

نقد الإطار النظري ومدى شموليته وملاءمته

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01

A theory-ingrained integrated change management framework for the implementation of
Enterprise Resource Planning Systems to mobilise user readiness

By

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A Thesis

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تطوير إطار متكامل لإدارة التغيير لتطبيق أنظمة تخطيط موارد المؤسسات
لتعزيز جاهزية المستخدم

A theory-ingrained integrated change management framework for the implementation of
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Chapter 2

BACKGROUND

The structure of this chapter, Chapter 2 is depicted in Figure 2.1.

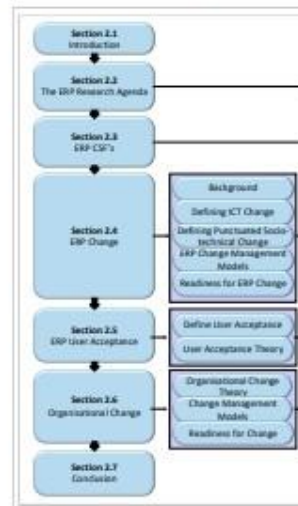


Figure 2.1: Chapter 2 outline

2.1 Introduction

This Chapter of the thesis document provides information about concepts that are relevant to the a theory-informed integrated change management framework for the implementation of ERP systems. This chapter informs subsequent Chapters of this thesis document as is illustrated in Figure 2.1.

Background information regarding the subject matter is obtained by performing a literature review. This review is performed to create the awareness and provide steps of the proposed DSR design as is indicated in Figure 2.2.

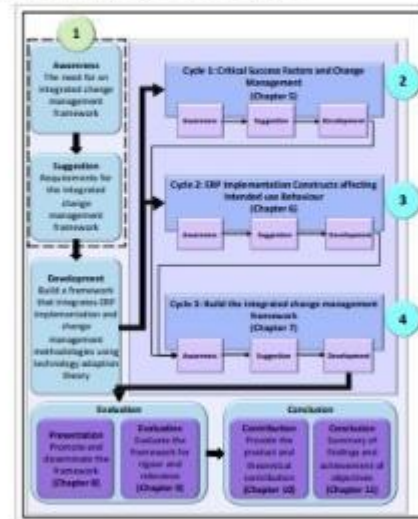


Figure 2.2: Research design: Awareness and suggestion

In Section 2.2, the ERP research landscape is reviewed and used as input to establish a research agenda. In the next section, Section 2.2 the ERP research agenda for this literature review, is established. The following knowledge areas are subsequently identified and explored to provide inputs to the design process step of the DSR project:

process step of the DSR project:

- In Section 2.3, CSF research is explored and the critical research landscape in the context of ERP is discussed. CSF research informs the development of Design Cycle One of the research project described in Chapter 5.
- In Section 2.4, knowledge regarding ERP change is reviewed, considering aspects of Information Communications Technology (ICT) change, punctuated socio-technical change, ERP change management and readiness for ERP change. This review informs the development of Design Cycle Two and Three of this research project which is described in Chapter 6 and Chapter 7 respectively.
- In Section 2.5, a definition of ERP user acceptance is pursued and to this end, acceptance technology field is explored by reviewing formal technology acceptance models; this informs the development of Design Cycle Two and Design Cycle Three of this research project which is described in Chapter 6 and Chapter 7 respectively.
- In Section 2.6, a framework for organisational development and change is reviewed, followed by the five most popular change management models suitable for a project related environment, as the requirements for a suitable readiness assessment measurement, this informs the development of Design Cycle Two and Design Cycle Three of this research project and is described in Chapter 6 as well as respectively.

Section 2.7 concludes this Chapter.

In the next section, Section 2.2 the ERP research agenda for this literature review, is established.

2.2 The ERP research agenda

In this section of the literature review, existing studies from the ERP knowledge base is reviewed a suitable research agenda to study ERP change.

Schlichter & Kraemmergaard (2010) conducted a comprehensive literature review to gain an understanding of the current state of the ERP field, and to identify areas of concern regarding this research field. research material was identified and classified into several research topics namely: implementations of ERP, management of ERP issues, the ERP tool, ERP and supply chain, studying ERP, ERP as an inter-disciplinary activity, ranging from accounting to information systems and beyond, and 4) areas of concern regarding the ERP research field (Schlichter & Kraemmergaard, 2010).

Further analysis of the data and a critical review of the sources of information and methods of research led to the conclusion that 1) the research field has matured as the number of theoretical papers and demands for explicit research methods have increased, 2) interest in ERP system research was an interest in a specific phenomenon, rather than the start of a new research discipline, 3) ERP is an inter-disciplinary activity, ranging from accounting to information systems and beyond, and 4) areas of concern regarding the ERP research field (Schlichter & Kraemmergaard, 2010).

Schlichter & Kraemmergaard (2010) used the data from the comprehensive literature survey to create a conceptual framework for the areas of concern in the ERP research arena and provides a number of questions to be asked for each of areas of concern; the areas of concern are:

- Implementation - selection, introduction phases, CSF and BPR
- Optimisation - post-implementation, usefulness, value and benefits, maintenance and expansion
- Management - organisational change, managerial implications, including the management of cultural aspects
- The ERP tool - system, architecture, modules and applications
- Supply chain management - ERP in Supply Chain Management (SCM), contribution, external system integration
- Studying ERP - how ERP systems can be studied
- Education and training - university ERP curricula and different ERP programmes
- Market and industry - market share and demand as well as macro diffusion of ERP

In 2016, Huang & Yasuda (2016) performed a comprehensive literature survey of ERP literature reviews in order to categorise and analyse the ERP research agenda; the study resulted in the identification of main research themes, namely 1) CSFs, 2) Small and Medium sized Enterprises (SMEs), 3) field approach, 4) operating themes and 5) the type of ERP system to be implemented. Within these main themes, sub-themes were identified namely: new emerging ERP technologies, critical success/failure factors, BPR, real benefits, system/organisation performance, evaluation user satisfaction, ERP selection criteria, ERP impacts, change management and implementation strategy. This study is concluded by indicating that research on the post-implementation phase is in its initial stages and that other areas of potential development in research interest can be: SMEs, ERP in specific industries, ERP implementations across geographical areas, and opportunities for more longitudinal case studies becoming available as ERP implementations mature (Huang & Yasuda, 2016).

A two-dimensional structure to classify ERP research for the purpose of research in the field of Accounting Information has been compiled by Grabski, Leech & Schmidt (2011) and this classification is illustrated in Figure 2.3.

Most of the current research are based on surveys and lacking a strong theoretical base and a well-defined level of analysis (Grabski et al., 2011), and as ERP systems are more elusive now and new technologies are offering opportunities such as Cloud-ERP and inter-organisation processing, a more theoretically motivated focus on outstanding areas is required.

In order to focus the effort on the literature that is relevant to the Main Research Question, a research agenda for the awareness process step of the DSR project has been compiled and for that purpose the following topics have been selected from the Grabski ERP research structure:

- ERP CSFs,
- ERP change,
- ERP user acceptance, and
- organisational change.



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In the next section, Section 2.3, research trends regarding CSFs for the implementation of ERP systems will be reviewed.

2.3 ERP CSFs

In this section of the literature review, existing literature from the ERP knowledge base is reviewed to understand how research regarding the CSF for the implementation of ERP systems are performed.

The concept of CSFs dates to 1961 when Ronald David discussed success factors in management literature; it has later been made popular when Rockart (1979) published an article in the Harvard Business Review in 1979, and proposed CSFs as an alternative method for managers to define their own information needs (Rockart, 1979).

Bullen & Rockart (1981) define CSFs as the limited number of items in a business, or area of the business that "must go right"; managerial focus on these items, will result in a flourishing business that will be achieving the business goals set. (Rockart, 1979) stressed that CSFs are not to be used for strategic planning, it is rather a suitable management tool to manage and control processes in order to ensure better outcomes, this makes CSFs suitable for use in an IS environment (Amberg, Field & Wiener, 2007).

CSF research focus on the identification of the factor, predominantly through surveys and then categorising it in a structure such as the ERP life cycle model (Holland & Light, 1999). Other studies draw on management theory to examine CSFs ((Bradford & Florin, 2003);(Wong & Tein, 2003)). Early CSF research focused on large organisations, research on SME CSFs becoming part of the knowledge base as the SME market is penetrated (Leyh, 2014a).

In a study performed by Esteves de Souza (2004), the following methods to define CSFs were identified: action research, case studies, combination methods, delphi technique, focus groups, group interviewing, literature review, multivariate analysis, scenario analysis and structured interviewing. Esteves further found that the survey method is the most common method to define CSFs.

Ngai, Law & Wat (2008) performed a literature review on CSF studies and found that different CSFs are identified within various frameworks, which raised the question that CSFs were identified in different settings and countries and that these differences might have an influence on the criticality of factors; they then compiled an extensive list of CSFs, categorised it according to the 11 main CSFs as proposed by Nah, Lau & Kuang (2001) and finally grouped it per country in order to find commonality as well as country specific factors.

Leyh (2012) performed studies to identify CSFs for SMEs and to find the difference between the CSFs identified for large enterprises and those for SMEs and concluded that although CSFs does not differ significantly between large enterprises and SMEs, the importance of factors differs a lot and that more emphasis needs to be placed on technological factors at SMEs ((Leyh, 2012); (Leyh, 2014a); (Leyh, 2016); (Leyh & Sander, 2011)).

Deedar & Sulaiman (2009) argue that CSF taxonomies need to be defined in order to allow researchers to find associated concepts for each CSF, practitioners might use taxonomies to understand the critical areas to

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focus on, and journal editors might use taxonomies to confirm that a comprehensive review has been done, and researchers can perform case studies on the categories of the taxonomies to understand unique characteristics in different environments. Other popular CSF taxonomies referred in literature are:

- a taxonomy of CSFs designed to create a link between the implementation aspects of the project and the business process aspects (Al-Mashari *et al.* 2003),
- the mapping of CSFs to the ERP implementation life cycle as proposed by Nah, Lau, *et al.* (2001),
- a structuring of CSFs into 26 categories and a grouping of the categories into strategic CSFs and tactical CSFs as performed by Finney & Corbett (2007),
- the work performed by Somers & Nelson (2001) to understand the impact of critical success factors across the ERP implementation life cycle,
- a comprehensive study of CSFs published over 12 years and categorised into 15 constructs as well as a mapping of the studies across the ERP life cycle performed by Shaul & Tauber (2013),
- and Tashiri *et al.* (2015) performed a structured review of CSFs and classified the CSFs according to nine stakeholder groups.

Wijaya *et al.* (2017) conducted the most recent structured literature review of studies published between 2005 and 2016 and identified 29 papers from which 38 CSFs are identified, which is listed in Table 2.1.

Criticism on the CSF method proposed by Rockart (1979), argued that only management is consulted to identify the CSFs - questions are raised around the completeness and validity of their opinion. Finney & Corbett (2007) raises the question that if new technology is to be implemented, should the opinion of all stakeholders not be obtained?

Pinto & Prescott (1988) raised a concern that most CSFs are assumed to be static across the life cycle of a project and they propose that the criticality of CSFs must be considered depending of the project stage (Pinto & Prescott, 1988). Nah, Lau, *et al.* (2001) performed a literature review to identify 11 factors that are critical to ERP implementation success and these were mapped to the phases of the ERP implementation life cycle as proposed by Markus, Axline, *et al.* (2000) to indicate each phase when a CSF comes into play.

In the 2007 review performed by Finney & Corbett (2007) three concerns were raised, a lack of depth in the coverage of CSFs, the absence of, or single dimensional view on a stakeholder perspective of CSFs and the varied definitions of CSFs, in particular change management, one of the most widely cited CSFs (Finney & Corbett, 2007).

Criticism is also raised by (Shaul & Tauber, 2013) about the limitation of CSF research when they argue that most of the case studies are performed at large scale implementations, in developed economies in Western settings, and furthermore most studies refer to one of the three main-stream software providers, namely (SAP, Oracle and Microsoft Dynamics) - SMEs in developing economies are largely excluded (Shaul & Tauber, 2013).

CSF research is the most prolific area of research in the ERP field; however, it has not been fully successful in identifying enough and all the necessary factors. The unanswered question about CSFs is how they need to be applied, how they interact and how the application of CSFs would change in different contexts. There is still potential opportunity to perform CSF research in micro-level approaches, longitudinal studies and at a multi-level approach to research. Current CSF research does not indicate the level or the timing of the CSF

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and it would therefore be useful to explore CSFs for ERP implementations in different settings, such as a re-implementation or during an organisational merger (Grabski *et al.* 2011).

In the next section, Section 2.4, current research topics regarding ERP change is reviewed.

2.4 ERP change

In this section of the literature review, existing literature from the ERP knowledge base is reviewed to understand how ERP system implementation change is described in IS literature.

2.4.1 Background

ERP systems have two major advantages above other non-integrated departmental systems, namely 1) a unified enterprise business view is provided across all functions and departments and 2) an enterprise database is implemented where all data is recorded ((Klaus *et al.* 2000); (Umbile, Hah & Umbile, 2003)).

The second generation of MRPII was originally developed for manufacturing concerns only, and was introduced to other industries from the 1990's as ERP systems (Elragal & Haddara, 2012). For the duration of the next century, many organisations opted to implement ERP systems in an attempt to avoid the imminent Y2K problems of legacy systems (Markus, Axline, *et al.* 2000), resulting in ERP system implementations driving major change initiatives in large organisations. In 2000, the Gartner group published a research note "ERP is dead-long live ERP!!" claiming that the internet allows for a next generation of ERP solutions providing inter-enterprise integration and collaborative ERP functionality in the form of the next generation of ERP!! systems (Boud *et al.* 2000), thus enlarging the footprint of ERP systems in organisations.

The current millennium started out with ERP systems being the only business system that organisations would implement; however, the focus changed over time, shifting the emphasis to the ERP system being the core business system integrating with "best of breed" functionality of which Supplier Relationship Management (SRM) and Customer Relationship Management (CRM) are examples (Shaul & Tauber, 2013).

Various life cycle phases have been named and identified in literature varying from adoption, selection, implementation, go-live, use and maintenance, evolution, and in some instances, the retirement phase is also noted as a life cycle phase (Esteves & Pastor, 1999; Parr & Shanks, 2000; Ahlert, Neumann & Zviran, 2002). ERP software providers developed their own implementation methodologies and several methodologies have been documented for various purposes in academic literature. Researchers and practitioners also distinguish between implementation strategies which are defined as a phased rollout, pilot study, parallel adoption, and big bang or direct cutover (Elragal & Haddara, 2012).

In 2019, the focus is on providing alternative technology approaches to enhance ERP functionality, and digital technologies, cloud deployment models, subscription based licensing are driving the ERP agenda ((Rizvi, 2019); (Shaul & Tauber, 2013)). Cloud deployment is on the forefront of this drive and is expected to be very disruptive to the ERP market (Robde & Zeng, 2014).



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(also known as continuous improvement or organisational learning). Williams & Williams (2007) state that the planned approach is often the more successful approach for the implementation of change.

Organisational perspectives are regarded from three viewpoints, namely technological, political and social. Although Williams & Williams (2007) agrees that these might not be the only perspectives, the technological perspective is a rationalised approach considering change to be executed according to a pre-defined plan, the political perspective assumes change is driven by power and employs strategies to predict these viewpoints and to plan change tactics accordingly. The social perspective is regarded as a complete opposite to the technological, and from this perspective social settings, everyday reality and cultural norms and how change will impact it, must be considered in the change process.

2.4.3 Describing punctuated socio-technical IS change

Lyytinen & Newman (2008) states that IS change is concerned with deliberate change applied to organisational sub-systems of an organisation. Many change studies describe the process as a system from a "before-change" state to an "after-change" state, describing vector change during the process. This simplification of the IS change process often miss the fact that many disciplines including organisation, information and computer science which contribute to the challenging multi-dimensional aspects of IS change (Korttjar, Dield & Schubert, 2008).

Applying richer theories such as structuration theory (Giddens & Barnett) (1991) or social network theory (Hosmer, 2004) merely provides a mechanism to describe IS change is does not provide a process theory to describe the IS change, and to achieve this, a socio-technical IS change is proposed (Lyytinen & Newman, 2008).

Trist (1981) of the Tavistock institute started with the conceptualisation of socio-technical performing action research in the coal-mining industry. Socio-technical systems has, an important theoretical lens in IS, specifically in the context of socio-technical change (Lyytinen & Newman, 2008). To this extent Lyytinen & Newman (2008) explain IS change as multi-level, punctuated change and the following theoretical assumptions are made:

- In general, IS change is uncertain, ambiguous and hard to execute, and many studies have attempted to classify IS change, of which Lyytinen & Newman identifies five categories named causal models of IS change, 3) normative IS development process models, 4) studies of IS failure.
- IS change is regarded as a multi-level change involving the establishment of a new system, within a multi-level organisational environment. The environment is divided into an organisational context, where the environmental context involves the organisational political, regulatory, and competitive environments that influence and are influenced by, and the organisational context involves the immediate organisational environment system that includes the resource, authority, culture, and political systems in which the change is implemented. The levels are regarded as 1) the horizontal, 'lower' levels of IS change for example, path

building system and the work system, and 2) the vertical level regards the dependencies between system the building system and the organisation environment.

- IS change is regarded as punctuated change, which is described by Lyytinen & Newman (2008) systems evolve through stages and that episodic change takes place after stages of long stability. Lyytinen & Newman (2008) state that if this is applied to IS, four characteristics are identified: 1) the system change gradually and the process is not smooth, 2) the change will be rejected under certain circumstances, 3) the systems do not possess teleology (refer to section 2.6.1 for an explanation of teleology), 4) system's composition will be fundamentally altered during the punctuation. The implication, that is: 1) IS change involves a deep structure, 2) systems experience episodes of upheaval, 3) a punctuated explanation of IS change is required as opposed to incremental change.
- Following Leavitt's S-T model for organisational change, the four components of organisation (task, actor, system and technology), is regarded as the process to re-establish an equilibrium between components should an imbalance state occur (Leavitt, 1965), and the change is taking place at levels which Lyytinen & Newman (2008) regard as the socio-technical change.
- The final assumption on the punctuated IS change stems from Leavitt's analysis on how these components react to change: the proposition that there are four options when a gap between the four components is identified: 1) failed intervention (gap remains), 2) successful, incremental change, 3) punctuation - generation of a new deep structure, and 4) crisis, further problems and then further punctuation required.

Lyytinen & Newman (2008) propose the Punctuated Socio-technical Information System Change model, aimed at describing the complex nature of IS change using a framework to record, describe a socio-technical IS change, as is illustrated in Figure 2.5.

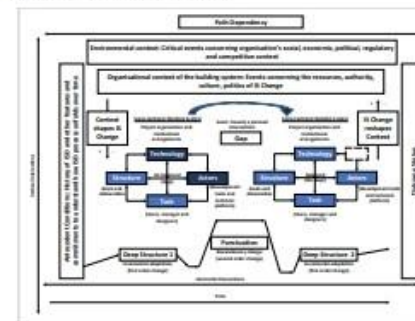


Figure 2.5: The PSIC model for socio-technical change (Adapted from Lyytinen & Newman (2008))

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The four components **technology, actors, task and structure** are in a stable state within the environment. These components are however, open to the environment and will react to changes in the environment, which can cause periods of instability. A gap occurs when one of the components deteriorate or becomes misaligned and it impacts the performance of the system, and any event that can cause a change in the state of the system can leave a gap, if unattended. The components then need to realign into a new stable state, a process which generates patterns of change.

The system can react to the gap in two ways, firstly by gradually adapting or secondly by re-writing its deep structure. Lyytinen & Newman (2008) posit that *IS change will always be punctuated* as it is a deliberate work system change.

The change process consists of the re-configuration of the current work system into new IS components. This process is complex and needs to be planned: a new system, the building system is defined for this purpose. The interaction between the work system and the building system is taking place within an organisational environment which must be analysed vertically as well as horizontally. This analysis is guided by three questions: 1) what was done in the building system to generate the IS change context? 2) what happened in the work system and what did truly change? 3) what are the interactions between the work and/or building system and the environment?

2.4.4 Change management models for ERP system implementation projects

In this section, ERP implementation frameworks and methodologies that contain change management constructs are explored for contextual discussion of the need for a theory-informed integrated change management framework for the implementation of ERP systems.

As a detailed review of literature revealed that terms such as change management methods, methodology and CSFs are used interchangeably with different meaning attributed to each term, only well referenced work that refers to a model, framework or methodology and that deliberately attempts to address sociological aspects of the change process, is included in the review that follows.

An integrated process-oriented framework to address employee resistance

Aladwaini (2001) contrasts the high failure rate of ERP system implementations with the high success rate of marketing endeavours and argues that concepts from marketing strategies must be included into ERP implementation strategies to avoid user resistance to change.

An integrated, process-oriented framework is proposed (refer Figure 2.6, aiming at providing top management with a tool to manage user resistance, by applying the appropriate marketing strategy at the right stage to address two sources of resistance to change, namely, habit and perceived risk. Three stages are identified: the **knowledge formulation stage**, the **strategy implementation phase** and the **status evaluation phase** and during each of these phases marketing strategies are proposed to mobilise users to adopt the change.

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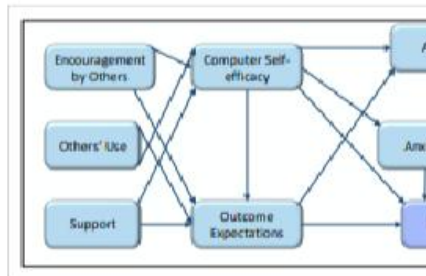


Figure 2.19: A model to describe computer use derived from social cognitive theory (see Gargues & Higgins (1995))

The models included in this study are: Theory of Reasoned Action (TRA), Tech (TAM), Motivational Model (MM), Theory of Planned Behaviour (TPB), Combin of Personal Computer Utilisation (MPCU), Innovation Diffusion Theory (IDT) an (SCT).

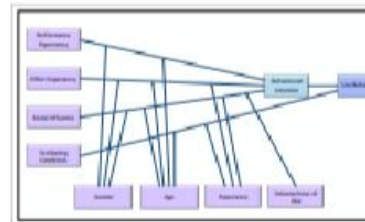


Figure 2.20: The unified theory of acceptance and use of technology (Adapted from Ven

After empirically comparing the constructs, Venkatesh, Morris, et al (2003) propo ceptance and Use of Technology (UTAUT) consisting of performance expectancy influences, facilitating conditions, as direct determinants of intended use behaviour, a and volunteriness of use are included in the model as moderators of the direct det behaviour.

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UTAUT2

In 2012, Venkatesh (2000) proposed an extension of the UTAUT to predict consumer use of in it the UTAUT2. In this proposal, the factors of hedonic motivation, price value and ha The moderating factor of volunteriness of use is excluded as consumer use of technology is The complex effect of the moderating factors in the context of consumer use of technology. Figure 2.21.

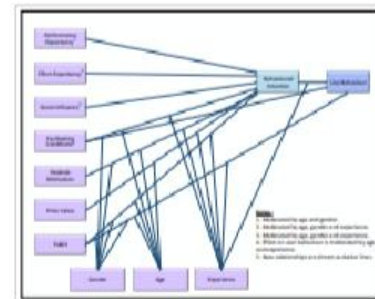


Figure 2.21: UTAUT2 (Adapted from Venkatesh (2000))

In the next section, Section 2.6, research topics regarding organisational change, referenced fro lens of an ERP system researcher, is reviewed.

2.6 Organisational change

In this section of the literature review, existing literature from the ERP knowledge base is re round the organisational change theories referred to in ERP change literature.

Organisational change is a comprehensive body of knowledge integrating organisational deq psychology, and a detailed study of these concepts is outside the scope of this research pre; this review is to consider organisational change constructs referred to in ERP literature as cross-references from ERP literature were used to locate primary sources of information, a framework for organisational development and change as presented by Von & Poole (1995) is point to describe organisational change.

Furthermore, organisational change is reviewed from two perspectives, namely: 1) wha and 2) how can organisational change be managed. In the next section, Section 2.6, Poole (1995) framework to position organisational change theory is provided, and management models for the management of organisational change, are reviewed.

2.6.1 Organisational change theory

Von & Poole (1995) constructed a framework to position organisational change theo ERP literature to understand reasons for failure (Robey, Ross & Boudreau, 2002). (also proposed as a suitable process theory for the management of ERP change (Willis 2013).

The framework provides 16 logical explanations of organisational change consisting (Von & Poole, 1995):

- Four different groups of process theories to explain change were identified, nam dialectics, and evolution theories;
- Life cycle theory defines change as imminent, the underlying form that regulates latent in the developing entity and during the change process, this form has been realised, mature and differentiated. Life cycle change follows a sequence of po pre-ordained end-state.
- Teleology theory proposes that the final goal is the guide for the change process; agent entity is purposeful and adaptive, can set a goal and take actions to achie the end state. Teleology defines no defined steps for the change process and a individual or group has the freedom to take the desired action to achieve the go
- Dialectical theory explains change by referring to the balance of power between takes place when these opposing entities confront the status quo. Stability is, quo is maintained, and the replacement of status quo represents a change.
- Evolution theory describes change as a process of cumulative change that procos cycle of variation, selection, and retention. Variations entail the creation of a n selection occurs through the competition for scarce resources when the environ fit for purpose, and retention is achieved when previous forms and practices are
- The first of change explains that change is affected at the individual, group, orga larger communities of organisations - nesting the entities form a hierarchy. Chao level 1) a single entity by examining its historical processes of change, adaptation the relationships between multiple entities to understand processes of competition, other interaction. The implication is that evolutionary and dialectical theories of ch the individual level as multiple entities are concerned, whereas life cycle and teleol is applicable at a single level, and changes in other levels of the environment are so the single level.
- The third element to consider is the mode of change which considers 1) a prescrib elements of change are moving in a proscribed direction, maintaining and increas

Lewin's Three-stage change model

Kurt Lewin, a social scientist and physicist, is regarded as the founder of change management and published a study in 1947 considering social movement and quasi-stationary social equilibria as well as locomotion through social channels (Lewin, 1947). Lewin (1947) stated that any change in a human group consists of three stages, namely unfreezing, change and freeze.

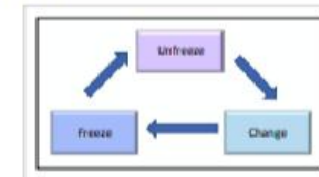


Figure 2.23: A graphical presentation of Lewin's 3-stage model for change (Adapted from Lewin (1947))

The unfreezing stage is when the group accept that the transition is imminent and that the status quo cannot be maintained - this stage is usually the most stressful time of change, the change stage is when the transition takes place and this process can become less stressful given time and proper communication, the freeze stage is when the transition is confirmed and celebrated.

ADKAR model for change

Jeffery Hiatt published a book in 2006 which proposes that the change management focus is shifted from the change process to the individuals' experience of the change and the milestones an individual must achieve throughout the transition process is defined (Hiatt, 2006). This process starts when the change has been identified and the five goals that an individual must achieve are as indicated in the acronym ADKAR: Awareness of the change which takes place when employees are informed of the change, a Desire to change is created when employees are motivated to participate in the change, Knowledge of the change is when employees know what to change, Ability to change takes place when employees are adequately equipped to execute the change and Reinforcement of the change is needed to maintain the change in the organisation. This model has been operationalised by the Prosci™ organisation and is used in practice for the management of change in enterprise technology implementations, illustrated as in Figure 2.24.

McKinsey 7-S framework

Whilst employed by McKinsey & Company, Tom Peters, Richard Phillips, and Robert Waterman Jr developed a framework for change management questioning the traditional notion in management science that structure follows strategy. They argued that strategy rarely dictates unique structure solutions, and that the problem



عرض ملخص الدراسة والإطار النظري

- هدفت هذه الدراسة إلى تطوير إطار متكامل لإدارة التغيير قائم على الأسس النظرية لتطبيق أنظمة تخطيط موارد المؤسسة (ERP) بهدف تعزيز جاهزية المستخدمين، بحيث يربط بين عوامل النجاح الحرجة (CSFs) ونظرية التغيير التقني (Technology Adoption Theory) مع نظريات إدارة التغيير.
- استخدمت الباحثة منهجية البحث التصميمي (Design Science Research) على ثلاث دورات، تبدأ بمراجعة منهجية للأدبيات والدراسات السابقة لاستخلاص العوامل المؤثرة في متغيرات الدراسة، ثم إجراء دراسة ميدانية (Action Design Research) لتحديد المتغيرات، وتوظيف نتائج الأدبيات السابقة والاستفادة منها في الإطار النظري.
- عرضت الباحثة في الإطار النظري عدة مفاهيم ذات العلاقة بنماذج تبني التكنولوجيا، وأخرى تتعلق بنماذج التغيير التنظيمي لتكوين الإطار المقترح والذي يستند على نظريات إدارة التغيير.
- كما قامت الباحثة أيضاً بتطوير مقياس لقياس جاهزية المستخدم (User Readiness) عند الانتقال إلى النظام، وربطه بالإطار النظري.



نقد الإطار النظري

□ من حيث الملاءمة والشمولية:

- اعتمدت الباحثة على مجموعة من النظريات في إدارة التغيير التنظيمي، أبرزها نموذج كوتر للتغيير (Kotter's 8-Step Model) ونظرية لوين (Lewin's Change Theory)، إلى جانب دمج بعض المفاهيم من نظرية السلوك المخطط (Theory of Planned Behavior – TPB) ويُظهر هذا الإطار تكاملاً بين البعد السلوكي والبعد التنظيمي في تفسير كيفية استعداد الأفراد والمؤسسات لتبني نظام تخطيط موارد ERP جديد.
- الإطار النظري جاء شاملاً نسبياً من حيث تغطيته لمستويات التغيير الثلاثة الفردي، والجماعي، والمؤسسي، كما تناول العوامل النفسية والسلوكية المرتبطة بجاهزية المستخدمين، مثل الاتجاهات والمعتقدات والسلوك، إلا أن الإطار لم يتناول بعمق كافٍ الجوانب التقنية والثقافية التي تؤثر في نجاح تطبيق نظم تخطيط موارد المؤسسات ERP

• نقاط القوة:

- الدمج بين نظريات التغيير والسلوك التنظيمي يعزز ملاءمة الإطار لموضوع الدراسة.
- شمولية المفاهيم السلوكية والتنظيمية ضمن إطار متكامل، أثري الإطار النظري معرفياً

• نقاط الضعف

- عدم التطرق إلى بعض النماذج المعاصرة مثل ADKAR أو Prosci يقلل من اتساق الإطار مع الممارسات الحديثة في المجال الموضوعي للدراسة.



تابع نقد الإطار النظري

□ من حيث مراجعة الأدبيات والدراسات السابقة :

- استعرضت الباحثة عدداً من الدراسات التي تناولت إدارة التغيير في بيئات التحول الرقمي وتطبيق أنظمة ERP وتميزت المراجعة بالتركيز على الثغرات في دمج النظريات السلوكية والنماذج التنظيمية معاً، إلا أن العرض كان في بعض المواضع وصفيًا ولم يقدم تحليلاً نقدياً كافياً يربط النتائج السابقة بالإطار المقترح .
- كما أن بعض الدراسات المرجعية تعود إلى ما قبل 2015 مما يحد من حداثة الأساس المعرفي للإطار النظري، حيث أن الدراسة كانت في عام 2020.
- **نقاط القوة:** الاعتماد على مراجع متعددة تربط بين الجوانب النظرية والسلوكية لإدارة التغيير.
- **نقاط الضعف:** من الملاحظ وجود ضعف في التحليل النقدي للدراسات السابقة وقدم بعض المراجع.



الخلاصة

الملاحظات	التقييم	المعيار
يتسق الإطار مع طبيعة موضوع الدراسة وأهدافها.	مرتفعة	الملاءمة
يشمل الأبعاد السلوكية والتنظيمية لكنه يغفل التقنية والثقافة.	جيدة	الشمولية
دمج واضح بين نظريات التغيير والسلوك التنظيمي	مرتفعة	تكامل المفاهيم
يغلب عليه الطابع الوصفي أكثر من النقدي	متوسطة	تحليل الأدبيات السابقة
بعض المراجع قديمة نسبياً تعود لما قبل 2015.	متوسطة	حدثة المراجع

يُعد الإطار النظري في هذه الدراسة متكاملاً وشاملاً، يتسم بالقوة في موضوع إدارة التغيير ضمن سياق نظم المعلومات وتخطيط موارد المؤسسة ERP، حيث أنه يتناسب إلى حد كبير مع الأبحاث والدراسات في مجال الإدارة، والتي تتعامل مع التغيير التنظيمي والتكنولوجيا، إذ يوفر رؤية شمولية لإدارة التغيير في مشاريع تطبيق أنظمة ERP من منظور سلوكي وتنظيمي، ومع ذلك، أرى من وجهة نظري أنه يظل بحاجة إلى تعزيز شموليته بإضافة الأبعاد التقنية والثقافية، وتعميق المراجعة الأدبية عبر التحليل النقدي المقارن بين النماذج النظرية الحديثة



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