enterprises in the European Union and provide around 65 million jobs (European Commission, 2009). Although SMEs lie at heart of European economy, they usually attract much less academic (both scientific and educational) interest in comparison with large multinational corporations. On the other side of the barrier there are universities and other tertiary education institutions which strive under various umbrellas of EU funded projects to interact more intensely with businesses and reflect on their needs. Developmental assistance is usually focused on alignment of educational curricula with industrial needs or additional training of SME employees.

Developing potential, capabilities, and competitiveness of SMEs through their interaction with science seems to be desired and declared, yet the focus lies on technical or innovation efforts rather than on soft skills or managerial competences. This gap can be addressed by non-interventional research methods (such as coaching) applied by researchers in business fields. SMEs face more troubles in attracting top talent, nurturing human capital (Garavan et al., 2001), setting and pursuing long-term strategic objectives (Peel and Bridge, 1998). Owners’ as well as employees’ skills and knowledge development affect growth of SMEs (Rauch et al., 2005). As coaching is recognized as a valuable tool for managerial development (Ellinger and Bostrom, 1999) it could be instructional for development and growth of SME managers.

After analysis of the literature on coaching and its effects on enterprise development we arrive at our central proposition, that coaching is a valuable tool for SME learning and development. Second, we discuss and develop a unique methodological approach, which was tested on a number of SMEs in the Czech Republic. Last, we conclude with lessons for SME professionals and researchers.

Theoretical framework of the research
In SMEs, it is often not possible to divide competences in accordance with typical managerial functions as can be found with larger enterprises (Floren, 2006). SME managers are held responsible for a variety of tasks which instigates higher requirements for their skills and knowledge (Martin and Staines, 1994). Managerial decisions are often taken on the spot and are heavily influenced by the manager, in many cases the owner of a particular enterprise (Carson and Gilmore, 2000). For instance, it has been documented that SMEs differ in their marketing activities due to potential lack of resources and heavier reliance on social and personal networks in decision making (Gilmore, Carson, Grant, 2001). On the other hand, a number of SME managers is aware that they may not possess in-depth knowledge and skills in respect to some of their duties or that they may approach issues differently to the common practice and hence less efficiently.

Enhancing enterprise competitiveness and development potential through training has become a central argument in levelling the playing field and closing the knowledge gap between large and small firms (Gibb, 1997). Learning offers substantial advan-
tages over intervention approach to enterprise development (Chaston, Badger, Sadler-Smith, 1999) as it motivates managers to take on their own responsibility for future actions. McGovern (2006) even suggests development of learning networks, in which companies from specific sectors may openly share their concerns and build up their capabilities. Even more so at these economically troubled times when firms have found themselves under ever increasing pressure for efficiency through purchasing power exercised by key suppliers or customers.

The experience is typically the guiding learning medium for SME owners and managers (Chouke and Armstrong, 1998; Penn et al., 1998), yet they often claim not having enough time to reflect on it (Gray, 2002). It may well be that organizational learning methods have been so far developed to suit large companies better than SMEs (Deakins and Freel, 1998). Culture in SMEs seems paternalistic and reliant on individual’s ideas and character (Penn et al., 1998) hence it is more prone to resist necessary changes (Gray, 2002), if not driven by a key manager or owner. On the other hand, due to a limited number of employees SMEs manage information flows faster and more effectively, which was empirically supported on a set of U.K. manufacturing firms (Chaston, Badger and Sadler-Smith, 2001), giving them chance to implement a change faster once they have decided. An overriding concern seems to be motivating SME managers and owners to make time for learning, for reflecting on their own experience and analyzing the need for change. Therefore, facilitated coaching approach may prove beneficial in overcoming the gap between the lack of time and resistance to change.

Coaching is argued to be the key behavioural habit of sustained managerial leadership (Boyatzis et al., 2006), contributing to long term effectiveness. It promotes learning rather than compliance (Hunt and Weintrab, 2004), although there is a positive impact on actual performance (Judge and Cowell, 1997). Additionally, executive coaching enhances managerial flexibility (Jones et al., 2006), preparing managers for the unexpected. On the organizational level, coaching might be perceived as a matter of strategic intervention (Rider, 2002) contributing to overall strategic development of an organization (Sherman, 2007). Coaching is therefore a developmental tool for both individuals and organizations.

The method of coaching is based on structured opened questions (Whitmore, 2006). Formulating answers to questions enables an individual to reveal reality, see it from an external, possibly more objective point of view, understand it and finally establish causal relationships among phenomena. A solution, which is identified by the individuals themselves, requires change, resistance to which is limited as motivation to pursue one’s own goals appears greater. It is a critical part of coaching – steadily emerging and finally acquired ownership of future goals. A coach becomes immediately attached to their proposition motivated by the utmost desire to pursue their own decision and achieve its goal. Lately, coaching has been found to be more successful with top managers than with lower ranks (Bowles et al., 2007). Coaching and mentoring was found especially valuable for developing SME managers, their potential and skills (Davins and Gold, 2000).

Every individual mind is different (Ratey and Galaburda, 2001). Our brain is like a machine linking various events and issues (Czemer, 2001). The connections seem like a map created out of our personal memories, experience, character, skills and ways of thinking. Attuning the respondent’s brain to their individual perception is best done through questions. Coaching is based on questions and listening, hence helps the coach to find their own way forward. The success of coaching goes hand in hand with positive feedback, support and affirmation. Future must be the focal point and not the past, in which old wounds would have been exposed.

It is difficult to identify the only way of coaching. Usually, coaching reflects the background of a coach (Feldman and Lankau, 2005). Suggestions as to the way of coaching have been numerous and even contradictory; however there is a limited empirical evidence of coaching effectiveness (Joo, 2005). This study aims to address the gap of empirical evidence of the effects of coaching.

Research methodology

Recently, Mullen, Budeva and Doney (2009) articulated the desire for state-of-the-art research methodologies in SME research. Inspired by the developmental three-stage methodology of Carson and Gilmore (2000), we have also attempted to assist SMEs in their pursuit for an ongoing business success on continuous basis. In contrast to attempts promoting more traditional or online classroom learning in SMEs (Mo-on et al., 2005), this study opted for coaching-assisted learning through two distinct sequential coaching sessions. Second session followed no earlier than 14 days after the first one. Third, after half a year we visited the companies again in order to establish whether they have realized the initially proposed solution/change (control visit). The study was conducted in 2007 and 2008.

During both interview sessions – on-site visits of researchers on company premises, internal enterprise processes were first self-assessed by SME managers (owners at the same time in most cases). Co-
aching discussions were framed around four areas identified in the interview protocol: production related processes, marketing and sales, corporate finance, and human resource management. Each area was classified after a thorough discussion by a respondent in terms of estimated performance (100 for ideal, 0 for poor).

Both sessions were structured as typical coaching interviews with four particular areas (Whitmore, 2006): goal determination; reality analysis; solution suggestion; and action plan. During the first interview, a manager focused on reality analysis and goal determination. The aim was fact-finding and identifying developmental goals. During the second interview, an interview would focus on various solution possibilities and would attempt to lay down the action plan. A researcher would not provide guidance in terms of suggesting a solution, rather we were in a role of bouncing ideas back and forth with interviewees in order to make them consider as many different possibilities as possible and to have them review their positives and down sides. Researchers have not intervened in the choice of a particular solution but focused on identifying its prerequisites, feasibility, and consequences.

Structure, sequence and approach to both interviews are registered as an industrial pattern with the Industrial Property Office of the Czech Republic. Both visits were recorded, transcribed and the transcripts were made available to respondents. Visits took usually between 60 and 80 minutes, some lasted longer than two hours. The study started with 32 SMEs located in the southern part of the Czech Republic, which agreed to be involved in the study (gathered through snowball sampling and through the local chamber of commerce). 31 out of the original 32 enterprises participated in the second coaching interview. A control visit was conducted at 28 enterprises (missing four firms decided either to pull out of the study, merged or moved out of the region). The control visit was another shorter interview focused only on the area in which companies were seeking improvement. However, all four areas were again numerically assessed by respondents during the control visit without initial numbers being shown. (None of the respondents had the previous interview protocols at hand during the control visit, although some may have prepared for it privately.)

**Research results**

As our study was focused on a limited number of participating enterprises, it would be difficult to employ advanced statistical methods. We undertook a pilot study in the field and hence the results are more indicative. Both coaching visits were documented in detail through recorded and transcribed interviews, qualitative analysis of the rich research evidence was also performed. All 28 companies were studied as separate cases for individual content analysis only with a focus on claims documenting the results of the sequential longitudinal coaching approach (the first two visits). Each case was concluded with one of four statements:

1) A company did not report any change or development as a result of coaching visits (3 SMEs);
2) A company identified its development needs and outlined possibilities to pursue them (which was the aim of the second visit; 17 SMEs);
3) A company identified its development needs, outlined possibilities to pursue them and in part implemented a change between the first and the second visit (6 SMEs);
4) A company identified its development needs, outlined possibilities to pursue them and fully implemented a change between the first and the second visit (2 SMEs).

The results have been encouraging as SME managers have on many occasions openly declared that the first visit made them think. The reflection on their actual experience gave them the impetus to invest their limited time into dealing with usually recurring issues. They knew something was not right but they were overburdened by daily affairs. Just the first reflection — identifying development needs and outlining possibilities to attain them — resulted in 8 companies that started implementing the solution without waiting for the second visit (which was then typically devoted to identifying another new developmental issue).

Comparing the self-reported perceptual performance levels between the first and control visits (see Table 1), SMEs originally felt their finance side being relatively the strongest and they chose to focus on other developmental areas such as human resource management (perceived improvement by 10/100), marketing (9/100) and production processes (7/100).

Shapiro-Wilk test showed that variables were distributed normally. According to the t-test, the perceived improvement in given areas could not have increased randomly but there must have been a common denominator such as our sequential coaching approach (the study did not use financial data as control variables; the first reason being the non-existent disclosure clause for SMEs in the Czech Republic, the second being that the respondents felt their finance being managed relatively successfully in comparison to other areas, and the third being that the study does not have to control for overall market and economy indicators).
As there were small and medium enterprises involved in the study, comparison of effects for both groups was performed. There were no substantial differences found for small (up to 50 employees) and medium enterprises (51 to 250 employees). Wilcoxon signed-rank comparison test echoed that performance levels are the same, normality of data was tested again using Shapiro-Wilk test and confirmed for each group individually.

Conclusions

The experimental non-interventional research design employed in our study of small and medium enterprises in the Czech Republic assisted companies in identifying their own avenues for further development. Identified needs for further improvement in selected areas have motivated respondents in moving from thoughts towards actions, hence indirectly stimulated and possibly pushed forward developmental tasks. Coaching proved to be a viable research as well as development tool for small and medium enterprises which typically do not hire (costly) consultants or professional coaches.

The study was limited to one particular geographical area and relatively small in scope and coverage. Similarly, the results might have been affected by the pursued research design. However, the study reflected on the need of self-guided learning in SMEs in order to secure prosperous future. Subsequent research endeavours may want to verify our results and/or utilize coaching as a viable research instrument.

Practitioners, especially SME owners and managers, can draw several important lessons from the study. Being preoccupied by day-to-day agenda they need to stop, step back for a minute and determine their future intentions. Employing a coach or even “mere” participation in a research study may provide them with unusual external view of their businesses, open their eyes and motivate them to address deficiencies they see themselves. SMEs – the backbone of European economy – need to be firmly placed at the forefront of economic growth, hence intentionally steer their futures.

Table 1

<table>
<thead>
<tr>
<th>Enterprise Processes</th>
<th>Average Before</th>
<th>Average After</th>
<th>Variance Before</th>
<th>Variance After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>72.67</td>
<td>79.90</td>
<td>3.57</td>
<td>4.98</td>
</tr>
<tr>
<td>Marketing and Sales</td>
<td>61.50</td>
<td>70.62</td>
<td>7.61</td>
<td>6.21</td>
</tr>
<tr>
<td>Finance</td>
<td>77.83</td>
<td>77.17</td>
<td>5.23</td>
<td>6.48</td>
</tr>
<tr>
<td>Human Resource</td>
<td>62.50</td>
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</tr>
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The article has been reviewed.
Received in September, 2010; accepted in October, 2010.