

THE IMPACT OF DYNAMIC CAPABILITIES ON TEACHING STRATEGIES IN HIGHER EDUCATION

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ABSTRACT

Dynamic capabilities are directed at generating, acquiring, integrating, and disseminating knowledge for reconfiguring processes. The purpose of this study is to investigate and develop a model of the way teaching strategies are shaped, in times of crisis, by dynamic capabilities. The contribution of this study is to apply the theoretical framework of dynamic capabilities to the field of higher education and to develop a model which demonstrates the role of dynamic capabilities in developing teaching strategies in times of crisis. This model can then be applied to the world of education. The data is from 16 academics in this qualitative research study who participated in focus groups. The data is analysed using content analysis and inter-rater reliability. The main finding is an empirically proven model showing the adoption of new teaching strategies through dynamic capabilities, namely agility, sensing, shaping, seizing and reconfiguring opportunities and threats. Dynamic capabilities shape new teaching strategies in a context of organisational support, learning, reflection, experience and students feedback. This study provides a number of practical recommendations for academics and higher education management.

Keywords: VUCA, Teaching Strategies, Dynamic Capabilities, Higher Education, Qualitative Research.

INTRODUCTION

A time of crisis, characterized by unpredictability and turbulence, tests every industry's and sector's ability to transform and reconfigure. The context of the current study is the COVID-19 pandemic that is described by Schoemaker et al. (2018) as a VUCA context. The VUCA context is characterized by volatility, uncertainty, complexity and ambiguity, hence the acronym VUCA. Schoemaker et al. (2018) describe the VUCA context as one of turbulence, upheaval, insufficient insight, and insufficient foresight. In recent times, this turbulence affected all sectors, including the education sector, as institutions found themselves quickly shifting from traditional face-to-face teaching to fully online teaching environments. The protagonists of this study are educators in tertiary education that shifted from teaching face to face to teaching online in a swift and agile manner to respond to critical times.

The purpose of this study is to investigate the way teaching strategies are shaped, in times of crisis, by dynamic capabilities, and to develop an empirically proven model. The research question is: How do dynamic capabilities shape teaching strategies in times of crisis? Dynamic capabilities are those competencies that help units extend, modify, and reconfigure their existing operational capabilities into new ones that better match the changing environment. Dynamic capabilities are directed at generating, acquiring, integrating, and disseminating knowledge for

reconfiguring organizational processes (Pavlou & El Sawy, 2011). In this study dynamic capabilities are researched as those capabilities that help teachers transform and reconfigure their teaching strategies and capabilities to rapidly match an environment that is marked by volatility, uncertainty, complexity and ambiguity.

The contribution of this study is that although the theory of dynamic capabilities is the theoretical framework to many studies in the field of business, in this study this theory is applied to the world of education and a model is put forward on the role of dynamic capabilities in education. In literature dynamic capabilities have been applied to: product development, strategic decision making, and alliancing (Eisenhardt & Martin, 2000); strategic competitiveness (Winter, 2003); entrepreneurship (Zahra et al., 2006). In the current study dynamic capabilities are applied to agile changes in teaching strategies in times of crisis.

LITERATURE REVIEW

The Theory of Dynamic Capabilities

The theory of dynamic capabilities was initially introduced by Teece et al. (1997) to challenge and reinforce existing dominant strategic management models. These paradigm approaches were presented to suggest sources of competitive advantage. Namely, Porter's (1980) competitive approach and the strategic conflict approach introduced by Shapiro (1989) focus on strategic positioning products in the markets. Porter (1980) suggests firms analyze competitive forces and take actions to defend product and market share while Shapiro's (1989) theory concentrates on investments, pricing strategies, and information control to keep an advantage over the rivals. Other types of paradigms include resource-based approaches, also known as efficiency-based strategies. They are also considered as routes to achieve sustainable competitive advantage. These efficiency-based approaches highlight the importance of company-specific competencies and resources to be used while developing competitive strategies (Penrose, 1959; Rumelt, 1984; Teece, 1984; Wernerfelt, 1984; as cited in Teece et al., 1997).

According to Teece et al. (1997), these approaches acknowledge a critical role of company's competences and resources; however, they do not identify sources of such crucial factors. The authors suggest a dynamic capabilities approach to identify company-specific capabilities that can be used to create a competitive advantage as well as to understand how competences and resources can be developed, deployed and utilized. They define dynamic capabilities as "*the firm's ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments*". As the authors suggest, the dynamic capabilities approach can be successfully used in rapidly changing environments. Teece et al. (1997) state that only having enough resources and basic capabilities might not be sufficient to survive and maintain competitive advantage: companies must have abilities to rapidly adapt those capabilities when new situations or conditions arise.

Research on Dynamic Capabilities

The theory of dynamic capabilities has been applied to many business areas such as product development, strategic decision making and alliancing (Eisenhardt & Martin, 2000); strategic competitiveness (Winter, 2003); entrepreneurship (Zahra et al., 2006). Before exploring the application of this theory in the field of education, an overview of literature in the business field, from where this theory originated, is described below.

Bleady et al. (2018) conducted a systematic literature review on the studies and research carried out since 1997 when Teece et al. introduced the concepts of dynamic capabilities. The primary purpose of this study was to find out whether other definitions for dynamic capabilities emerged and which of these was the most influential, therefore affecting subsequent empirical research. According to the authors, the majority of the empirical research conducted on dynamic capabilities was based on the theoretical frameworks considering the definition by Teece et al. (1997).

Schoemaker et al. (2018), similarly to the current study, researched dynamic capabilities in crisis, specifically the VUCA context. According to the authors, the volatile, uncertain, complex, and ambiguous (VUCA) *“world presents a shift in kind rather than just in degree”*. The researchers cite earlier works (Teece et al., 1997) to highlight that developing dynamic capabilities safeguards the organizations from being bounded with only ordinary capabilities and benchmarks. Accordingly, companies with dynamic capabilities are able to monitor external turbulence and better create, integrate and reconfigure their competences to deal with the challenge successfully. The researchers highlight the need of more insights on how decision-making processes connect with dynamic capabilities that are higher-order skills and abilities such as sensing changes, seizing opportunities, and transforming organizations (Schoemaker et al., 2018). In other words, the authors call these capabilities as pillars that enable companies to navigate through a turbulent environment. Sensing changes is an essential set of dynamic capabilities that allow organizations to anticipate shifts in dynamic environments and understand their implications for the company. This aspect is critical; however, organizations also must seize opportunities by successful innovation, taking advantage of external changes. While these two pillars are important to tackle with the turbulence and crisis, the organizations must also create the third pillar by transforming themselves to achieve long term sustainability (Schoemaker et al., 2018).

Dynamic Capabilities and Agility

Teece et al. (2016) explored the mechanisms by which companies may adjust the fundamental level of organizational agility, carry it cost-effectively, and link it to strategies. The authors highlight that *“organizational agility is often treated as an immutable quality, where it is implied that firms need to be in a constant state of transformation”*. They explored agility at a vital level and related it to dynamic capabilities. The authors argue that agility is needed to manage uncertainty and underline that foundations of agility mainly lie on two interdependent pillars of dynamically capable companies such as capabilities of combining and recombining technologies and rapidly modifiable structures. The authors discuss in detail how effectuating agility can be achieved through sensing, seizing, and transforming. Baškarada & Koronios (2018) propose 5S organizational agility model that relies on five dynamic capabilities foundational organizational agility such as sensing: the ability to spot new opportunities and threats from the external environment; searching: the ability to generate new opportunities within the company; seizing: the ability to come up with balanced decisions about strategy and business model; shifting: the ability to successfully implement novel strategies, set business models and enhance capabilities; shaping: the ability to implement and scale new capabilities.

Various scholars researched agility and dynamic capabilities in different business functions. For instance, Blome et al. (2013) studied supply chain agility, particularly from the dynamic capabilities perspective. Through the conducted empirical research, the authors suggest that supply chain agility can transform supply and demand competences into superior

performance. Investigating dynamic capabilities, agility and knowledge management within emerging markets multinational companies Pereira et al. (2019) found out that higher investments in dynamic capabilities enhance multinationals to be more agile and acquire competences to gain and secure sustainable competitive. Having reviewed existing literature on agility and dynamic capabilities, we must admit that these concepts are essential to apply in ambiguous environmental conditions; however, there is a lack empirically proved discussions and suggestions that leaves a large room for scholars for further research. What follows is an account of dynamic capabilities in the education sector which is the context of the current study.

Dynamic Capabilities and Agility in Higher Education Context

Today's world is characterized as no longer stable and predictable as it has undergone significant socio-economic, political, demographic and technological changes (Navarro & Gallardo, 2003). Higher education industry is no exception. It had to go through the various changes to accommodate to rapidly changing external environment. Furthermore, recently COVID-19 took the world by surprise, and all educators had to adapt to even more unfamiliar and previously unexperienced environment based on the principle that 'education must continue'. Most education institutions had to change their education modes, and thus there was a need for rethinking their existing strategies and applying new ones (Fenech et al., 2020).

Navarro & Gallardo (2003) proposed a model of generating dynamic capabilities based on the theory of resources and capabilities, institutional theories and analysis of strategic change literature provided by various scholars (Ruiz-Navarro, 1998; Elfring et al., 1997; Ashkenas et al., 2015; Miles et al., 1995; Baden-Fuller and Stopford, 1994; Whipp et al., 1989, cited in Navarro & Gallardo, 2003). This three-pillar model portrays the picture of a generation of dynamic capabilities in large organizations. These interdependent pillars are resource-based determinants, process, and institutional determinants. This model was developed for managing strategic change and to be used in a higher education context. As the authors suggest, changing environment and increasing social demand require universities to set and implement a process of change, practising continuous improvement and excelling dynamic capabilities. The theory of dynamic capabilities helps universities succeed through the change process achieving their own unique goals and strategies within a dynamic environment.

In their recent studies on the factors influencing organizational agility in higher education, Menon & Suresh (2020) indicate that changing environmental dynamics in higher education call for changes in the skill sets of the workforce, and hence processes and practices that enhance and develop new knowledge and capabilities in the workforce have become crucial for the HEIs to realize their goals. The researchers explored major factors facilitating agility in higher education and analyzed interrelationship among them. According to existing literature and expert opinion, the researchers identified eight enablers to endorse agility in higher education: the ability to sense the environment, organizational structure, adoption of ICT, organizational learning, human resource strategies, leadership, readiness to change and collaboration with the stakeholders. By applying total interpretive structural modelling, the researchers revealed leadership as the most critical enabler followed by human resource strategies and organizational structure.

In a modern and ever-evolving world of business, human capital represents a key indicator in achieving organizational goals and competitiveness (Ghafar, 2020). Higher education is no exception. Among other university employees, we can see many academics as a powerful resource in the change process and as an agile driving force in the turbulent times.

However, there is insufficient research and empirical evidence on how dynamic capabilities are developed among academic staff and how these capabilities are contributing to their agility. The current research may significantly contribute to the field of higher education agility, particularly in developing dynamic capabilities among academic staff and their ability to be agile and adapt well to the current crisis.

METHODOLOGY

The qualitative methodology described below was chosen with the aim of an in-depth investigation into the participants' use of dynamic capabilities, the context within which such dynamic capabilities develop, and the outcome of such capabilities in times of crisis. This methodology was chosen keeping in mind the end goal of this research, which is the development of a model which may be used in the field of education to shed light on the process through which teachers go through in the creation of new teaching strategies.

Population and Sampling

Sixteen participants accepted to attend focus groups and were split into two groups of 8. Participants were chosen purposively on the basis of the following criteria:

1. All participants manage their own teams of academics within the same specialization.
2. Participants were sourced across different specializations in business for example human resource management, entrepreneurship, accounting, quality and business analytics.
3. Participants' titles range from lecturers to Assistant Professors.

Procedure

The unstructured focus groups, conducted by all three researchers, centered on the following themes that were agreed upon in a debriefing meeting:

1. The shift from traditional teaching to online learning;
2. Transforming self;
3. Sensing opportunities;
4. Reshaping self;
5. Seizing opportunities;
6. Agility;
7. Antecedents to transforming self.

Participants were informed about the above themes at the start of the focus group and were also briefed about the confidentiality in reporting the outcomes of the focus groups. The responsibility for moderation was assigned to one of the researchers whilst the other two took notes and also joined the moderator in asking further questions based on the discussion being held.

Trustworthiness

1. Detailed descriptions of the interview data were created. This allowed the researchers to decide on the scientific merit of the data collected (Creswell, 2009).
2. An audit trail of the study was recorded allowing replication of the study.
3. Interrater reliability was measured as all three coders were engaged in coding the data autonomously (Babbie, 2013; Swepresad, 2015).

4. To allow for inter-rater reliability, a deductive approach was utilized. The codes for the theme of dynamic capabilities and antecedents were predefined, therefore established prior to the start of the content analysis, and based on the theoretical framework.

A total of 11 codes were listed (Table 1). The results section that follows details the inter-rater reliability tests that were adopted, a statistically descriptive account of results, and a qualitative analysis of content including key quotes (given in *italic text*) from participants.

Theme	Code Number	Code Name
Dynamic Capabilities	1	Agility - quickly correcting one's course
	2	Sensing opportunities/threats - seeing around corners
	3	Shaping opportunities/threats - reshaping self to reap advantage of new teaching model
	4	Seizing opportunities - mobilizing resources to implement new systems to take advantage of challenges
	5	Reconfiguring/Transforming - continuous renewal of self
Context	6	Challenge - Volatility; Uncertainty; Complexity; Ambiguity
Antecedents	7	Experience
	8	Organizational support
	9	Reflection
	10	Learning
	11	Student feedback

RESULTS

Inter-rater Reliability

Intra-class correlation of paired scores was used to calculate the consistency of coding between the three researchers. Values with a correlation of less than 0.5 indicate poor reliability, values between 0.5 and 0.75 indicate moderate reliability, values between 0.75 and 0.9 indicate good reliability, and values greater than 0.90 indicate excellent reliability. Table 2 indicates the intra-class correlations for each code after the coding of researchers were paired using the criteria of the highest intra-class correlation.

Intra-class correlations range between 0.1 and 0.8. Good reliability of intra-class correlation resulted for the codes Agility and Experience, moderate reliability of intra-class correlation resulted for Sensing, Seizing, Shaping, Reconfiguring, and Reflecting. Low reliability of intra-class correlations resulted for the remaining codes, namely Challenge, Learning, Student Feedback, and Organisational support.

Descriptive Statistics

The intra-class correlations in Table 2 are calculated on the coding by a pair of raters in Table 3, which shows the frequency of codes as well as the mean frequency. Raters were paired using the criteria of the highest intra-class correlation resulting from their coding. The aim of this exercise was to select scores with the best intra-class correlation omitting the third set of scores that did not correlate as well as the other two.

Theme	Code Number	Code Name	Intra-class correlation
Dynamic Capabilities	1	Agility - quickly correcting one's course	0.8
	2	Sensing opportunities/threats - seeing around corners	0.6
	3	Shaping opportunities/threats - reshaping self to reap advantage of new teaching model	0.7
	4	Seizing opportunities - mobilizing resources to implement new systems to take advantage of challenges	0.6
	5	Reconfiguring/Transforming - continuous renewal of self	0.6
Context	6	Challenge - Volatility; Uncertainty; Complexity; Ambiguity	0.4
Antecedents	7	Experience	0.8
	8	Organizational support	0.4
	9	Reflection	0.6
	10	Learning	0.3
	11	Student feedback	0.7

	1	2	3	4	5	6	7	8	9	10	11
Rater 1	36	41	39	31	24	35	13	5	31	50	33
Rater 2	44	54	42	29	31	64	14	9	39	63	32
Mean	44.5	40	56.5	47.5	40.5	30	32.5	27.5	13.5	7	35
Variance	210	16	42	42	2	1	.25	12	.25	4	16

Content Analysis

Code 1 agility

On agility, academic members participating in this study recounted their ability to quickly adopt flexibility in their teaching strategies. They engaged in a process of adjustment and quick development of innovative ways of teaching. They swiftly transferred to online teaching from one week to the other. This agility was narrated using words such as: alertness; improvising; quickly taking control; adjustment; being swift. In being agile, swift reflection led to transformation (we were asked to act with not much time to reflect; reflecting came along the process). Participants recounted swiftly changing the content of their lectures, their teaching styles, practice activities, and teaching materials. Agility was described as a backdrop as participants referred to being agile, swift, fast paced etc. in all their thoughts and actions leading to new teaching strategies (Figure 1).

Code 2 sensing

Participants in this study recounted sensing the challenges of student engagement and lack of face to face interaction, particularly the missing non-verbal cues in communicating with students. However they also recounted sensing the opportunity to shift to active online teaching, the personal learning opportunity (teaching online increases my employability for the future of my career) and the opportunity to engage with students who were shy to engage in traditional face-to face classes (students felt more comfortable answering online than face to face).

Code 3 shaping opportunities and threats

Participants narrated different ways they used to reshape educational content (reshaping content to smaller learning bites; use of video and multi-media content); teaching strategies (my teaching strategy drastically changed); formative and summative assessments; teaching methodology (flipping the classroom); teaching activities such as collaborative activities. There was agreement on the need for more active and experiential learning as opposed to information sharing (I cannot keep teaching the same way; an activity every 10 minutes before I would lecture for 25 minutes) in shaping this new opportunity to teach online.

Code 4 seizing opportunities

Participants showed strong dynamic capabilities by seizing opportunities to utilize new and different resources in meeting learning outcomes. Participants described mobilizing resources to take advantage of challenges. They seized opportunities to: introduce gamification and simulations in the classroom; use online polls; use Nearpod/Kahoot; adopt online discussion boards; use role play; resort to case studies; utilize quizzes; use breakout groups; videos; encourage self-paced research; adopt formative assessments; and utilize to their full potential the already existing learning management systems.

Code 5 reconfiguring/transforming

The continuous renewal of self is one of the pillars of dynamic capabilities. Participants reported transforming their teaching strategies, becoming more flexible (I cannot use the same teaching strategies for all courses), embracing active learning; being innovative (I was up to something new every time); transforming self into motivational speakers. They also mentioned noting an attitudinal and behavioural (I need to make a change in what I am doing) transformation in themselves. In this process of reinventing themselves they spoke about acquiring new skills.

Code 6 challenges

Challenges represent the overall context of this research study (Figure 1) as this study was carried out within the COVID-19 pandemic context. This overall challenge brought about specific challenges for participants, the primary being rapidly shifting from traditional face to face teaching to fully online teaching. Other specific challenges participants spoke about are: not having students physically in the classroom (It is a challenge not to have students in front of me); not being able to read students' body language cues (body language cues are missed); lowered student engagement (motivating students is challenging); limited student independent learning, that is favored in an online learning environment (online teaching assumes students are independent learners). All participants are academics from a single teaching institution which prior to the COVID 19 pandemic lectured exclusively in traditional face to face mode.

Codes 7, 8, 9

Together with code 10 (Learning) and 11 (Student feedback), these three codes, namely experience, organisational support, and reflection were mentioned by participants as antecedents

to their dynamic capabilities (Figure 1). Experience in adopting different teaching strategies, including blended learning (I had experience in blended learning so the transition was smooth) and online learning, was mentioned as an advantage in being able to sense and seize opportunities as well as to transform oneself in an agile manner. Organisational support was associated with opportunities for professional development that became a resource to be mobilized in times of uncertainty. Finally, reflection was seen as a means to sense, size and shape opportunities (Reflection in action and on action. After the class I thought about what went well). Reflection was an opportunity in volatile times (this situation provided me with the opportunity to reflect on my teaching experience and practices). Participants mentioned reflecting on their actions as well as whilst engaging in different strategies.

Code 10 Learning

In times for uncertainty learning enabled the rapid assimilation of new knowledge and the emerging of a new teaching strategy. Participants spoke about resorting to learning for a professional backing in times marked by uncertainty and volatility. Learning from colleagues (*I learnt about the use of technology; I learnt from my colleagues*) and training programmes featuring as the main source of learning. The latter were a mix of training programmes offered by the education institution they work in and training programmes participants enrolled in independently. As academics found themselves shifting from a fully traditional mode of teaching to an online mode they resorted to thinking creatively and learning (*I had to think of out of the box tools to engage students; I have to learn new skills*).

Code 11 student feedback

The development of dynamic capabilities is facilitated by feedback. Staying agile, sensing, shaping and seizing opportunities was possible also as a result of the encouragement of student feedback. Participants spoke about encouraging student feedback through polls, use of emoticons on student chat platforms, student evaluations, student verbal feedback, and discussion boards (student feedback through polls; asking students for their expectations; discussion boards; helped me understand if students were learning or not). Participants added that the analysis of formative and summative assessments also served as feedback.

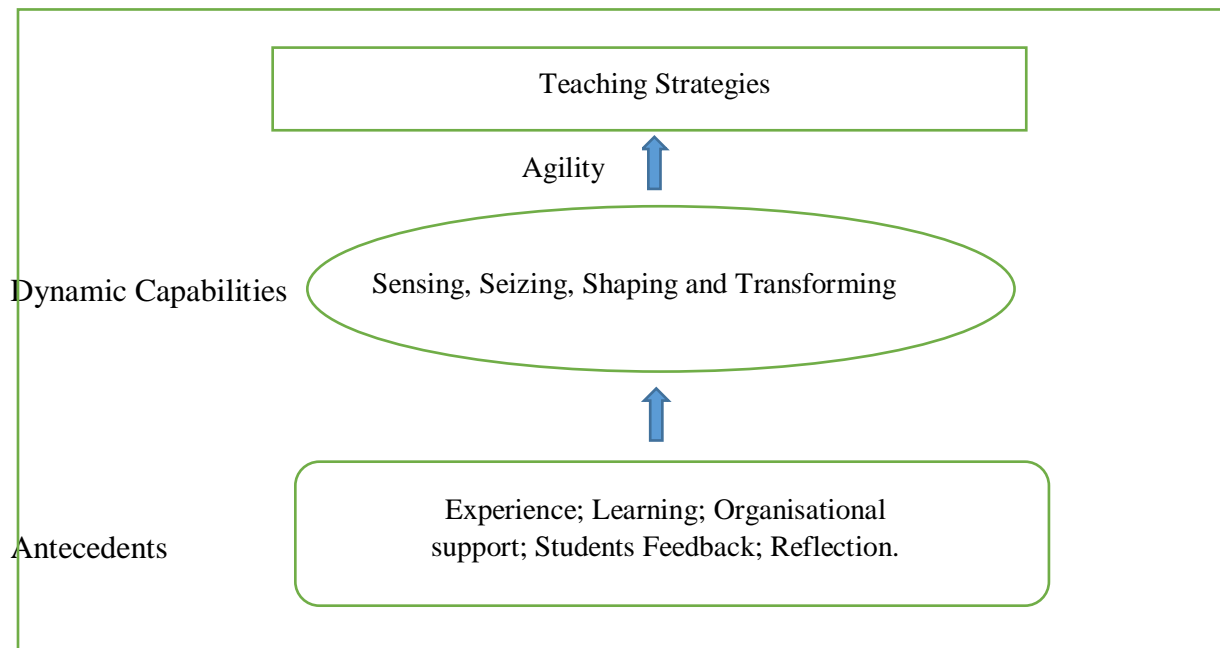
The model in Figure 1 brings together the above codes resulting from the qualitative data analysis that together answer the research question (How do dynamic capabilities shape teaching strategies in times of crisis?). Learning, experience, organisational support, reflection and student feedback, are the antecedents to a process of sensing, seizing, shaping and transforming (dynamic capabilities) that are supported by a backdrop of agility, that in turn lead to new teaching strategies.

DISCUSSION

How do Dynamic Capabilities shape teaching strategies in times of Crisis?

The findings above can be illustrated using the below model. This model is analyzing the link between teaching strategies and Dynamic capabilities in the VUCA environment, whereby there is a need for agility and flexibility to face the challenges. The model is represented in

Figure 1 and it connects the environment (antecedents) to dynamic capabilities (sensing, seizing, shaping and transforming) to teaching strategies.



Source: Authors' compilation

FIGURE 1
DYNAMIC CAPABILITIES SHAPE TEACHING STRATEGIES

The model is explained based on its context and adaptability to a particular situation. The adoption of new teaching strategies can be achieved through the components of dynamic capabilities namely agility, sensing, shaping, seizing and reconfiguring opportunities and threats. Dynamic capabilities shape new teaching strategies in a context of organisational support, learning, reflection, experience and students' feedback. The data confirms that when in a situation of crisis the respondents developed their teaching strategies based on being flexible and adapting to the context. It was clear from the data that the respondents had to adapt or perish and it was clear that they adapted by sensing the opportunities and threats. The data clearly indicates that they were trying to seize the opportunities and minimize the threats in order to meet their goals and objectives. In the words of participants 'my teaching strategy drastically changed'; 'I cannot keep teaching in the same way'; 'I need to make a change to what I am doing'. The participants were aware of a threatening environment and seized opportunities which were presented to them. The discussion with the participants emphasized that they agility was a key factor. In fact the agility is what led the participants to sense, shape, size and reconfigure teaching strategies. In other words the threats of the environment were transformed into opportunities and supported the changes that took place in teaching strategies.

This transformation was supported by two main aspects. Firstly the experience and reflection of the participants gave them the confidence needed to bring in the change in teaching strategies. Experiences in blended learning and online teaching methods made the respondents more agile to adapt and to change their ways of teaching. Although this was a fast changing environment the respondents discussed about the importance of reflection 'reflection in action,

on action'. This shows that the respondents were not reacting to the situation but also being proactive. This whole process was happening very fast and thus the changes could be seen in the very short term. The second aspect which supported the transformation was the self-learning and student feedback. Self-learning was a key component as in order to transform, one needed to acquire new skill sets. The organization support in terms of new training programs and tools and techniques such as online teaching platforms were key elements to this transformation. The self-learning was based on creativity and commitment from the respondents was supported by peer learning, "*I learnt from my colleagues*". Although it was clear that the respondents were all engaged in changing the teaching strategies in times of crisis, the student feedback was very important to close the loop. The students had to be on board to have effective implementation of the new emerging strategies. The student feedback was key and respondents encouraged student feedback formally through learning platforms such as polls and discussion boards and assessments as well as informally through informal discussions with students about their expectations and learning.

As discussed previously, there is limited research on dynamic capabilities in higher education so this paper is timely in the context of most higher education professionals having to transform their teaching strategies. The discussion pertains mainly to the changing environmental dynamics leading to development of new processes and practices in higher education, Menon & Suresh (2020). This paper supports the same principles that in this times of crisis there is a transformation in teaching strategies and this transformation is driven by dynamic capabilities. In the context of higher education, the crisis has shaped teaching strategies through transformation and emergent strategies and experiential learning cycles (Fenech et al., 2020). The process of transformation is based on experiences and feedback.

In larger perspective dynamic capabilities has played a critical role in developing competences and skill sets required for the future of higher education in times of crisis (Tece et al., 1997). Although research has shown that dynamic capabilities is company specific, this study has indicated that higher education institutions have developed, deployed and utilized resources and competences to develop new teaching strategies. Dynamic capabilities are used to develop new strategies to transform in times of crisis (Schoemaker et al., 2018) by providing the framework required to create, integrate and reconfigure the existing strategies. In higher education, the times of crisis has led to the partners (teaching faculty, organization and students) sensing, shaping, seizing and transforming the teaching strategies in order to continue meeting goals and objectives.

CONCLUSION AND RECOMMENDATIONS

The main conclusion of the study is that the transformation of teaching strategies in higher education has been shaped by dynamic capabilities in times of crisis. The study was conducted at a time where all classes were move to remote online classes due to lockdowns and the impact of COVID 19 virus. The transformation in the education sector was driven by all stakeholders having to positively adapt to the emerging environment and the new context. The teaching strategies are well engrained and although there have been a lot of uncertainties, it seems that the move away from traditional face to face teaching is permanent and most higher education institutions will be moving to a hybrid model. This is an evolving and dynamic model and will lead to future research.

The main recommendation of the study is that in order for teaching strategies to change in the VUCA environment, it is important for educators and policy makers to understand the

environment in which the changes are taking place. By using the model, policy makers in higher education will be able to ascertain the type of organizational support to be given to educators in terms of infrastructure, technological platforms and appropriate competency based training. The second recommendation is that the key stakeholders namely students and educators must be in constant communications through reflections and feedback in order to ascertain the impact of the new teaching strategies and thus the success of the model. Last but not least, this model can be adapted to fit the antecedents of the stakeholders in order to be beneficial and create value.

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