The Relationship between Organization Learning and Organizational Effectiveness in SMEs

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Abstract
Organization learning is known as one of the keys to organizational success. The turbulent business environment makes small and medium businesses to keep searching for determining and using the main strategies for survival and development. Organizational learning facilitates flexibility and spotting opportunities for growth and generally eventuates in better performance for the small and medium size organization. The present study is an attempt to survey the relationship between resources – learning methods- and organizational effectiveness of small and medium enterprises (SMEs). Sample group was adopted using random sampling method including 85 of managers and experts in SMEs. A modified questionnaire, after being confirmed by academic experts, was used for gathering the data. Reliability of the questionnaire was ascertained using Cronbach’s alpha (0.90). Spearman correlation coefficient and Friedman’s rating test were used to analyze the data. The findings showed that there is direct relationship between learning from experiences in the business and effectiveness of SMEs. In addition, no relationship was found between learning by training and effectiveness. Moreover, the results showed that SMEs do not weight the resources and learning methods equally. According to ranking, learning by experiencing, learning through apprenticeship, learning through vocational mission, and learning through vocational changes were the most important learning methods for SMEs.

Key words: Organizational learning, Organizational effectiveness, Small and Medium Size Enterprises (SMEs)

Introduction
Given the considerable role played by SMEs in national gross production (NGP) and employment, they are generally considered as the driving force of national economy (Verstegen et al., 2011). Two key features of managerial independence and number of workforces are mainly under focus regarding small and medium institutes. SMEs play a notable role in creating job opportunity, innovation, and competitive advantages (Acs&Audertsch, 2005). In spite of the undeniable role of SMEs, there is no clear insight regarding development and nurture of learning capabilities among the employees and managers of these organizations. In many cases and in particular in self-employment activities, and in the case of micro, small, and medium enterprises, it is the individual learning concept that let us to study organizational learning. Learning, in SMEs, is mainly considered as the set of activities in doing the business and transferring experiences, ideas, and information within the organization (Gray and Consalves, 2002). Organizational learning is a dynamic procedure that enables the organization to harmonize with the changes in short time. The procedure includes generating novel knowledge, skills, and behaviors; and it is strengthened through sharing, publishing and cooperating. The result of the procedure is promotion of learning culture and shared culture by the employees (Koragh and Nonaka, 2000).
There are concerns about organizational learning such as level of learning (Argyris, 1995), sources of learning (Baron and Ozgen 2007), learning methods (Mumford, 1990), and learning performance (Mathew and Morgan 2007). “Learning sources” refers to the roots and the references used by the employee and manager to learn. With a reforming attitude, Mumford (1987) classified learning resources into three classes of learning by job, learning by human, and learning by training (Mumford, 1990). Furthermore, learning methods is about the mechanisms and operational approaches employed by the employees and managers to learn new things or expand what they already know. SMEs in Iran’s economy, although have “how to learn” as one of their key concerns, have failed to deal with such concerns with regard to sources and methods of learning. The issue has also been neglected by academic researches as well. Knowing this, this research raises the question “what is the current situation of learning sources and methods for the employees and managers of SMEs and what its relation with operation effectiveness is?” To find the answer, literature review was conducted in three fields of learning sources, learning methods, and business performance; afterward, the question was answered using survey method.

Literature review

Sources and methods of learning

a. Sources of learning

ErnOzgen and Robert A. Baron (2007) divided sources to gain information – learning sources – in three groups of coaches, informal networks (friends and family), professional associations (seminars, conferences, and training workshops). Fischer and Riuber (1995) named four learning sources including others’ recommendations and suggestions, education, and experiences gained from previous and current jobs. Mumford (1978) introduced three sources of learning:

1. Learning by activities: how and by what method people learn through their activities and job? Learning by job and activities plays the key role in nurturing capabilities and flexibility of workforce. Acquiring the knowledge and information (Minniti and Bygrave, 2001), skill (Kirby, 2003), and required insights (Boisot, 1997) to accomplish tasks are known as learning by job. Kirby (2003) recommended that people skills are developed through practicing doing better job. Boisot (1997) maintained that learning by doing prepares the environment for emergence of creative insights. Minniti and Bygrave (2001) held that knowledge is gained by doing job. On the other hand Freel and Deakins (1998) and Sexton and Young (1997) argued that learning happens, first, by doing the task and encompasses issues such as try and learn, problem solving, and discovering. Learning by job is weighted given its role in nurturing individuals’ capability in business environment. This approach conveys the message that skills flexibility and capabilities are achievable through participating in the job. Learning by job is a reliable way to improve individual capacities. The approach implies that talented and smart individuals who are interested in learning must not be inconsiderate regarding changes and evolutions in their job and business. On the other hand, by adopting knowledge promotion viewpoint (Wang and Noe, 2009) learning by job has valuable lessons to teach. So that it is believed that organizations need to evaluate and document their failures and successes and make available such documents to the employees. This fosters learning by job and through this processes the difference between fruitful failure and fruitless success is emphasized. The fruitful failure results in development of deeper insight and deeper perception of knowledge possessed by individuals and the organization. In contract, fruitless success happens when everything goes well but nobody knows how and why. (NabiAkkenar, 2007).

2. Learning by human: learning through interacting with colleagues, neighbors, and friends is one of the general approaches followed for policies (Foster and Rosenzweig, 1995), which also at macro level is crucial in success of change plans at organizational level (Cardon and Stevens, 2004). Acquiring knowledge, new skills and attitudes or expansion of individual capabilities through communicating and interacting with others is what we known as learning by human. In other words, it is the process through which people try to learn new things or expand the scope of their knowledge with the help of different human-social mechanisms. In this way, the chance to learn, whether consciously or unconsciously, from other human beings in work and
living environments is a promising approach to nurture humanistic capacities. Learning by human also conveys that ability to establish long-term and stable relations with people prepares the ground for learning (Farhangi, 2007). Through the process of learning by human, issues like goal and intention of the man’s deed, the mean, and the act of man are dealt with one by one or in one place. There are variety of mechanisms of learning by human including learning from mistakes and errors of others, observing others (Gale, 1996), and examining decisions made by others (Bikhchandani et al., 1998). Smilor (1997) argued that successful people are those who learn by their experience including with customer, suppliers, competitors, and employees. Gibb (1997) stated that combined learning method in small businesses environment is learning from colleagues, the customer/supplier’s feedback and from the mistakes. Wyer and Mason (2000) proved that small businesses are navigated by accumulated combined learning that creates learning and perception of other members of the organization (Mumford, 1990). Learning by observing others’ decisions is a promising ground to explain and elaborate on why people act the way they do (Bikhchandarni et al., 1998). Learning by observing others’ behavior is a fundamental aspect of learning by human, which is known as social learning theory (Bandura, 1971). Some researchers believe that informal interaction with colleagues is more efficient than the official learning. (Boud and Middleton, 2003)

3. Learning by training: Koratco (2005, 579) argued that there are three main sources available to learn the science of entrepreneurship including the academic training and publications, direct observation of actual works, and conferences and group discussions. The weak spot of this classification for learning entrepreneurship is negligence of learning that happens by doing the job; and regarding its advantages, emphasis on academic and published training materials are notable. He further maintained that using academic materials and textbooks, biographies, summaries, publications all may lead to learning. On the other hand, Monford (1987) held that using training techniques such as self-study, participation in workshops, conferences, seminars, and academic courses might help managers of organizations to learn. These ways of learning include using academic materials and textbooks, using periodical published materials (Kurako, 2005) or periodical participation in official and occasional training events. Deakens et al. (1998) tried to determine the methods followed by entrepreneurs (owners and establishers of SMEs). They found that the establishers’ team or entrepreneurs of the enterprises tend to learn from their wrong decisions, mistakes and social network they participate. They argued that the main portion of the learning among the establishers of SMEs occurs through experiencing. Furthermore, the official training they had received is probably ineffective in their success. Moreover, the findings of the learning researches (Westhead, 1996) revealed that even in the best scenario there is weak relationship between performance of SMEs and training activities.

**Effectiveness**

Business growth as indicated in profitability, share return rate, and sale; and performance records is one of the main concern of SMEs. Geraski and Mazzucata (2002) suggested that there different learning methods are the main sources of growth of businesses or organizations. A survey of the effects of different learning methods on the growth of the businesses in car industry of the USA for 8 years (1910-1998) revealed that they are the cause of different performance. To put it another way, learning as an opportunistic and non-systematic matter powers organizational growth. Hughes and Morgan (2005) surveyed the effectiveness of SMEs using the indices of the customer’s satisfaction, sale figures, and income. There are several indices to measure performance of organization, each of which mirrors different scale of effectiveness of the organization. The indices used by Hughes and Morgan (2005) were used in this research to measure effectiveness of small businesses.
Hypotheses of the research, based on the literature review and the framework of the study (figure 1) are as followed:

Hypothesis 1: there is positive relationship between using learning by job and effectiveness of businesses under study. (Three secondary hypotheses were designed regarding learning by job method)

Hypothesis 2: there is positive relationship between using learning by human and effectiveness of businesses under study. (Seven secondary hypotheses were designed regarding learning by human method)

Hypothesis 3: there is positive relationship between using learning by training and effectiveness of businesses under study. (Six secondary hypotheses were designed regarding learning by job training)
Hypothesis 4: learning methods pertinent to the three learning sources (job, human, and training) have equal weight on effectiveness of SMEs.

Methodology
The study was conducted as survey-descriptive study; so that it is descriptive as it pictures the current situation; and it is a survey work as the data were collected from the study population using questionnaire. Questionnaire was the main data-gathering tool. The study population was comprised of experts and managers in SMEs established in Baharestan Industrial Zone in 6th km of Karaj-Ghazvin Highway, which is home to 80 producing firms. To have a homogenous study population 12 companies (7 small and 5 medium) in car industry were adopted. Sample group was selected using class random method and based on Cochran sampling formula number of the participants was obtained 85. Different learning sources such as learning by job, learning by human, and learning by training were adopted as the independent variables and effectiveness as dependent variables. A questionnaire with 34 questions scored by Likert’s scale was used to collect the data. Indices and indicators used in standard questionnaires were used and the final design of the questionnaire was reviewed and confirmed by five university professors. Number of the questions based on the independent and dependent variables are listed in Table 1.

Table 1- Variables and indicators in the research

<table>
<thead>
<tr>
<th>Variables</th>
<th>Questions</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Learning by job</td>
<td>10</td>
<td>Momford (1987)</td>
</tr>
<tr>
<td>2 Learning by human</td>
<td>11</td>
<td>Momford (1987)</td>
</tr>
<tr>
<td>3 Learning by training</td>
<td>6</td>
<td>Momford (1987)</td>
</tr>
<tr>
<td>4 Effectiveness of business</td>
<td>7</td>
<td>Hughes and Morgan (2007)</td>
</tr>
</tbody>
</table>

Reliability of the questionnaire was ascertained using Cronbach’s alpha (0.90), which confirmed reliability of the questionnaire. Based on the type of the study, the data were analyzed using descriptive and deductive statistic techniques such as Spearman correlation coefficient (to determine type and strength of relationship between learning methods-sources and effectiveness) and Friedman ranking test to rank the learning methods.

Findings
The analyses of the data and hypotheses tests were done based on 85 questionnaires filled out by the experts and managers of the companies in car industry established in Baharestan industrial zone. Men and women constituted 68.2% and 31.8% of the respondents respectively. Regarding education, 74.1% had bachelors’ degree and 25.9% had postgraduate degree. Regarding organizational position, 54.1% were experts, 25.9% were supervisors, 12.9% were in charge of ward, and 16.5% were managers. Speaking about age, 8% were below 25 years old, 41.2% were between 25 and 30, 30.6/5 were between 30 and 35, 8.5% were between 35 and 40, and 8.2% were older than 40. Regarding the hypothesis one, the correlation between learning by job and effectiveness of SMEs was 0.309 at sig. level 0.004 (sig = 0.05). Thus, the hypothesis was supported. In addition the results confirmed the positive direct relationship between learning by the content of the job (correlation = 0.317) and learning by vocational mission (correlation = 0.466) with effectiveness of SMEs, while such relationship was rejected for job design and effectiveness (correlation = 0.112). Regarding the hypothesis two, the correlation between learning by human and effectiveness of SMEs was 0.129 at sig. level 0.241 (sig = 0.05). Thus, the hypothesis was rejected. In addition, the results confirmed positive direct relationship between learning with the help of consultation (correlation = 0.266), teamwork (correlation = 0.243) and effectiveness of ESMS and no such relation between learning by trainee (correlation = 0.034), modeling (0.0133), questioning (correlation = 0.17), observation (correlation = 0.029), and customers (correlation = 0.29) with effectiveness of SMEs. Regarding the hypothesis three, the correlation between learning by training and effectiveness of SMEs was 0.039 at sig. level 0.836 (sig = 0.05). Thus, the hypothesis was rejected. In addition, the results confirmed no positive direct relationship between official training courses (correlation = 0.039), seminars (correlation = 0.087), conferences (correlation = 0.31), and training methods.
training workshops (0.138), self-studies (correlation = 0.106), and Internet surfing (correlation = 0.35) with effectiveness of SMEs. Regarding the hypothesis four (whether all the source of learning have quality effect on effectiveness of SMEs), Chi2 test was obtained 95.34 with DF of 15 and sig level of 0.000 (sig=0.05). Thus, the hypothesis was rejected and learning by job was determined with highest priority followed by learning by apprenticeship, learning by vocational mission, learning by job changes, and learning by observation. Other methods are ranked in the Table below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Ave. rank</th>
<th>Ranking</th>
<th>Variable</th>
<th>Ave. rank</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job</td>
<td>12.29</td>
<td>1</td>
<td>Customers</td>
<td>7.59</td>
<td>12</td>
</tr>
<tr>
<td>Vocational mission</td>
<td>9.43</td>
<td>3</td>
<td>Team work</td>
<td>8.37</td>
<td>8</td>
</tr>
<tr>
<td>Vocational changes</td>
<td>9.33</td>
<td>4</td>
<td>Formal training courses</td>
<td>7.76</td>
<td>10</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>10.06</td>
<td>2</td>
<td>Seminars</td>
<td>6.48</td>
<td>15</td>
</tr>
<tr>
<td>Consultation</td>
<td>8.81</td>
<td>7</td>
<td>Conference and gathering</td>
<td>6.56</td>
<td>14</td>
</tr>
<tr>
<td>Modeling</td>
<td>8.88</td>
<td>6</td>
<td>Trainign workshops</td>
<td>8.16</td>
<td>9</td>
</tr>
<tr>
<td>Questioning</td>
<td>8.37</td>
<td>8</td>
<td>Self-studies</td>
<td>7.60</td>
<td>11</td>
</tr>
<tr>
<td>Observation</td>
<td>9.00</td>
<td>5</td>
<td>Internet searching</td>
<td>7.31</td>
<td>13</td>
</tr>
</tbody>
</table>

Discussion and Conclusion

The main question of the study was “whether there is relationship between learning source and methods and effectiveness?” The results showed that learning by job and experience led to effectiveness in SMEs, while official learning courses held by the organization were found ineffective on effectiveness. Regarding learning by human, only learning by consultation and teamwork were found effective. The hypothesis of equal effect of different learning methods on effectiveness was not supported and learning by job, learning by changes in job, learning by vocational mission, and learning through apprenticeship and observation were the five learning sources that led to highest level of learning. The results further revealed that learning SMEs mainly happens through learning by job and human factors play a trivial role, while learning by training was found ineffective in effectiveness of the businesses. The author believes that competition, professional limitations, and lack of job security prevent transfer of information between colleagues. Our results are consistent, to some extents, with the results by Richard Chouke and Roger Armstrong (1998) who tried to identify the learning sources in SMEs. They found that the main learning source was learning by experiencing (905) followed by other sources such as learning by colleagues (61%), learning by trainee (43%), and learning by academic courses (41%) as the main learning sources. Another study by Mariam Kafarl (1999) showed that the main learning methods in SMEs with moderate growth rate were team learning and learning by job. Improvement of performance and informal learning are two issues of great importance in “learning by job.” Informal learning has to do with “learning new things out of daily personal and professional life.” These findings are consistent with other studies including Markoart and Alexander (1999), Poel and Fenderkroget (2003) who showed that main portion of learning at work happens through informal training and interaction with colleagues, small team works, trainee-apprenticeship relations, and opportunities provided by the networks. An internal study by KhodaieiMahmoudi R. titled “surveying the role of training courses in increasing productivity of employees in the University of Tehran” on 72 employees by comparing pretest and posttest results showed a positive and significant relationship between training and the aspects of productivity (optimum utilization of human sources, increase in organizational commitment, improved way of doing job, and increase in motivation)
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