Relationship between Learning Organization and Organizational Performance
(Empirical Study of Pharmaceutical Firms in Jordan)

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ABSTRACT
This study examined the relationship between learning organization and organizational performance in the pharmaceutical industry in Jordan. A descriptive analytical methodology was used, and a sample of (400) employees was selected representing (5) pharmaceutical firms, which were selected on the basis of size, age and location. For the purpose of the study, six core dimensions of learning organization were identified: systems thinking, shared vision, teamwork and collaboration, leadership and empowerment, organizational culture, and learning environment. For organizational performance, four scales were identified: financial performance, customer service, internal processes and learning/ growth/ innovation. Research findings indicated a strong positive relationship between learning organization and performance and between each of the learning organization dimensions and each scale of organizational performance. The study provided a number of recommendations that would help management of pharmaceutical firms to maintain and even upgrade continual learning organizations, and consequently improve performance.

Keywords: Learning Organization, Organizational Performance, Pharmaceutical Firms, Jordan.

INTRODUCTION
Business organizations are facing, at present, and will continue to face in the future, unprecedented challenges and demands. Among these challenges are: rapidly changing environment, the ever increasing environmental uncertainty, fierce competition, globalization, rising expectations and demands of various stakeholders, corporate social responsibility, ethical dilemmas, and the emergence of knowledge economy/ society/ organization. Knowledge assets have become very valuable and are considered as the main, if not the sole, source for sustainable competitive advantage. The learning organization has become a very crucial and critical factor for organizational success and effectiveness.

IMPORTANCE OF THE STUDY
Jordanian pharmaceutical industry has been steadily growing and expanding, in the international market, and playing an important role in the Jordanian economy. But, in order to keep growing and expanding, and even maintain the current position, pharmaceutical firms have only one choice: to reinforce and expand their capabilities to learn, adapt, innovate and transform themselves, i.e. to build and maintain learning organizations.

The significance of this study stems from several reasons.
First, human resources are considered the most valuable assets for any organization, particularly Jordanian firms where financial and material resources are scarce. Second, knowledge has become the main, if not the only, source for sustainable competitive advantage.
Third, the learning organization has been widely and strongly advocated as a critical and crucial factor for...
organizational performance.

Fourth, research dealing with the relationship between the learning organization and performance is scarce (Thomas and Allen, 2006). Empirical work involved with hypotheses development and testing is very limited (Johnson, 2003). Joshopora (2003) likewise, observed that “there is little evidence in the current literature to show how the prescribed forms of learning are likely to lead to increased performance among firms (Joshapora, 2003).

Fifth, most of the management of Jordanian firms are not fully aware of the critical role of a learning organization.

Sixth, to the best knowledge of the writer, very scarce empirical research has been conducted on the learning organization in the Jordanian setting, and the Arab setting, too.

Accordingly, this paper, hopefully, will make a modest contribution to the literature, at the theoretical, and empirical, prescriptive levels.

**RESEARCH PROBLEM**

The study shall examine and identify the relationship between the learning organization and organizational performance in the pharmaceutical industrial sector in Jordan. The paper will attempt to answer the following questions:

1. To what extent pharmaceutical firms in Jordan are considering learning organizations?
2. How well the pharmaceutical firms in Jordan are performing?
3. What is the nature of the relationship between learning organization and performance?

**STUDY HYPOTHESES**

Considering problem statement of the study, following are the principal hypotheses of this research:

**H1:** There is a relationship between the learning organization and organizational performance.

**H2:** There is a relationship between learning organization and financial performance of an organization.

**H3:** There is a relationship between learning organization and customer service.

**H4:** There is a relationship between learning organization and internal processes of an organization.

**H5:** There is a relationship between learning organization and learning/ growth/ innovation of an organization.

**RESEARCH PURPOSES**

The principal aim of this research was to identify the prevalent core dimensions of a learning organization, and how they are related to organizational performance, and apply this to pharmaceutical firms in Jordan. Consequently, the objectives have been to:

- Identify the current level of the dimensions of the learning organization that characterize pharmaceutical firms in Jordan.
- Assess the organizational performance of the pharmaceutical firms against prevalent performance measures.
- Examine the relationship between learning organization and performance of the pharmaceutical firms, and highlight the dimensions of a learning organization which have noticeable positive relationship with performance measure (s).
- Provide a broad framework to help management in pharmaceutical firms, and others, in practical enactment of the learning organization, leading to higher organizational performance.
- Consequently, this research, hopefully, will make a modest contribution to the literature, at both theoretical and empirical levels.
- Also, it is expected that this research will
stimulate further research in other sectors, which will help management in various organizations to become more aware of and committed to building and maintaining learning organizations.

Theoretical/Conceptual Framework

This part of the research presents a review of the literature focusing on the definition of the learning organization, organizational learning, the relationship between the two concepts, models of the learning organizational and assessing organization performance.

Definition of the Learning Organization

Senge, one of the leaders in the field of the Learning Organization (LO) defined the LO as one where: “people continually expand their capacity to create results they truly desire; new and expansive patterns of thinking are nurtured; collective aspirations are set free; people are continually learning to learn together” (Senge, 1990:3). Since Senge published his book The Fifth Discipline (1990), the concept LO has been very popular and attracted many theorists from sociology, anthropology, social psychology, management, and philosophy, who have attempted to define this concept. (Pedler et al., 1994:1) defined the learning company “as a vision of what might be possible… it is not brought about simply by training individuals; it can only happen as a result of learning at the whole organization level. A learning company is an organization that facilitates the learning of all its members and continuously transforms itself”.

Farago and Skyrme (1995) defined LOs as “those that have in place systems, mechanisms and processes, that are used to continually enhance their capabilities and those who work with it or for it, to achieve sustainable objectives for themselves and communities in which they participate.

Malhotra (1996) defined the LO as an “organization with an ingrained philosophy for anticipating, reacting and responding to change, complexity and uncertainty”. The key ingredient of the LO, Malhotra commented, is in how organizations process their managerial experiences. Overmeer (1997) viewed the LO as “a particular organizational environment facilitating individual learning, which in turn is harnessed by the organization and encourages the continuous development of new behaviors and practices”. Drew and Smith in (Teare and Dealtry, 1998) defined the LO as “a social system whose members have learned conscious, communal processes for continually generating, retaining and leveraging individual and collective learning leading to improved performance of the organizational system.

Kerka (1995) commented on the great number of attempts to define LO “there is little consensus on the definition of an LO. Five years later, Garvin (2000:9) observed that a clear definition of the learning organization has proved to be elusive. Thomas and Allen (2006) recently commented “literature indicates a little agreement on what LO or OL means and even less on how to create an LO”. A number of themes and notions can be drawn from these, and other definitions of the LO.

• Learning is required at the individual, team and organizational levels.
• Learning must be continuous.
• Learning should be goal-oriented, used to reach desired goals-individual, team and organizational.
• Individual performance must be linked with organizational performance.
• LO must foster inquiry and dialogue, making it safe for people to share knowledge openly and take risks.
• Embrace “creative tension” as a source of energy and renewal.
• LOs are continuously aware of and interact with their environment (Kerka, 1995).
• Learning combines both adaptive learning (coping) and generative learning (creating), it is not enough for an organization to adapt to change, but it is necessary, as well, to learn to create its future (Senge, 1994; Peter, 1996; Mahotra, 1996).

• What distinguishes LOs from other organizations is their ability to continually expand their respective capacities to create their future or learn and transform themselves (Watkins and Marsick, 1993).

Learning Organization and Organizational Learning (OL)

Some authors have used the term LO interchangeably with OL, while others have attempted to make clear distinctions or, alternatively, establish relationships between the two concepts. Stewart (2001) commented that the central concerns have developed along divergent tracks. The literature on OL has concentrated on the detached collection and analysis of the processes involved in individual and collective learning inside the organization, whereas LO literature has an action-orientation, and it is geared toward using specific diagnostic and evaluative methodological tools which can help to identify, promote and evaluate the quality of learning processes inside the organization (Tsang, 1997; Easterby-Smith and Arujo, 1999:2). Finger and Brand (1999) argue that OL is the activity and processes by which organizations eventually reach the ideal of an LO. For McHugh et al. (1998) OL emphasizes Human Resources Management, training, knowledge and skills acquisition, whilst the LO links to “organizational capability”, i.e. the tacit, experiential learning that often goes unnoticed in organizations. Renolds and Ablett (1998) on the other hand, argue that LO responds to and anticipates changes in the environment by proactive OL. In their view, an LO deliberately aims at improving its ability for learning and in order to learn on an organizational level it makes use of the learning of all employees, and therefore striving to create a work environment which stipulates and supports learning. In contrast, Ikehara (1999: 65) observed that “the spirit of the LO is founded on the learning processes of the individuals in the organization. However, it does not necessarily mean that it will automatically lead to LO. An LO exists when individuals in the organization continually learn not only to realize efficiency in the work, but also to develop as an individual and be creative in the organization, as it pursues its unknown future. It is not enough to learn to survive, one must enhance one’s capacity to create” (Ikehara, 1999: 65).

An elaborate and clear distinction between the two concepts was suggested by DiBella (2001). The LO concept is about building learning and knowledge creating capacity in individuals and enabling the effective dissemination of this knowledge through the organization. In essence, then, the learning organization is the product and result of a critical combination of internal change mechanisms concerned with structure, process and human capability allied to continuous environment reviews to maintain and improve performance. Conversely, OL might be described simply as the capacity or processes to get to that product or result. Argyris and Schon (1996), well-known leaders in the field, commented on the distinction between the two concepts pointing that management literature of applied orientation tends often to express the practicing consultants’ view of LO, whereas the literature of academic and theoretical orientation manifests the academicians’ view of OL, and each group uses different terminology, but they share common basic notions and themes: emphasis on the importance and vitality of learning, and that individuals and their experiences and skills are the main factor in organizational excellence. Gorlick (2005) saw a complementary relationship
between the two concepts, when she said: it is not either the LO or OL, rather OL and LO can and should coexist.... In order that an organization becomes an effective learner, there is a need for continuous learning cycle; any organization can claim that it is continuously learning and describes itself that it practices OL.

A concluding comment on the two concepts, was suggested very recently by Thomas and Allan (2006), there is little consensus in the literature on what an LO might look like, what is OL, and what is, if there is any, the relationship between LO and OL (Thomas and Allen, 2006).

**Why is the LO Important?**

In his book the Fifth Discipline, Senge (1995) argued that the old methods, efforts and procedures of quality management, learning from mistakes, process reengineering are insufficient to enable organizations to survive in the future - an organization needs to become learning.

The concept of the LO popularized by Senge (1990) has received much attention recently because it is thought to embrace many of the vital qualities for today’s organizations, i.e., teamwork, participation, flexibility and responsiveness. (Bierly et al., 2000) observed that the theme underpinning literature is that there is unprecedented need for LO capable to create, integrate and apply knowledge, such capability is critical to firms developing competitive advantage. Likewise, Robbins and Coulter (2005: 41) argued that the capability of an organization to learn and apply what it learns can be the only source for sustainable competitive advantage. Similarly, Kiernan (1999) suggested that “the ability for continual learning has become an inevitable necessity for a company to attain competitive advantage”. Farrago and Skyrme (1995) stressed that with the pace of change ever quickening, the need to develop mechanisms for continuous learning and innovation is greater than before. In general, says Ghosh (2004), "there appears a general consensus in literature that organizational learning can help achieve sustainable competitive advantage. A very recent similar argument was stressed by Keith and Allen (2006),” that is the ability to learn has become a critical factor in the firms’ capability to respond and deal successfully with market opportunities in knowledge-based economy.

Denton (1998) identified the following six factors that encourage interest in and support for LO:

1. Intellectual capital has become the most important resource instead of material resources.
2. A widely ever increasing belief that knowledge has become the main source for achieving sustainable competitive advantage.
3. Unprecedented rapid change of external environment.
4. Increasing employees’ dissatisfaction of traditional management methods based on strict orders and control.
5. Fierce competition in international business environment.
6. Organizations need to be constantly fully aware of customers’ rising and changing needs and desires, and quickly respond to them.

**Building a Learning Organization**

One of the first and most popularized models dealing with building an LO is Senge’s model. Senge (1990) identified five core disciplines needed to build an LO. These disciplines are: systems thinking, personal mastery, mental models, building shared vision, and team learning.

Senge saw "systems thinking" at the heart of his model, the whole as primary, interdependence and interaction of the parts, parts not to be taken as primary,
and stressed cyclical causation, long-term perspective, and feedback of the features of open systems perspective. Personal mastery means that organizations must encourage their employees to continuously learn and develop their skills and capabilities. Each individual must have a clear vision and long range goals, recognize clearly the gap between the vision and current situation, and be willing and determined to change the present situation.

Team learning is seen to be crucial "because teams, not individuals, are the fundamental teaching unit in modern organizations (Senge, 1990: 10). Stress is made on dialogue, team work, sharing information, constructive discussion, openness, collaboration, and free thinking as crucial in team learning.

A mental model is one’s way of looking at the world, it determines how we think and act. We need to examine objectively our assumptions and beliefs, see things as they are, never make generalization, say what we think, take criticism without being on the defensive, recognize mistakes and correct them, and never avoid risks.

Shared vision is a critical factor in organization success, and shared vision of an organization must be built from the individual visions of its members. Vision must be created through interaction with individuals in the organization not imposed by top management. Senge stressed that vision cannot be sold; for a vision to develop, members of the organization must enroll in the vision, because through enrollment members choose to participate. With truly committed members the “creative tension” – the difference between shared vision and current reality – will drive members towards organizational goals. A shared vision provides encouragement and support for members to learn and innovate. Individuals become fully aware of the current situation and committed to have great drive to change it. Senge’s five - discipline model attracted many theorists and became very popular. Commenting on this model, Gorelick (2005) observed “I believe that Senge’s five disciplines are integral components in a learning organization, providing tools and methods that are applicable and useful in the process of OL. Several models of an LO were developed extending and or drawing on Senge’s model to a greater or lesser degree. Following is a brief discussion of some of these models.

Garvin (1993) suggested that an LO is built on five core principles:

1- Systematic problem solving: using rational scientific method in analyzing problems, and relying on data.
2- Experimenting new approaches.
3- An organization should learn from its own experiences and history.
4- Learning from others’ practices and experiences, and benchmarking.
5- Effective and efficient knowledge transfer within the organization.

Garvin stressed that an organization doesn’t become an LO overnight…. rather it is the result of carefully developed attitudes and management processes accumulated and achieved slowly over many years.

Watkins and Marsick in (Cullen, 1999) identified seven principale dimensions for building an LO:

1. Creating opportunities for continuous learning.
2. Encouraging and supporting dialogue and inquiry.
3. Encouraging and supporting teamwork and collaboration.
4. Establish systems for acquiring and sharing learning.
5. Employees’ empowerment and collective vision.
6. Linking the organization with its external environment.
7. Develop leaders to be examples/models and support learning at the individual, team and organizational levels. Farago and Skyrme (1995) identified four broad characteristics of an LO:

- Learning culture: an organization climate that nurtures learning. There is a strong similarity with those characteristics associated with innovation.
- Processes: processes that encourage interaction across boundaries. These are infrastructure, development and management processes, as opposed to business operational processes.
- Tools and Techniques: methods that aid individual and group learning, such as creativity and problem solving techniques.
- Skills and motivation - to learn and adapt.

They pointed that “many learning organization initiatives are highjacked by the HR function or outside specialists. This should not be the case. Developing an LO is about doing it from within and taking a holistic systems view (Farago and Skyrme, 1995).

Goh (2003) suggested that an LO is built on five strategic foundations:

2. Leadership commitment and empowerment.
3. Experimentation and rewards.
4. Effective knowledge transfer.
5. Teamwork and group problem solving.

Daft (2004) suggested that an LO involves five main elements:

1. Horizontal organizational structure.
2. Information sharing.
3. Adaptive culture.
4. Collaborative strategy.
5. Employee empowerment.

Finally, Robbins and Coulter (2005) stressed that the characteristics of an LO revolve around the following dimensions:

1. Organizational design: boundaryless, teams, empowerment.
2. Information sharing: accurate, open, timely.
3. Leadership: shared vision, collaboration.

Robbins and Coulter (2005) observed that:

In a learning organization, it’s critical for members to share information and collaborate on work activities throughout the entire organization – across different functional specialties and even at different organizational levels. This can be done by minimizing or eliminating the existing structural and physical boundaries. In this boundaryless environment, employees are free to work together and collaborate in doing the organization’s work the best way they can and to learn from each other. Because of this need to collaborate, teams also tend to be an important feature of a learning organization’s structural design. Employees work in teams on whatever activities that need to be done, and these employees are empowered to make decisions regarding their work or resolving issues. With empowered employees and teams, there’s little need for “bosses” to direct and control. Instead, managers serve as facilitators, supporters, and advocates for employee teams.

It can be concluded from the previous discussion that the various models of the LO extend and/or draw on Senge’s five discipline models, to a greater or lesser degree. Building an LO is a challenging, slow, continuous multi-faceted process that requires continual changes in the whole organizational internal environment, including culture, structure, job design, processes, technology, human, etc.

Organizational Performance

Literature on organizational performance clearly
shows a general consensus among theorists that there is no single universal measure that can be used to assess overall organizational performance. Also, traditional financial measures are not accepted as the sole indicators for organizational performance. Moreover, we can hardly find an organization that is very successful or failure in every aspect.

Many performance measures and models have been developed and advocated by various authors, such as: profitability, productivity, efficiency, effectiveness, adaptability, growth, innovation, etc..

Hodge and Anthony (1994:268-274), classified performance criteria into three groups: efficiency, effectiveness, and humanism. Effectiveness measures include four models/approaches: goal/output achievement, resources acquisition, internal processes and satisfaction of main constituencies; these models/approaches complement each other. Robbins (1998: 483) suggested four performance indicators to assess organizational effectiveness: profit maximization, organizational ability to acquire inputs and transform them successfully into outputs, maintaining stability and balance, and identifying and satisfying customers’ needs. Kottler (2000:40), one of the leading authors in competitiveness, identified four key dimensions to achieve competitive performance: stakeholders, internal process, resources and organizational management.

Among the performance measures that received much attention is effectiveness, which is considered by many writers as a multi-dimension measure. For example, Daft (2004: 66) pointed out that organizational effectiveness included: goal approach, resource-based approach and internal process approach. Robbins and Coulter (2005:465), recently observed that the frequently used organizational performance measures include organizational productivity, effectiveness and industry ranking. They add that organizational effectiveness includes four approaches/models: goal/output achievement, systems resources, internal process, and multiple constituencies models (Robbins and Coulter, 2005:466).

One of the approaches/models of assessing organizational performance that became popular and widely applied is the "balanced scorecard". It is a comprehensive management control system that makes a balance between traditional financial measures and operation measures related to factors that are critical to the organizational success, and high concern with markets, customers and employees (Kaplan and Norton, 1992; Chow and Haddad, 1997). The balanced scorecard is a performance measurement tool that focuses on four areas: financial performance, customer service, internal processes and people/innovation/growth. These four measures are interdependent indicators/measures. Daft (2004:293) commented on this model “This model has attracted much attention and became the main management system in many giant firms, and managers can use it for setting goals, resource allocation, budget planning and rewards.”

**RESEARCH METHODOLOGY AND PROCEDURE**

This study is a descriptive analytical research; it investigates how far pharmaceutical firms in Jordan have built learning organizations, and what relationship these organizations have with organizational performance of pharmaceutical firms.

**RESEARCH POPULATION AND SAMPLE**

This research was administered with a sample of (400) participants, representing a number of pharmaceutical firms in Jordan, and (350) questionnaires were analyzed. The pharmaceutical industry was selected because it has been playing a steadily increasing role in the Jordanian economy, witnessing rapid disturbing changes, and continual product development.
and fierce competition. All this makes the pharmaceutical industry attractive and suitable for studying the learning organization and its relationship with organizational performance.

**RESEARCH INSTRUMENT**

The researcher made an extensive review of the literature on the subject presented in books, periodicals, prior studies and the worldwide web internet. This review provided a solid basis for developing the theoretical model, hypotheses and instrument (questionnaire) of the study.

A questionnaire was developed for the purpose of collecting field data, and consisted of two parts. The first part dealt with the learning organization and included (45) statements representing the 6 core dimensions of a learning organization, as follows:

1. Systems thinking: Statements 1-7
2. Shared vision: Statements 8-13
3. Teamwork and collaboration: 14-21
4. Leadership and empowerment: 22-27
5. Organizational Culture: 28-36

This part drew on and extended basically Senge's model (1990), and Watkins and Marsick's model (1992).

The second part of the questionnaire focused on organizational performance, and included (18) statements covering four performance measures, based on balanced scorecard, as follows:

1. Financial performance: statements 1-4
2. Internal processes: statements 5-9
3. Customer service: statements 10-13
4. Learning / growth / innovation: statements 14-18

The questionnaire was translated into the Arabic language which is the native language of the research sample.

Cronbach Alpha coefficients were calculated for all dimensions of the learning organization, and the results were: systems thinking (0.740), shared vision (0.792), teamwork and collaboration (0.669), leadership and empowerment (0.726), organizational culture (0.675), learning environment (0.724). Also, Cronbach Alpha coefficients for all performance measures were found as follows: financial performance (0.708), internal processes (0.779), customer service (0.715), learning/ growth/ innovation (0.64) (Table -1). The minimum accepted percentage is 60% according to Sekaran, 2006.

**Table 1. Cronbach Alpha coefficients for research variables**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Cronbach Alpha</th>
<th>Dependent Variables</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems thinking</td>
<td>0.740</td>
<td>Financial performance</td>
<td>0.708</td>
</tr>
<tr>
<td>Shared vision</td>
<td>0.792</td>
<td>Customer service</td>
<td>0.715</td>
</tr>
<tr>
<td>Teamwork and collaboration</td>
<td>0.669</td>
<td>Internal process</td>
<td>0.779</td>
</tr>
<tr>
<td>Leadership and empowerment</td>
<td>0.726</td>
<td>Learning/ growth/innovation</td>
<td>0.684</td>
</tr>
<tr>
<td>Organizational culture</td>
<td>0.675</td>
<td>Overall</td>
<td>0.8793</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>0.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.915</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RESEARCH MODEL**

The Model suggested in this paper (Figure-1) represented a synthesis/ integration of the themes and dimensions of the learning organization most frequently cited in the literature on the subject. The model attempted to provide a broad practice framework that helps practitioners to understand and build learning organizations.
Statistical Methods and Tools:
In this study, the following relevant statistical methods and tools were used:

- Cronbach Alpha coefficient: for testing the reliability of the research instrument/questionnaire.
- Descriptive statistics such as the mean and the standard deviations; for describing the participants’ responses to questions of both the independent variable (the learning organization) and the dependent variable (organizational performance).
- Pearson correlation coefficient to identify the association between the learning organization and organizational performance.
- Factor analysis: to explain the variation of respondents’ answers to questions of both independent and dependent variables.

Data Analysis
1. Learning Organization:-
Table (2) presents the means ($\bar{X}$) and the standard deviation (s) of the responses of the research sample to the statements of the independent variable (the learning organization). It clearly appears that respondents felt that their firms have been moving well toward building a learning organization, with an overall mean = 3.892. Most of the variables/statements have a mean above the mean of the scale (3); only few statements have a mean below (3).

Among the six core dimensions of the learning organization, systems thinking had the highest mean (4.17), and all the variables of systems thinking had a mean above (3). In fact, six variables of eight had a mean above (4). Thus, people saw their firms as a system interacting with the external environment, and consisting of interacting and interdependent individuals and units.

Learning environment and knowledge transfer dimension ranked the second, with a mean = 4.11. This meant that people felt strongly that the organizational environment and knowledge transfer support and facilitate building and maintaining a learning organization. Six of the variables had a mean above (4), and only two variables had a mean above (3).

Leadership and empowerment dimension came third, with a mean = 4.00, which meant that study respondents had a strong feeling that leadership and employee empowerment is an important factor in building a learning organization. Four of the variables had a mean above (4), and two had a mean above (3).

Shared vision came fourth, after leadership and empowerment, with a mean = 3.87, which is still higher than the mean of the scale (3). This meant that respondents
had a relatively strong belief that shared vision and goals contribute to building learning organizations.

Teamwork and collaboration dimension didn't differ much from shared vision, with a mean = 3.78. Three variables had a mean above (4), three had a mean above (3), and only one variable (product development projects were assigned to teams) had a mean = 2.02, which meant that product development projects and programs are individual-based, rather than team-based structure.

Last, organizational culture had the lowest mean (3.43) among the six core dimensions, which is a little above the mean of the scale. This meant that the core organizational values, norms and beliefs adhered to by employees play a relatively moderate role in building learning organizations. The lowest means corresponded to the following variables: employees’ mistakes are constructively discussed, mistakes are tolerated, and encouraging experimentation, inquiry and risk taking.

Table 2. Means and standard deviations of participants’ responses to variables of learning organization

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>X¯</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The company focuses on trends, change forces….</td>
<td>4.246</td>
<td>1.016</td>
</tr>
<tr>
<td>2</td>
<td>The company regularly examines its market position.</td>
<td>4.514</td>
<td>0.944</td>
</tr>
<tr>
<td>3</td>
<td>Employee recognizes that the company is part of a larger system …….</td>
<td>3.785</td>
<td>1.22</td>
</tr>
<tr>
<td>4</td>
<td>Employees are aware that company’s performance is largely determined by the nature of relationships and interactions among individuals and units.</td>
<td>4.269</td>
<td>1.044</td>
</tr>
<tr>
<td>5</td>
<td>The individual is concerned with the effect his/ her actions on others.</td>
<td>4.168</td>
<td>1.014</td>
</tr>
<tr>
<td>6</td>
<td>The company regularly compares its performance (benchmark) with other high performers…..</td>
<td>4.340</td>
<td>0.925</td>
</tr>
<tr>
<td>7</td>
<td>The company reviews and learns from its successes and failures ….</td>
<td>4.348</td>
<td>0.875</td>
</tr>
<tr>
<td>8</td>
<td>The company continuously contacts various stakeholders……</td>
<td>3.817</td>
<td>0.955</td>
</tr>
<tr>
<td>9</td>
<td>Employees share clear vision, mission and goals.</td>
<td>4.088</td>
<td>1.082</td>
</tr>
<tr>
<td>10</td>
<td>Company’s mission and vision have wide acceptance.</td>
<td>3.831</td>
<td>0.953</td>
</tr>
<tr>
<td>11</td>
<td>Individuals participate in developing company’s shared vision and goals.</td>
<td>2.120</td>
<td>0.325</td>
</tr>
<tr>
<td>12</td>
<td>Employees recognize the gap between company’s shared vision and current situation.</td>
<td>3.974</td>
<td>1.133</td>
</tr>
<tr>
<td>13</td>
<td>Employees are motivated and determined to achieve the common vision and goals.</td>
<td>4.505</td>
<td>0.771</td>
</tr>
<tr>
<td>14</td>
<td>Company’s mission defines the core values that employees must comply with.</td>
<td>4.614</td>
<td>0.625</td>
</tr>
<tr>
<td>15</td>
<td>Product development programs/ projects are assigned to teams.</td>
<td>3.782</td>
<td>0.941</td>
</tr>
<tr>
<td>16</td>
<td>Teams are widely used across different units and levels.</td>
<td>3.762</td>
<td>0.328</td>
</tr>
<tr>
<td>17</td>
<td>Current practices encourage employees to solve problems before discussing them with their managers.</td>
<td>3.165</td>
<td>1.414</td>
</tr>
<tr>
<td>18</td>
<td>Team members consider themselves collectively and jointly responsible for results.</td>
<td>4.323</td>
<td>1.303</td>
</tr>
<tr>
<td>19</td>
<td>Interaction and intense communication and collaboration prevail among members.</td>
<td>4.051</td>
<td>1.437</td>
</tr>
<tr>
<td>20</td>
<td>Individuals feel safe when expressing their opinions and/ or criticizing others’ opinions.</td>
<td>4.315</td>
<td>0.884</td>
</tr>
<tr>
<td>21</td>
<td>Every individual is committed to constructive dialogue to promote common understanding, not to</td>
<td>4.578</td>
<td>0.694</td>
</tr>
<tr>
<td>No.</td>
<td>Statement</td>
<td>( \bar{X} )</td>
<td>S</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------</td>
<td>------</td>
</tr>
<tr>
<td>22</td>
<td>Mutual trust prevails among individuals.</td>
<td>3.910</td>
<td>1.162</td>
</tr>
<tr>
<td>23</td>
<td>Top management supports change and welcomes new ideas.</td>
<td>4.371</td>
<td>0.961</td>
</tr>
<tr>
<td>24</td>
<td>Managers and employees share common vision and goals.</td>
<td>4.272</td>
<td>1.075</td>
</tr>
<tr>
<td>25</td>
<td>Managers accept criticism without much defensive reaction/ behavior.</td>
<td>3.685</td>
<td>1.295</td>
</tr>
<tr>
<td>26</td>
<td>Managers usually provide feedback which helps to identify problems and opportunities.</td>
<td>3.165</td>
<td>1.414</td>
</tr>
<tr>
<td>27</td>
<td>A manager encourages employees to participate in decision making and problem solving.</td>
<td>4.282</td>
<td>1.283</td>
</tr>
<tr>
<td>28</td>
<td>A manager allows employees great independence and autonomy in doing their work.</td>
<td>4.046</td>
<td>1.389</td>
</tr>
<tr>
<td></td>
<td><strong>Leadership and Employee Empowerment</strong></td>
<td><strong>4.001</strong></td>
<td><strong>1.251</strong></td>
</tr>
<tr>
<td>29</td>
<td>The company is concerned with the future and external world.</td>
<td>4.317</td>
<td>0.869</td>
</tr>
<tr>
<td>30</td>
<td>Managers and employees accept and support change.</td>
<td>4.562</td>
<td>0.694</td>
</tr>
<tr>
<td>31</td>
<td>Knowledge is considered the main resource for both the individual and the company.</td>
<td>3.897</td>
<td>1.143</td>
</tr>
<tr>
<td>32</td>
<td>Employee’s mistakes are constructively discussed to be avoided in the future.</td>
<td>2.004</td>
<td>0.434</td>
</tr>
<tr>
<td>33</td>
<td>Mistakes by employees are tolerated.</td>
<td>2.091</td>
<td>0.49</td>
</tr>
<tr>
<td>34</td>
<td>Work environment allows employees safe expression of their opinions.</td>
<td>4.371</td>
<td>0.960</td>
</tr>
<tr>
<td>35</td>
<td>Experimentation, inquiry and risk taking are encouraged.</td>
<td>2.058</td>
<td>0.328</td>
</tr>
<tr>
<td>36</td>
<td>Emphasis is placed on mutual trust, frankness and openness among individuals.</td>
<td>3.165</td>
<td>1.414</td>
</tr>
<tr>
<td>37</td>
<td>Every person is treated with care, respect and dignity.</td>
<td>4.328</td>
<td>1.303</td>
</tr>
<tr>
<td></td>
<td><strong>Organizational Culture</strong></td>
<td><strong>3.432</strong></td>
<td><strong>0.851</strong></td>
</tr>
<tr>
<td>38</td>
<td>A new employee is encouraged to question the current practices in the company.</td>
<td>4.358</td>
<td>0.879</td>
</tr>
<tr>
<td>39</td>
<td>Management gives serious consideration to new ideas submitted by employees.</td>
<td>4.589</td>
<td>0.689</td>
</tr>
<tr>
<td>40</td>
<td>An employee believes what he learns will be applied.</td>
<td>3.92</td>
<td>1.143</td>
</tr>
<tr>
<td>41</td>
<td>Creative and innovative ideas which are implemented are rewarded.</td>
<td>3.319</td>
<td>0.958</td>
</tr>
<tr>
<td>42</td>
<td>When hiring, promoting and rewarding employees, an employee’s willingness to learn and share knowledge is taken into consideration.</td>
<td>4.317</td>
<td>1.068</td>
</tr>
<tr>
<td>43</td>
<td>The company has constant plans to develop and train employees in all areas and at all levels.</td>
<td>3.718</td>
<td>1.350</td>
</tr>
<tr>
<td>44</td>
<td>The company seeks to provide all necessary actions and measures to extend and spread learning and knowledge sharing throughout the whole organization.</td>
<td>3.116</td>
<td>1.407</td>
</tr>
<tr>
<td>45</td>
<td>There is a system which allows and encourages employees to learn successful practices form other companies.</td>
<td>4.289</td>
<td>1.198</td>
</tr>
<tr>
<td></td>
<td><strong>Learning Environment and Knowledge Transfer</strong></td>
<td><strong>4.112</strong></td>
<td><strong>1.101</strong></td>
</tr>
</tbody>
</table>

2. **Organizational Performance**:-

Table (3) displays the means and standard deviations of sample responses to the statements of the dependent variable (organizational performance). Overall performance of the studied firms was high, as perceived by the research subjects. \( \bar{X} = 4.00 \). The scale that got the highest mean was financial performance with a mean = 4.241. The four indicators of financial performance had a mean above (4).

Customer service scale came second, very close to
financial performance, with a mean = 4.143. Three of the four indicators had a mean above (4).

Internal processes scale ranked the third, very close to high, with a mean = 3.99; three indicators of (5) had a mean above (4), and (2) had a mean above (3).

The lowest performance assessment by respondents was given to learning/growth with a mean = 3.652, which is still above the mean of the scale (3). Two indicators had a mean above (4), two had a mean above (3), and one indicator (development of new production methods) had a mean = 2.11.

Table 3. Means and standard derivations of participants’ responses to variables of organizational performance.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>$X^\bar{}$</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Increase in profits.</td>
<td>4.0514</td>
<td>1.437</td>
</tr>
<tr>
<td>2</td>
<td>Increase in earnings.</td>
<td>4.365</td>
<td>0.884</td>
</tr>
<tr>
<td>3</td>
<td>Sales growth.</td>
<td>4.662</td>
<td>0.694</td>
</tr>
<tr>
<td>4</td>
<td>Growth in market share compared to other competitive products/services.</td>
<td>3.900</td>
<td>1.162</td>
</tr>
<tr>
<td>5</td>
<td>Efficiency of internal processes.</td>
<td>4.371</td>
<td>0.960</td>
</tr>
<tr>
<td>6</td>
<td>Cost reduction.</td>
<td>4.331</td>
<td>1.072</td>
</tr>
<tr>
<td>7</td>
<td>Resources acquisition and utilization.</td>
<td>3.762</td>
<td>1.355</td>
</tr>
<tr>
<td>8</td>
<td>Employees’ satisfaction.</td>
<td>3.165</td>
<td>1.414</td>
</tr>
<tr>
<td>9</td>
<td>Reduction of employees’ turnover.</td>
<td>4.328</td>
<td>1.303</td>
</tr>
<tr>
<td>10</td>
<td>Customer satisfaction regarding quality and price of products provided by the company.</td>
<td>4.051</td>
<td>1.437</td>
</tr>
<tr>
<td>11</td>
<td>Customer satisfaction of company’s fast and smooth response to customer’s requests and inquiries.</td>
<td>4.357</td>
<td>0.879</td>
</tr>
<tr>
<td>12</td>
<td>Retaining present customers.</td>
<td>4.563</td>
<td>0.723</td>
</tr>
<tr>
<td>13</td>
<td>Attracting new customers.</td>
<td>3.875</td>
<td>1.071</td>
</tr>
<tr>
<td>14</td>
<td>Development and introduction of new products/services.</td>
<td>4.272</td>
<td>0.982</td>
</tr>
<tr>
<td>15</td>
<td>Improvement of current products and services.</td>
<td>4.231</td>
<td>1.062</td>
</tr>
<tr>
<td>16</td>
<td>Development of new production methods.</td>
<td>2.112</td>
<td>0.462</td>
</tr>
<tr>
<td>17</td>
<td>Introducing changes and improvements in company’s strategies policies, processes, structure and culture.</td>
<td>3.156</td>
<td>1.328</td>
</tr>
<tr>
<td>18</td>
<td>Coping and dealing successfully with various environmental changes.</td>
<td>4.285</td>
<td>1.285</td>
</tr>
</tbody>
</table>

Hypotheses Testing

Pearson’s Correlation was used to test hypotheses of the study, and the results were displayed in Tables (4) and (5).

H1: There is a relationship between the learning organization and organizational performance.

Based on Pearson’s correlation coefficient, there is a
significant positive relationship between the learning organization and organizational performance, \( (r = 0.959) \), which reflected high correlation, at \( \text{sig.} = 0.00 \).

H2: There is a relationship between the learning organization and financial performance scale.

It appears clearly from Table (4) that all of the six core dimensions of the learning organization, except shared vision, had a significant positive relationship with the financial performance of the studied pharmaceutical firms. The positive relationship was most noticeable between organizational culture and financial performance, while the weakest relationship was found between systems thinking and financial performance.

H3: There is a relationship between the learning organization and customer service.

Results in Table (5) indicated a positive relationship between each of the six dimensions of the learning organization and customer service. Noticeable correlation coefficients \( (r = 0.954, 0.931, 0.899, 0.839) \) were found between four of the dimensions of learning organization and customer service, at \( \alpha = 0.00 \).

H4: There is a relationship between the learning organization and internal processes. Correlation coefficients showed a strong positive relationship between four of the dimensions of the learning organization and internal processes of pharmaceutical firms, where \( (r) \) reached nearly 0.90 and above, at \( \text{sig.} = 0.00 \). The highest correlation coefficient was found between teamwork/collaboration and internal processes \( (r = 0.954) \), followed by the relationship between leadership and empowerment and internal processes \( (r = 0.931) \), at \( \text{sig.} = 0.00 \).

H5: There is a relationship between the learning organization and growth/innovation. A positive relationship was found between each of the six dimensions of the learning organization and growth/innovation. Four dimensions of the learning organization had significant strong positive relationship with organizational growth/innovation.

The other two dimensions (systems thinking and shared vision) had rather weak positive relationship, and \( r = 0.173 \) and \( 0.330 \), respectively.

<table>
<thead>
<tr>
<th>Table 4. Pearson Correlations Calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>IND1</strong> Pearson Correlation</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td><strong>IND2</strong> Pearson Correlation</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td><strong>IND3</strong> Pearson Correlation</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td><strong>IND4</strong> Pearson Correlation</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>Independent Variable</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>IND5</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>IND6</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

** Correlation is Significant at the 0.01 level (2-tailed).

** Table 5. Pearson Correlations Calculations **

<table>
<thead>
<tr>
<th>IND</th>
<th>DEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td>000</td>
</tr>
<tr>
<td>N</td>
<td>350</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.959**</td>
</tr>
<tr>
<td>Sig.(2-tailed)</td>
<td>000</td>
</tr>
<tr>
<td>N</td>
<td>350</td>
</tr>
</tbody>
</table>

** Correlation is Significant at the 0.01 level.

DISCUSSION

The research findings discussed above indicated a significant positive relationship between the learning organization and organizational performance at the Jordanian pharmaceutical industry. Most of the variables of the six dimensions of learning organization had a moderate-to-strong positive relationship with all the indicators of performance four scales. These findings match those of Kumar and Khairuddin (2006), and Power and Waddell (2004).

The six dimensions of the learning organization, except shared vision, had moderate-strong relationship with financial performance scale. These findings agree with previous researches carried out by Selden (1998), McHargue (1999,2003), and Power and Waddell (2004). Organizational culture dimension had the highest correlation coefficient ($r = 0.821$), followed by learning environment, with $r = 0.754$.

As for the relationship between dimensions of the learning organization and customer service, it has been found that four scales of the learning organization had strong positive relationship with customer service indicators, and the other two scales (systems thinking and shared vision) had a weak positive relationship. These findings do not differ from the findings reported by Bushe et al. (1996), Cacioppe (1998), Power and Waddell (2004), and Yagil (2002) which stressed particularly the effect of empowerment on customer satisfaction.

The relationship between dimensions of the learning
organization and internal processes does not differ much from their relationship with customer service. Systems thinking and shared vision had a weak positive relationship, whereas the remaining four dimensions had a significant positive relationship. These findings were consistent with those reported by Suzik (1998), and Bush et al. (1996), and Kumar and Khairuddin (2006).

Research findings showed a positive relationship between each of the six dimensions of the learning organization and learning/growth/innovation scale. In fact, four of the dimensions of the learning organization had strong positive relationship with learning/growth/innovation, and the other two dimensions—systems thinking and shared vision—had weak positive relationships with learning/growth/innovation. Similar findings were reported by Fytton (2004), Lopez, Peon and Ordas (2004), De Long and Fahey (2000), McHargue (1999) and Hernandez (2000), which stressed the effect of organizational culture on organization.

CONCLUSIONS AND RECOMMENDATIONS

Based on the aforementioned discussion, hypotheses testing and data analysis, following are the main conclusions and results of the study.

- Pharmaceutical firms in Jordan have developed an overall above moderate level of learning organizations, with varying degrees from one core dimension to another. The highest level corresponded to systems thinking dimension, while organizational culture got the lowest level ($X^{-}=3.43$).
- Pharmaceutical firms have developed moderate-to-high levels of most variables of the six dimensions of the learning organization. Only few variables were a little above moderate and few far below the mean of the scale (3), which will be discussed below.
- The following variables were very much below the mean of the scale (3):
- The company has constant development and training plans (Q43)
- The company provides all what is necessary to extend learning and knowledge sharing throughout the whole organization.

• Assessment of overall performance of the pharmaceutical firms, as perceived by a research sample, was relatively high. In fact, three performance scales (financial performance, customer service and internal processes) were above high level; only learning/ growth/ innovation got an assessment below high level.

Among the performance indicators which were assessed a little below high level were:

• Resources acquisition and utilization (Q7).
• Employees’ satisfaction (Q8).
• Attracting new customers (Q13).
• Introducing new policies, strategies, etc (Q17).

Only one performance indicator was below the mean of the scale (3); that was “development of new production methods” (Q16).

RECOMMENDATIONS

Considering the above – mentioned results and conclusions, the writer recommended the following:

1. Management of pharmaceutical firms in Jordan should maintain and reinforce the current levels of learning organization their firms have developed. In fact, they should keep moving steadily towards reaching a higher level of continual learning.

2. Pharmaceutical firms are currently attaining relatively high performance levels. Management should be aware that the learning levels their firms have built, have a strong positive impact on the performance levels they attained.

3. In order that pharmaceutical firms develop higher level of continual learning, and consequently attain a higher performance level, management should give prompt special attention to the following areas:

   • Managers need to discuss constructively with employees their mistakes in order to avoid these mistakes in the future.
   • Managers should be tolerant with minor and non – serious mistakes made by employees.
   • Managers need to encourage, support, and even reward experimentation, inquiry and risk taking by employees.
   • Product development/ programs should use team – based structures.
   • Individual employees must be allowed to participate in developing company’s mission, vision and goals.

4. Other areas that need to be given more attention:

   • Employees need to understand and keep into consideration the interacting and interdependent nature of relationships among individuals and units, and between the company and its environment.
   • Intense and regular contacts must be established with various stakeholders, such as owners, customers, suppliers, etc.
   • Concentrated efforts are needed to enhance and reinforce employees’ acceptance and commitment to company’s mission, vision and goals.
   • More use of teams across different units and levels.
   • Managers should welcome, accept, and even encourage criticism from their employees.
   • Regular, specific and purposeful feedback must be provided by managers.
   • Managers and employees need to recognize that
knowledge is the main organizational resource.

- Mutual trust, frankness and openness should be emphasized, nurtured and rewarded.
- Creative ideas and innovations should be encouraged, recognized and rewarded.
- Constant plans for employees’ development and training in all areas and at all levels must be in place.
- Management should undertake all necessary actions to extend learning and knowledge sharing throughout the whole company.

**Limitations and Further Research**

This study has several limitations. First, the research was carried out in Jordan, and therefore, the findings are likely to have limited application to other countries, especially non – Arab countries having different cultures. Second, due to time and other resource constraints, a limited sample was used representing just one industry – pharmaceutical. Third, only one method for data collection (questionnaire) was used. Finally, the study relied on respondents’ perceptions and individual perspectives.

This research should be seen as a starting point for research in the learning organization in the pharmaceutical industry. It is hoped that it will stimulate more interest and research in the pharmaceutical, as well as, other sectors; areas suggested for further research may include:

- Investigation of cases of successful learning organizations, and conducting longitudinal studies.
- Investigating cultural, structural, technological and human resource variables that facilitate and support developing and maintaining a learning organization.
- Examining the impact of organizational dimensions (characteristics), such as: age, size, institutionalism, etc on building and maintaining a learning organization.
- Future research should seek to use multiple research methods for data collection in order to obtain deeper and more reliable data.
- Finally, research should involve stakeholders other than employees in assessing organizational performance, such as customers, owners, etc.

**REFERENCES**


12.


(إدارة التدريس و التكوين) في الأداء التدريسي المنظم بين علاقات الأردان في الأدوية للشركات

حرب حسین

ملخص

هذى هدف الأردن في الأدوية الصناعية يختص

وصفي تحليل طريقة تطبيق وتكدس

على تشمل الموظفون منعين واختيارية. 400 أدوية شركات خمسة لتمثل موظف، كما على الاختيار تتمقد كما الأجراءا الساسيأساسي للتنظيم: النظام والتفكير، الشريك، والرؤية والتعاون، الجماعي والتنمية والعملية الإدارة التنظيمية، التعليمية، الثقافية والبيئة.

معيارات بقررية تأريخ تنفيذ الأداء جملة: المالية، والأداء الزبائن، الداخلي والخدمة، العملية ونمو وتعليم وإلى التأثير

نتيجة أشارت توافر تجايبة علاقية الأداء والتعليم المنظم بين يمكن تقوية كما قد مثلت الأدوية في تشكيل التوجيه لنسخ.

. لنفس الأدابف كي تتولى دفعًا من أجل مناجم تدريس: نهج جراف