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Impact of External Environment on Triple-loop Learning in the Context of Universities

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Abstract: *The purpose of the study was to see how the external environment affected triple-loop learning at institutions. The research was based on the Bruke-Litwin organisational change model. The study's goals were to: (1) determine the state of triple-loop learning in educational institutions; and (2) determine the status of triple-loop learning in educational organisations (universities) (2) Determine how the external world affects triple-loop learning. The survey method was chosen for a descriptive study with a quantitative approach. The survey included 4195 respondents from the faculties of natural and social sciences, with a sample size of 377 of the total population and 300 responses obtained. The data was analysed using descriptive statistics and regression analysis. According to the findings, the external environment has a favourable impact on people.*

Key Words: External Environment, Triple-loop Learning, Bruke-litwin Model

Introduction

Any organization's ability to function effectively has always been influenced by the external environment. The external environment is not only beneficial to an organization's working conditions, but it also has an impact on trends and changes within it, as the external environment is the foundation of all organisational transformation. It has direct or indirect control over every area of a company (Muscalu, Iancu, & Halmaghi, 2016).

Many theories have been developed in this field, but the focus will be on Argyris and Schon's typology organisational learning. According to them, three levels of organisational learning have been established in accordance with degrees of transformation, commitment, and questioning, and these are the single, double, or triple loop organisational learning stages. Triple-loop learning is a paradigm that focuses on long-term organisational changes that have a positive influence. Transformational learning is another name for triple-loop learning (Tosey, Visser & Saunders, 2012; Kwon & Nicolaides, 2017). According to the principle, an organization's major and minor features should be changed for greater success. Organizational learning focused on the core change of an organisation is known as triple-loop learning. Argyris and Schon introduced single-loop and double-loop learning before introducing triple-loop learning. Triple-loop learning includes single-loop and double-loop learning.

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Single-loop learning is a method by which businesses can grow and learn without having to fully change their action framework or future strategy. Bateson defines learning as "a change in the characteristic of error-correction reactions within a set of possibilities" in the following paragraph. As a result, most institutions adopt single loop learning to overcome problems and concerns while maintaining their pre-determined objectives. Because of the methodical approach to learning in a single-loop, problems are solved at the outset, and changes in the institutional environment are properly adjusted. The single-loop learning method not only overcomes but also attempts to remove deficiencies in any institutional organisation.

Double-loop learning is a methodical process that occurs when an organisation decides to examine its strategic goals while keeping its framework for action in mind. This is a sort of learning in which the entire system is focused on "the introduction of unexpected stress, a breakup, or a dose of chaos that drives the organisation to adapt its way of thinking in order to face it." It also mentions that "this form of learning process drives the company to re-examine its underlying assumptions." In the same way, the double-loop learning theory emerges, which is defined as "a correction in all the alternatives, as opposed to basic loop learning, which essentially consists of adjusting tactics within a frame of reference and continuous performance requirements." Such a learning process necessitates a shift in form, which entails intense attention and variation along the lines of maximal performance. Such a learning process necessitates a shift in form, which entails intense attention and variation along the lines of maximal performance. It is through such a learning process that the conflict between the methods used and the method chosen is distinguished. As a result, double-loop learning is exclusively defined as follows: "Organizational investigations that resolve the incompatibility of the organization's norms by defining new priorities and reallocating the weight of standards or by redesigning the standards themselves with new methods and presuppositions will be referred to as double-loop learning."

It is a process that involves not only a change in the organization's beliefs and values but also an effective transformation that influences the action framework of any company. "The triple loop learning process necessitates a radical rethinking of one's own identity," it says. "Learning at the third level," according to numerous authors, "involves integrating development processes into our analysis, thinking, problem-solving skills, and philosophy." We no longer need to modify the company's aims, plans, or structures; instead, we need to change ourselves and our way of thinking. It's the growth of essential self-criticism, questioning, and cognitive processes, as well as the definition of the meaning we want to give our activities." Taking the aforementioned concept into consideration, three learning processes can be linked to it, and they are as follows.

1. Single-loop learning results in pointing and fixing an error in the first order. This correction may consist of adjusting the value according to the scenario at this point.
2. Second-order double-loop learning results in pointing and correcting, and the correction can also include alteration of the basic plan at this level. Along with all of this, there is also questioning of organisational standards and identification of a basic framework. The third-order or triple loop learning process is based on combining the two single loop and double loop processes.
3. The triple-loop process thus translates to "questioning the organization's identity and reason for existence, as well as the leaders' cognitive structures." "Triple-loop learning is a sort of double-loop reasoning about double-loop learning," Peschl (2007) proposed.

A stagnant environment cannot survive successfully. Hence continuous change is required for an organization's sustainability. Change in an organisation with new trends enhances the achievement of organisations in

the competitive environment, leading to progress and advancement. Organizational learning is the concept of bringing improvements and advancements to all aspects of a company. Organizations used to focus on organisational learning to become more practicable and advanced in order to make greater progress. Learning as a means of knowledge management is beneficial to both the individual and the company (Liao, Fei & Liu, 2008). Learning is the first step in gaining information. Hence knowledge and learning are mutually beneficial. When the organization's foundation is built on learning, it exhibits ongoing change. Previous research has shown that learning in companies has significant benefits (Keskin, 2006; Ussahawanitchakit, 2008; Noruzy et al., 2013), as learning organisations have the ability to alter in response to global dynamics.

Competitive environments boost the competitiveness of human capital-based enterprises all around the world (learning and knowledge). As previously said, learning is the foundation of knowledge hence learning organisations exist to develop knowledge in order to remain in a competitive market (Hult et al., 2003). In short, information gained via learning is a positive characteristic of a learning company, which it holds and expands with world change. By keeping an eye on the changing external environment, a learning organisation is always focused on improving individual, team, and organisational performance (Saru, 2007). When it comes to organisational transformation, triple-loop learning shows that mission/strategy, leadership, and culture are more essential than structure, management techniques, and systems. Because the responsibility of the leader is more than just communicating about new tactics, effective change requires efficient and powerful leadership (Burke and Litwin, 1992). The strategy and leadership performance must be in sync with the culture, and cultural transformation must be well-planned.

The role of leadership in the learning process, as well as the adoption of all three loops, is critical. Leader performance demonstrates a method of learning how to learn. They have a firm concept of why they should learn. They understand the reasons for learning, action, reasoning, and implementation, but not the level of power they wield. Leaders offer a variety of learning opportunities to others and even recognise their shared knowledge and growth. Leaders are more likely to follow critical thinking and logical analyses. Therefore,. Therefore the culture develops into a varied learning culture. The transformation of an organisation begins when employees develop a sense of leadership. Learning insight helps organisations grow and evolve. They keep track of all three levels of learning without informing their superiors or subordinates.

The organisational transformation also necessitates capable personnel. In a learning organisation, each individual requires motivation. Individuals must be motivated by organisations placing a value on their ideas and labour, as well as meeting their needs for improved performance (Plummer, 2001). Many sorts of motivation exist, but the type to be followed is determined by the organisation, whether positive or negative, intrinsic or extrinsic. Employees who are intrinsically motivated take ownership of their work and dedicate their heart, mind, and effort to the firm. Because of the drive to boost productivity, changing the corporate culture from negative to positive may necessitate some changes in the compensation and reward process. Overall, transformational learning aimed to increase organisational production through improving learning and bringing knowledge into the organisation.

For institutes, managing assessment for learning at the institutional level is a difficulty. At various levels, all three learning loops are equally crucial to assess. Assessment points the way for corporate learning and identifies new paradigms to adopt. Many additional elements play a role in intervening if "triple-loop learning was frequently found to be incomplete, and transformations were constrained at both the temporal and organisational dimensions"

(Johannessen et al., 2019). Knowledge management, which includes knowledge creation, sharing, and culture for the knowledge process, also helps to keep the learning process running smoothly. In the assessment of triple loop learning (Fabricius & Cundill, 2014), the blend and shift between all of the listed contributors of the process often behave as a fluid, making it difficult to distinguish between them.

A robust workforce that works with competence is also required for organisational change. Individual motivation is required in learning organisations. Individuals must be motivated by organisations that value their ideas and labour while also meeting their needs in order to achieve progressive performance (Plummer & FitzGibbon, 2004; Kravetz, 1988; Oldham & Hackaman, 1981). Overall, transformational learning aims to improve the organization's production through boosting its learning and knowledge.

Triple-loop learning is the most recent and widely used method in businesses and institutions around the world. It assists individuals in growing and developing a deeper awareness of a situation, resulting in a shift in perspective and transformative change. People think about how they think about the "rules" in this case, not just whether the rules should be modified. In Pakistan, however, this trend is still missing and is not being followed, resulting in many issues and challenges for organisations. This level of learning necessitates an examination of the values and principles that guide actions, challenging us to understand how problems and solutions are related, even when separated by time and space. It also pushes us to think about how our earlier behaviours contributed to the current state of affairs. To keep up with changing global trends, organisations must adapt their learning and knowledge. The goal of the proposed research was to determine the impact of the external environment on triple-loop learning.

Objectives of the Study

The study objectives were to

1. Identify the status of triple-loop learning status in educational organizations (universities).
2. Find out the impact of the external environment on triple-loop learning.

The study's framework will be the Argyis and Schon model for triple learning. According to Argyris and Schön (2002), the third type of learning is "deutero learning" (Bateson, 1942), sometimes known as "triple-loop learning," which emphasises the possibilities of "learning about learning" or "learning to learn" as well as "learning lessons from experience."

The Bruke-Litwin model was employed to perform this study, and it focuses on organisational transformation by utilising all twelve elements. Transformational, transactional, and individual or personal elements are the three phases of the approach. The transformational phase affects transformational elements by causing change in the external environment (mission & strategy, leadership and organisational culture). The second phase of this paradigm is the transactional phase, which has an impact on transactional elements such as an organization's structure, management practises, and systems. In the third phase, referred to as the individual and personal phase, both preceding stages (transformational and transactional) work together to bring about change. Below is the model, complete with all phases and factors.

Overall, triple-loop learning incorporates both single- and double-loop learning, as well as a great deal more. As a result, triple-loop learning emphasises the ability to use both single- and double-loop learning. It calls into question conventional learning frameworks, models, and assumptions. The learning extends beyond patterns and insights to include context. We discover new ways of learning and make new commitments when we use triple-loop learning.

Learning how to learn through reflecting on how we learn is referred to as triple-loop learning. There will be a paradigm change to cope with all challenges, issues, and prospects as a result of the learning that goes beyond

insights and patterns. Triple-loop learning can be used to create novel and effective solutions to long-standing or difficult problems. Individuals and organisations can discover how they need to be different to accomplish transformative change through triple-loop learning.

Triple loop learning, especially at the level of higher education institutions and stakeholders, leads to incredible learning processes. From the goal through the transformation into a progressive developmental institution, triple loop learning must be studied and implemented. Triple-loop learning is the most recent and widely adopted trend among institutes. It not only assists international organisations and institutions in progressing and growing, but it also fosters a profound comprehension of any topic, resulting in a paradigm change. There will be a paradigm change to cope with all challenges, issues, and prospects as a result of the learning that goes beyond insights and patterns. Triple-loop learning can be used to create novel and effective solutions to long-standing or difficult problems.

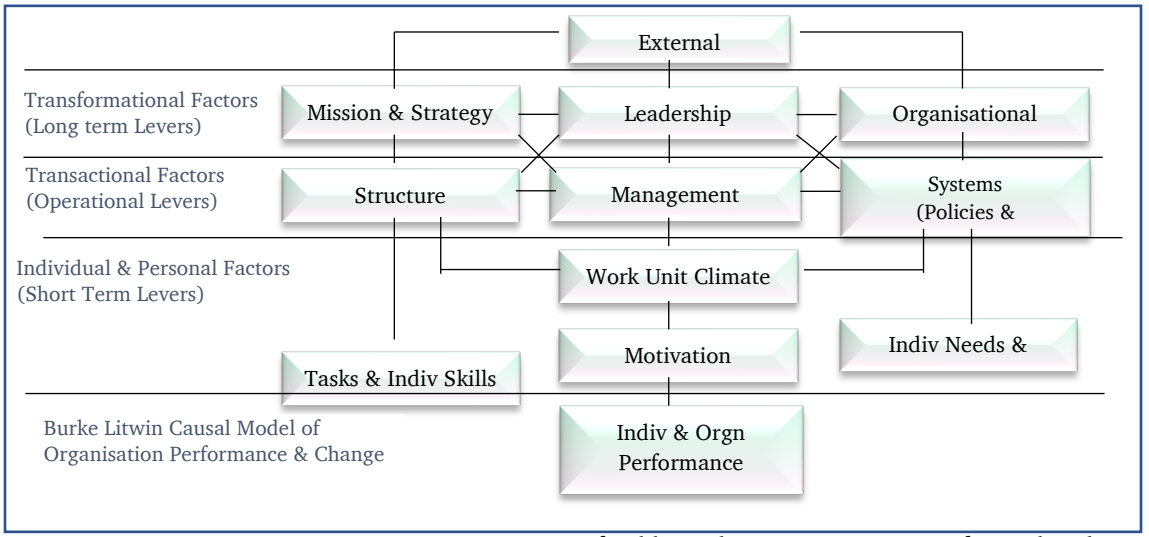
Stakeholders such as industry for skill utilisation and academia for critical bridging must work on triple loop learning and continue to amend. Higher education institutions can start introducing new programmes based on industry needs by studying and analysing the present system in the context of triple loop learning. Policymakers can gather data and information to support policies based on paradigm shifts. Following detailed assessments of system reviews and consideration of institutions' transformational journeys, educational policies can be derived from the findings. Participate in globalisation while keeping an eye on reforms based on triple loop learning processes could lead to

Methodology

Following methodology and procedure were followed for the study

Research Design

The study was based on descriptive survey research and the quantitative approach was used for the analysis. The study was on triple-loop learning theory and the model used to analyze change was the Burke-Litwin model, which contains twelve key components.



Population

The population of the study was the faculty of natural sciences and faculty of social sciences of public and private universities of Rawalpindi and Islamabad city. The total population of natural science and social science was 4195.

Sample and Sampling Technique

A stratified proportionate sampling technique was used for the study and the total sample size was 377 or 9%, taken from the entire population.

Instrument of the Study

A standardized questionnaire was used for the study. The permission was taken from the developer of the questionnaire. The 5-point Likert scale was used in the study.

Data Collection

The questionnaire was distributed to the respondents of the study and the received questionnaire was 300 or 7.16%

Data Analysis

The data were analyzed by using descriptive statistics and regression analysis to achieve the objectives of the study.

Results and Interpretation

The analysis has been done with the use of the SPSS program. The data analysis with its interpretation is given below.

1. Identify the triple-loop learning status of educational organizations (universities).

Table 1

Factors/components		Mean values	Cumulative Mean Value	TRIPLE-LOOP LEARNING
Transformational factors	Mission and strategy	3.865		
	Leadership	2.137	3.255	
	Culture	3.761		
Transitional factors	Structure	3.013		
	Management practices	3.052	3.385	
	Systems	4.091		3.367
Individual and personal factors	Work group climate	2.811		
	Task requirements/individual skills	4.095	3.437	
	Motivation	3.440		
	Individual needs and values	3.401		

Transformational Factors

Transformational factors have three components; mission and strategy, leadership, and culture. Results show that the mean value of mission and strategy was 3.865, leadership mean value was 2.137 and culture mean value was 3.761 and the cumulative mean value of transformational factors was 3.225

Transitional Factors

Transitional factors include three components; structure, management practices, and systems. The mean values shown in the result; structure mean value was 3.013, management practices mean value was 3.052 and the mean value of systems was 4.091, while the cumulative mean value of transitional factors was 3.385.

Individual and Personal Factors

individual and personal factors contain four components which are workgroup climate, task requirement/individual skills, motivation, and individual needs and values. The mean value of workgroup climate was 2.811, task requirement/individual skills mean value was 4.095, motivation mean value was 3.440 and the mean value of individual needs and values was 3.401, whereas the cumulative mean value of individual and personal factors was 3.437.

These three factors jointly lead towards triple-loop learning and the result shows that

the mean value of triple-loop learning was 3.367

Table 2. Assess the Effect of the External Environment on Triple-loop Learning Practices

Variables	Coefficient	Std.error	t-Statistics	Prob.
Constant	6.094	.192	31.693	.000
External environment	.706	.050	14.218	.000
R-squared	0.764216		F-statistic	202.158
			Prob (F-statistic)	.000

Y (TLL) = β0 + β1X1 (EE)

= 6.094 + .709

Y (TLL) = Dependent Variable (Triple Loop Learning)

β0 = Constant

β0 β1 = Parameters

X1 (EE) = Independent Variable (External Environment)

The result shows that 1 unit increase in the independent variable (External environment) will lead to an increase of .709 in the dependent variable (Triple Loop Learning). There is a positive relationship between Y and X1.

R-squared shows the variation in the dependent variable due to the independent variable which is 0.76 %. F- Stat is significant because the P-value of F- stat is less than 5%; therefore, the external environment influences the dependent variable (triple-loop learning).

Conclusion

It is concluded from the results about transformational learning that the leadership of the organization was weak and needed to be strengthened and the structure of an organization needs more importance from transitional learning. The results also concluded from personal and individual factors that workgroup climate needs more attention from other components. Of all three main factors, the leadership of the organization was the weakest one. Furthermore, the external environment has a positive effect on triple-loop learning.

Recommendations

The change in an organization is necessary as the world trends change every moment. Therefore, organizations need to update their basic key components of the organization by keeping an eye on changing things worldwide for better performance and progression in the organization.

The study shows that among transformational factors, the leadership was the weakest one; therefore, to strengthen leadership, there is needed to train the leaders and enhance their leadership qualities by increasing their communication skills by encouraging them to read books and dialogues. The leaders also need to build a relationship with their good and polite behavior; other qualities that enhance leadership are practicing discipline, transparency, taking responsibility, admitting failure & strengthening weaknesses. For all this, the organizations need to conduct seminars and training sessions and the most important thing is that an organization needs to choose the correct person who has the required leadership skills.

The study shows that the external environment has a positive effect on triple-loop learning which means the organization needs to update them according to changing world trends.

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