

Antecedents and Consequences of A Learning Orientation

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This study develops and tests a model of the antecedents and consequences of a learning orientation. Results suggest that centralisation has a negative affect on a learning orientation, while market turbulence has a positive affect on a learning orientation. Results also suggest that a learning orientation has a positive affect on organisational commitment and esprit de corps, and on organisational innovativeness.

Keywords: learning orientation, innovativeness

Introduction

The concept of organisational learning is the subject of a fast growing body of literature (Fiol & Lyles 1985; Levitt & March 1988; March 1991; Stata 1992; Barrow 1993; Garvin 1993; Schein 1993; Sinkula 1994; Nevis, DiBella & Gould 1995; Cahill 1995). The literature is replete with a wide variety of definitions of a learning organisation (see Table 1).

The final definition in Table 1 is similar to that proposed by Kohli & Jaworski (1990) in their definition of market orientation. However, Kohli and Jaworski's definition of market orientation is primarily concerned with information pertaining to current and future customer needs, and not the broader type of information implied by Sinkula (1994). Similarly, Slater & Narver (1995) argue a market orientation may be too restrictive impeding learning. They suggest that "the conception of 'market' should be broadened to encompass all sources of relevant knowledge and ideas pertaining to customers and customer value creating capabilities" (Slater & Narver 1995, p68). Such an extension would facilitate the process of organisational learning, of which the ability to learn faster than competitors may be the only source of sustainable competitive advantage (deGeus 1988). Indeed, Lukas, Hult & Ferrell (1996, p233) argue that "*Organisational learning is considered by many scholars as a key to future organisational success.*" The resource-based theory of the firm (Hunter & Morgan 1995) argues that information and knowledge are the key ingredients for success (Bell 1973). In short, the ability to learn is a priority for organisations that wish to compete effectively.

Despite a growing increase in the literature on organisational learning, there are few empirical studies. The purpose of this paper is to develop and test a model of the antecedents and consequences of a learning orientation. In this study, I focus on two types of antecedent variables, external environmental variables, market turbulence, technological turbulence, competitive intensity, and internal organisational variables, formalisation and centralisation. With regards the consequences of a learning orientation, we examine organisational innovativeness, organisational commitment and esprit de corps

Table 1. Definitions of Organisational Learning

Author	Definition
Argyris (1977); Argyris & Schon (1978)	“the detection and correction of error”
Fiol & Lyles (1985)	“the process of improving actions through better knowledge and understanding”
Levitt & March (1988)	“organisations are seen as learning by encoding inferences from history into routines that guide behaviour”
Stata (1992)	“organisational learning occurs through shared insights, knowledge and mental models ... and builds on past knowledge and experience”
Huber (1991)	“an entity learns if, through its processing of information, the range of its potential behaviours is changed”
Garvin (1993)	“an organisation skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights”
Jashapara (1993)	“a continuously adaptive enterprise that promotes focused individual, team and organisational learning ...”
Bennet & O’Brien (1994)	“an organisation that has woven a continuous and enhanced capacity to learn, adapt and change its culture ...”
Nevis, DiBella & Gould (1995)	“the capacity or processes within an organisation to maintain or improve performance based on experience”
Sinkula (1994); Slater & Narver (1995)	“organisational learning is a three stage process that includes information acquisition, information dissemination and shared interpretation”

Antecedents of a Learning Orientation

Structure

Slater & Narver (1995) cite a number of authors who argue that organisations with decentralised structures (Burns & Stalker 1961), which cooperate and share information (Miles & Snow 1992), and dismantle any constraints on information flows (Woodman, Sawyer & Griffin 1993) will be more learning oriented. Aiken & Hage (1966, p506) found that highly centralised and highly formalised organisational structures are related to the absence of staff opportunities to participate in decisions concerning organisational policies, leading to alienation. Jaworski & Kohli (1993) found that both formalisation and centralisation of decision making serves as a barrier to market orientation.

In similar vein, Fiol & Lyles (1985, p809) argue that a “*centralised mechanistic structure tends to reinforce past behaviours, whereas an organic, more decentralised structure tends to allow shifts of beliefs and actions*”. Fiol & Lyles (1985) cite Galbraith (1973) who claims that lower information demand reduces the cognitive workload of the individuals, facilitating the assimilation of new patterns and associations. Meyer (1982, p533) argues that “*formalised and complex structures retard learning but that learning is enhanced by*

structures that diffuse decision influence". The above discussion leads to the following hypotheses:

- H₁: The lower the formalisation, the greater the level of learning orientation
H₂: The lower the centralisation, the greater the level of learning orientation.

Environment

In line with Jaworski & Kohli (1993) we include three environmental variables which, we argue, have an impact upon the learning orientation of the organisation. The first environmental factor is market turbulence – the rate of change in the composition of customers and their preferences (Jaworski & Kohli 1993, p57). In markets that are more turbulent, one may expect organisations to have to continually modify their products and services. Conversely, stable markets will require relatively less modification of the organisations' offerings. Thus, in more turbulent markets, organisations will need to have a greater learning orientation to both monitor and respond to changing consumer preferences. Stated formally:

- H₃: The greater the market turbulence, the greater the level of learning orientation.

A second environmental factor that may be argued to have an impact upon the learning orientation of an organisation is competitive intensity. It has been argued that in complex and dynamic environments, overload of information may occur and learning will not take place (Lawrence & Dyer 1983; Fiol & Lyles 1985). Hedberg (1981, p5) argues that "*learning requires both change and stability ... between learners and their environments*" whereas March & Olsen (1975) suggest that excessive change and turbulence impedes the ability of learners to '*map their environment*'. It has also been argued (Fiol & Lyles 1985) that for learning to take place, a degree of stress is a prerequisite. Similarly, it has been argued that stress levels and uncertainty about past successes influence perceptions and interpretations of the environment (Starbuck, Greve & Hedberg 1978; Weick 1979; Daft & Weick 1984; Fiol & Lyles 1985). These claims suggest that competitive intensity may lead to stress and uncertainty, which may reduce the ability of the organisation to learn. Thus:

- H₄: The greater the competitive intensity, the lower the level of learning orientation.

A third environmental factor is technological turbulence. Industries that are characterised by rapidly changing technology are, by definition, those industries that comprise organisations that are successful innovators. The product innovation literature is strongly linked to the concept of organisational learning (see McKee 1992). In short, technologically turbulent industries place importance on R&D and associated learning activities. We argue that in industries that are characterised by rapidly changing technology there is a concomitant requirement to have a much greater learning focus. Stated formally:

- H₅: The greater the technological turbulence, the greater the level of learning orientation.

Consequences of a Learning Orientation

Organisational Commitment

Jaworski & Kohli (1993) found that the greater the level of market orientation of an organisation, the greater the organisational commitment and esprit de corps of employees. It has been argued that in an environment in which a learning orientation is encouraged, individuals will be motivated, encouraged to learn, develop and share new skills and perspectives (Nonaka 1991). In such a learning environment, employees are more able to take risks without fear and to more fully develop their potential. This may improve the psychological and social mindset of employees and further strengthen the alliance between the individual and the organisation. Given the above discussion, we suggest the following hypothesis:

H₆: The greater the level of learning orientation, the greater the level of organisational commitment and esprit de corps.

Organisational Innovativeness

McKee (1992, p233) argues that the concept of organisational learning pervades the product innovation literature. Indeed, Cooper (1986) and Cooper & Kleinschmidt (1987) argue that management action has a strong effect on successful innovation, and that product innovation is an activity that can be learned (Cooper & Kleinschmidt 1986). McKee (1992, p235) suggests that “*evidence that organisations that learn to innovate is found in the historical decline of new product failure rates (Booz, Allen & Hamilton 1982), as well as in the ability of some firms to develop new products with more consistent success than their competitors*” (Cooper & Kleinschmidt 1987; Hopkins 1980). In short, McKee (1992) argues that organisations learn to innovate. Similarly, Slocum, McGill & Lei (1994, p35) argue that successful organisations are flexible, responsive and rapid learners and are able to produce innovative products and services, and give their customers what they want, when they want it, and where they want it. Bouwen & Fry (1991, p37) argue that the process of organisational innovation requires the capacity to learn how to translate ideas or intentions into new action.

The actual premise of the learning organisation is that it has a strategic intent to learn new capabilities and an experimental mindset (Slocum, McGill & Lei 1994); continuous education (Bennet & O’Brien, 1994); and an ability to learn from past successes and failures (Slocum, McGill & Lei 1994) which implicitly facilitate the process of innovation. Drucker (1954, p37) argues that a business enterprise has only two basic functions: marketing and innovation. Deshpande, Farley & Wester (1993, p31) found that organisational innovativeness is related to performance, and state that “*Simply put, customer-oriented and innovative firms do better*” (emphasis added). In a recent study, Hurley & Hult (1998) argue that “*a market and learning oriented culture...promotes a receptivity to new ideas and innovation as part of an organisations’ culture.*” Indeed, Hurley & Hult (1998) found that the more the group’s culture emphasises learning and development, the higher the cultural innovativeness, and thus the capacity to innovate. The above discussion leads to the following research hypothesis:

H₇: The greater the level of learning-orientation, the greater the level of organisational innovativeness.

The research reported in the following sections addresses each of these seven hypotheses.

Method

Data Collection

The study involved a mail survey of the top 2000 companies as defined by annual revenue, using the Dun and Bradstreet database. Large organisations are chosen because they are more likely to have systematic intelligence gathering, which is vital to a learning orientation. The unit of analysis is the corporation, with the CEO/Managing Directors as the key informant. A limited pilot study was undertaken to ensure that there were no problems in completing the survey instrument. A questionnaire and a personal letter were mailed to the CEO/Managing Director of the respective organisations. A second mail out two weeks after the initial mail out was conducted to improve the response rate. One hundred and thirty one questionnaires were either returned to sender due to an incorrect address, or the person had left the company. Seventy-three questionnaires were not completed, as it was company policy not to complete such surveys. In total, 268 useable questionnaires were returned, resulting in an effective response rate of 14.92%.

Informants were told that the purpose of the survey was to investigate state of the art business practices. No mention was made of either learning orientation, or any other construct. Independent sample t-tests for differences between means of the key variables were conducted to check for non-response bias. Tests were performed between early and late respondents. As per convention (Armstrong & Overton, 1977), it is postulated that the late respondents are relatively dis-interested respondents, similar in nature to non-respondents. All t-tests indicated an absence of significant differences between the means at a $p < .01$ level of significance. Thus, by this measure, the sample appears to be relatively free from non-response bias.

It is worth comparing the response rate of this study with similar studies. Kumar, Subramanian & Yauger (1998), obtained a response rate of 28.5%; Slater & Narver (1996) obtained a response rate of 23%; Pitt, Caruana & Berthon, (1996) obtained a response rate of 17%, while Oczkowski & Farrell (1998) achieved a response rate of 17.1% for privately owned companies and 29.2% for publicly listed companies. Finally, in a recent study, Slater & Narver (1997) obtained a response rate of 7%. While the Armstrong & Overton, (1977) test for non-response bias was encouraging, it must be pointed out that the response rate is relatively low compared to similar studies, and the possibility of non-response bias cannot be discounted. However, as one reviewer noted, this study is concerned with 'model testing' rather than 'parameter estimation', and as such, should be viewed accordingly.

Measures

The measures chosen for this study relied on several sources. For learning orientation, we use the measure developed by Sinkula, Baker & Noordewier, (1997). According to Sinkula, Baker & Noordewier (1997, p309), "*one can conceptualise a learning orientation as giving rise to that set of organisational values that influence the propensity of the firm to create and use knowledge.*" Thus, they argue, a learning orientation influences the degree to which an organisation is satisfied with its theory in use, and the degree to which proactive learning occurs. Building on this, they argue that there are three organisational values associated with

the predisposition of the firm to learn: commitment to learning, open-mindedness, and shared vision, (see Senge 1990; Day 1991, 1994; Tobin 1993). In sum, Sinkula, Baker & Noordewier (1997 p309) argue that these core components reflect the learning orientation construct. A commitment to learning is important because if an organisation places little value on learning, little learning is likely to occur (Norman, 1985; Sackman 1991). Similarly, for learning to occur, then unlearning must be at the centre of organisational change, and open-mindedness is an organisational value that may be necessary for unlearning efforts to transpire. Finally, shared vision influences the direction of learning and is crucial in building a comprehensive learning orientation. Indeed, Sinkula, Baker & Noordewier (1997) note that it is widely agreed by many scholars that shared vision is crucial for providing a focus for learning that generates energy, commitment and purpose among organisational members.

The actual measure of learning orientation is an eleven-item scale, of which four items measure commitment to learning, four items measure shared vision, and three items measure open-mindedness. The items were measured on a 1-7 scale, with 1 = 'Not at all', and 7 = 'To an extreme extent'. Sinkula, Baker & Noordewier (1997, p312-313) found strong evidence of both convergent and discriminant validity of the scale.

Measures of formalisation, centralisation, market turbulence, technological turbulence, competitive intensity, organisational commitment and esprit de corps were adopted from Jaworski & Kohli (1993). The measure of organisational innovativeness was adopted from Hurley & Hult (1998). We also included a measure of transformational leadership, which was adopted from the Multifactor Leadership Questionnaire (MLQ) scale developed by Bass & Avolio (1994). This measure was included because theories of leadership consistently demonstrate that transformational leadership may affect esprit de corps and organisational commitment. This leadership scale has been used extensively in the leadership literature. Note that the scale for leadership is subject to copyright, and is therefore not reported. However, we briefly describe the construct of transformational leadership.

According to Bass & Avolio (1994) transformational leadership is seen when leaders stimulate interest among colleagues and followers to view their work from new perspectives; when leaders generate awareness of the mission or vision of the team and organisation; when leaders develop colleagues and followers to higher levels of ability and potential and finally, when leaders motivate colleagues and followers to look beyond their own interests toward those that will benefit the group. The measure of transformational leadership is a multi-item measure that comprises the following sub-constructs: idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. See Bass & Avolio (1994) for a further discussion.

Data Analysis

The scales were refined using the responses to the main survey. Cronbach's Alpha was used to assess the reliability of each of the measures. Items were eliminated from their respective scales if their removal resulted in a higher Cronbach's Alpha. The Alpha of all scales exceeded the cut-off of .70 recommended by Nunnally (1967). The items were then factor analysed to check for their convergent and discriminant validity. All items of a scale should load strongly on a single factor to demonstrate convergent validity and load weakly on other factors to demonstrate discriminant validity. The results of the factor analysis provide evidence of both convergent and discriminant validity.

Data was analysed using ordinary least squares multiple regression. Finally, multicollinearity was determined by examining the variance inflation factors (VIF) for each of the regression coefficients. All of the VIF scores were well below the cut-off of 10, “*suggesting that multicollinearity is not a likely threat to the substantive conclusions drawn from the parameter estimates*” (Neter, Wasserman & Kutner, 1990). Table 2 contains the means, standard deviations, correlations and Cronbach Alpha’s of the measures used in the study.

Table 2. Means, Standard Deviations, Correlations and Cronbach Alpha’s of the measures used in this study

Constructs	Mean	Stand. Dev.	V ₁	V ₂	V ₃	V ₄	V ₅	V ₆	V ₇	V ₈	V ₉	V ₁₀
Learning Orientation	4.90	.88	(.91)									
Centralisation	2.11	1.07	-.343**	(.86)								
Formalisation	3.20	.69	-.001	.149*	(.71)							
Market Turbulence	3.51	1.08	.215**	.067	.110	(.73)						
Technological Turbulence	4.84	1.54	.133*	-.006	-.114	.392**	(.88)					
Competitive Intensity	4.89	1.23	.164*	-.004	.080	.241**	.250**	(.80)				
Innovativeness	5.55	.91	.553**	-.441**	-.048	.140*	.243**	.191**	(.79)			
Organisational Commitment	5.17	.89	.507**	-.250**	.092	.092	.041	-.018	.401**	(.82)		
Esprit de Corps	4.78	1.00	.632**	-.348**	.025	.177**	.136*	.091	.450**	.708**	(.87)	
Transformational	3.18	.39	.385*	-.233**	.089	.096	.140*	.200**	.330**	.335**	.383**	(.82)

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

*Correlation is significant at the 0.05 level (2-tailed)

Cronbach Alpha’s in Parentheses.

Results and Discussion

Antecedents of a Learning Orientation

The following discussion is based on the results in Table 3. The results are varied and provide partial support for the study hypotheses. Contrary to the hypothesis, no evidence was found to support the hypothesis that lower levels of formalisation lead to higher levels of a learning orientation. It was argued that formalisation would inhibit the ability of the learning orientation of the organisation, through its emphasis on formal rules and regulations. This contradicts the argument by Jaworski & Kohli (1993) that properly designed rules may facilitate a market orientation (which is a narrower form of learning).

Results support the hypothesis that lower levels of centralisation lead to higher levels of learning orientation, ($b = -.35, p < .01$). This supports the argument that highly centralised organisations tend to inhibit the ability of the organisation to allow shifts of beliefs and actions and thus inhibit organisational learning. This supports the finding by Jaworski & Kohli (1993) that centralisation acts as a barrier to market orientation, which we argue is a narrower form of learning (see Slater & Narver 1995, p68 for a discussion of how a market orientation is a narrow form of learning).

Three environmental variables were thought to have an impact on the learning orientation of an organisation: market turbulence, technological turbulence, and competitive intensity. Contrary to our hypotheses, neither technological turbulence nor competitive intensity had a statistically significant affect upon the dependent variable, learning orientation. This is surprising given that it was argued that markets that are more technologically turbulent would result in a need for a stronger emphasis on a learning orientation. Similarly, it is not clear why the level of competitive intensity was found to not affect the level of learning orientation, given the argument that competitive intensity may affect the ability of the organisation to learn. However, these findings are similar to those in a recent study, where the same variables were found to be not statistically significant (Oczkowski & Farrell, 1998).

Table 3. Antecedents of a Learning Orientation

Independent Variables	Hypothesised Relationship	Beta Value	t	Sig t
Formalization	-	.02	.378	.706
Centralisation	-	-.35	-5.83	.000
Market Turbulence	+	.21	3.17	.002
Competitive Intensity	-	.08	1.25	.210
Technological Turbulence	+	.03	.481	.631

$R^2 = .18, F = 10.27, \text{Sig } f = .000$

In contrast, there was support for the hypothesis that the greater the market turbulence, the greater the level of learning orientation, ($b = .24, p < .01$). This supports the argument that in more turbulent markets, organisations may have to modify their offerings more frequently, and will thus need a greater learning orientation to monitor and stay abreast of changing consumer preferences.

Consequences of a Learning Orientation

The following discussion is based on the results in Table 4. Overall, results provide strong support for the hypotheses. Results provide support for the hypothesis that a learning

orientation affects organisational commitment, ($b = .44, p < .01$) and esprit de corps, ($b = .57, p < .01$). The study also argued that learning oriented organisations have environments in which individuals are encouraged to learn, are motivated, develop and share new skills, thus leading to a stronger alliance with the organisation, and a greater team spirit. Similarly, although not a specific hypothesis of the study, transformational leadership was found to affect both organisational commitment, ($b = .16, p < .01$), and esprit de corps, ($b = .15, p < .05$), which is consistent with theories of leadership. Thus, the results indicate that a learning orientation may foster a learning environment and further strengthen the alliance between the individual and the organisation, in the form of greater organisational commitment and esprit de corps.

Table 4. Consequences of a Learning Orientation

Independent Variables	Dependent Variables		
	Organisational Commitment	Esprit de Corps	Organisational Innovativeness
Learning Orientation	.44***	.57***	.55***
Transformational Leadership	.16***	.15***	
R ²	.28	.41	.30
F value	47.84	85.65	109.06
Sig F	.000	.000	.000

* $p < .10$

** $p < .05$

*** $p < .01$

Results also provide strong support that the level of learning orientation ($b = .55, p < .01$), affects the level of organisational innovativeness. This is consistent with findings by Hurley & Hult, (1998), and suggests learning oriented cultures are strongly linked to the concept of innovation.

Conclusion

Managerial Implications

The purpose of this study was to empirically test several hypotheses regarding the antecedents and consequences of a learning orientation. The study found that lower levels of centralisation lead to higher levels of a learning orientation. Given this result, and the finding by Jaworski and Kohli (1993) that centralisation acts as a barrier to market orientation, it may be argued that low levels of centralisation are conducive to allowing shifts of beliefs, and generally facilitating a learning environment. If this is accepted, then managers may consider encouraging greater de-centralisation within their organisation. The results from this study are encouraging, and further promote the idea that de-centralisation may lead to better information flows, thus enhancing learning.

The study also found that markets that were more turbulent, tended to have organisations that were more learning oriented. For managers, this suggests that in turbulent markets, organisations may need to be more learning oriented to stay abreast of the latest developments and changes in consumer behaviour. However, this is speculative, and warrants further investigation.

Despite the enormous challenge facing senior managers in developing a learning orientation, the rewards are high. Firstly, this study suggests that learning oriented organisations generate greater commitment from their employees, and a greater esprit de corps. This suggests that managers may be able to derive internal organisational benefits, in the form of committed employees, as a result of their organisations being more learning oriented. Although speculative, it may be argued that a learning oriented culture is able to generate commitment and esprit de corps from employees, by allowing employees to take risks without fear, and encourage them to learn. However, a degree of caution is required in interpreting these results, as employees were not surveyed. It may also be argued that managers in organisations that are more learning oriented, perceive their employees to have greater commitment and esprit de corps.

With regard innovation, the study found that a learning orientation has a positive impact on the innovativeness of the organisation. This is consistent with the idea that innovation and learning are inextricably linked, and is consistent with recent findings by Hurley & Hult (1998). Given the findings by (Deshpande, Farley & Webster, 1993) that organisations that are more innovative tend to be more profitable, then results from this study suggest that one way of becoming more innovative, and hence more profitable, is to encourage greater levels of a learning orientation within the organisation.

Limitations and Future Research Directions

There are several limitations with the study. First, the cross-sectional nature of the data does not permit us to determine whether organisations have actually learned. Although innovativeness is a useful proxy for organisational learning, future research may consider improving measures in this area. The response rate is also a major limitation of the study, as was discussed earlier, and should be taken into account in interpreting the results. Clearly the key measures of a learning orientation measure the perceptions of one key informant, at a specific moment in time. Given this, it would be revealing to determine an organisation's current level of this key construct, and then track any changes with use of a longitudinal study. This would provide us with a much clearer picture of the nature of organisational learning, how it evolves over time, and more specifically, how it manifests itself. It is also worth noting that CEO's and not lower level employees completed the survey. This may have some effect upon the results. Further research may consider including responses from various levels in the organisation.

Finally, it has been argued that organisational learning may be the key to future organisational success, (Lukas, Hult & Ferrell, 1996). Future research should examine the relationship between a learning orientation and profitability, in a similar vein to the literature on market orientation and profitability. Such research may also examine the relative effects of a market orientation, a learning orientation and profitability, which may provide interesting guidelines for practising managers.

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