# Factors Influencing Transfer of Learning in the ICT Sector. A Conceptual Framework

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**Abstract:** Learning takes place constantly, including in workplace settings. Exploring which factors may facilitate or hinder the transfer of learning in the workplace may have implications on organisational performance. Following a review of the extant literature exploring factors that impact situated learning, and bi the Situated Learning Transfer Model emerged as a potential tool that may make learning processes more explicit. A qualitative approach using semi-structured interviews with 40 respondents from two ICT companies was used to collect data that would operationalise the Situated Learning Transfer Model. Deductive analysis using four overarching themes categories: (i) respondents' perception of workplace learning, (ii) factors affecting transfer of situated learning at an organisational level will be noted, (iii) individual level in relation to how factors affecting the transfer of situated learning, and (iv) transfer climate was conducted. The findings support the Situated Learning Transfer model and indicate that the workplace is a rich, contextual environment where learning can take place. Factors that affect situated learning may be observed at the organisational and individual level with the support of an adequate transfer climate. The workplace provides a social context where individuals interact and learn from each other. This study focuses on this type of learning that takes place in situ. This paper is a first attempt to operationalise the Situated Learning Transfer Model which gives prominence to learning taking place at the organizational level and at the individual level within the work environment. There is considerable scope for situated learning to be placed at a strategic level to gain leverage and enhance organizational performance.

**Keywords:** situated learning, learning transfer, workplace learning

## 1. Introduction

Learning takes place constantly (Tracey et al. 1995) and it is highly contextual and situated within the communities where it evolves through the interactions of members ((Vygotsky, 1962). It may be natural to assume that this happens at the workplace too Eraut (2004) with individuals learning from one another on the job (Brown and Duguid, 1991; Lave and Wenger, 1991). This instigates curiosity about how situational 'cues' (Roullier and Goldstein, 1993) may encourage individuals to apply new learning. In their study, Chiaburu and Marinova (2005), found that the application of new skills was positively correlated with organisational support. All organisations can be learning organisations, however, how individuals learn, the pace and the cost can be differentiated (Mai, 1996). A comparison between the engagement in situations where formal learning is imparted and informal learning situations occur led by Berg and Chyung (2008) found that there are aspects that impinge on the extent of informal learning and its transfer like personality, the work environment, relationship with colleagues and also physical proximity to co-workers.

For firms to improve their effectiveness, learning needs to be at the heart of their operations (Grugulis and Stoyanova, 2005). Informal learning opportunities including situated learning are often overlooked especially when the learning is not deliberate. Informal learning, may be considered important, as researchers see it as a key determinant of organisational success since it takes place in daily working situations (Tjepkema, 2002) without having any clear goals a priori.

## 2. Workplace learning

For some time now, there has been growing consensus that instability in the modern working environment has become a key ingredient that challenges organisations constantly (Argyris and Schon, 1978) leading to VUCA circumstances. In this view, the importance of treating learning as an ongoing process becomes increasingly emphasised. The unstable conditions in which many businesses now operate add a tangible context to justify the need to leverage internal knowledge that resides within employees.

The workplace offers various learning opportunities (Davies and Easterby-Smith, 1984). Often the learner is unaware of the process of learning itself especially when learning takes place incidentally (Marsick and Watkins, 2001). Workplace learning has also been criticised as 'unstructured', an affirmation that Billet, (2001) discounts, claiming that norms, values and common practices themselves provide a structure for learning experiences. Marsick and Volpe (1999:4) on the other hand claim that the value of informal learning is due to it being

'predominantly unstructured, experiential and non-institutional'. The cultural and structural characteristics of the organisation may therefore shape the 'learning landscape' and affect the effectiveness of the application of informal learning. Lave, (1990) refers to structure as the 'learning curriculum', emphasising the difference from a 'teaching curriculum', as learning takes place in a social context through engagement and co-participation in real activities with other members of the workplace community. In this research the curriculum refers to the structure of learning opportunities in situated instances. Gherardi et al (1998) introduce the concept of the 'situated curriculum' which is embedded in the habits and traditions of the community. The focus of this study lies in the value of the often-neglected aspects of the transfer of informal learning within the workplace under situated conditions. The 'situated curriculum' (Gherardi et al., 1998) could emerge as an important factor in the process of the transfer of such learning.

## 2.1 Learning in the workplace

Models of informal learning abound in the literature. Researchers explored how learning is manifested from different points of view in an effort to improve the success rate of these instances. When moving away from formal structures, a predominance of learning from experience can be observed in the literature (Boud and Walker, 1990; Davies and Easterby-Smith, 1984; Kolb, 1984) particularly due to the unstructured nature of learning events that take place in the workplace. Experiential learning has been documented as happenings emerging from specific events or stages that contribute to a process within which the acquisition of knowledge takes place (Kolb, 1984; Mc Call, Lombardo and Morrison, 1988). These events provide adequate grounds from which 'lessons' are learned as the learner engages with the experience from one stage to the next. Exploring distinct stages of (i) concrete experience, (ii) reflective observation, (iii) abstract conceptualisation, and finally (iv) active experimentation, Kolb's experiential learning model in particular instils an element of reflexivity between one stage and the next leading the individual from experience to actual implementation of concepts learned thus potentially facilitating transfer of knowledge acquired under situated conditions. Keeping experience at the heart of the learning process, Davies and Easterby-Smith (1984) spoke to 60 managers about their professional development. It emerged that the subjects learned more when elements of novelty were presented under the guise of challenges or new experiences. The need to change and shift perspectives provided learning instances while leading to professional development. Looking at experience from the point of view of how learning influences career success Hoeksema, van de Vliert and Williams (1997) found that depth of learning is an important factor. They suggested customised development programmes in order to maximise the learning potential. In a collaboration with van der Sluis and Williams, Hoeksama (2002) proceeded to develop an instrument to measure the quality of managerial learning on the job based on four types of work experience that offer opportunities for learning at the individual level. Influenced by Meggison (1996), the authors also looked at learning behaviour that explores how individuals engage with different learning opportunities that they come across at the workplace. Emergent learning which happens spontaneously and planned learning as identified by Megginson (1996) complemented the learning behaviours identified by Hoeksama et al. (2002) in the development of their study.

It must be noted that so far, the models explored are primarily centred around the experience of the individual from a learning opportunity. In their work Nonaka and Takeuchi (1995), first distinguish between two types of knowledge, tacit predominantly difficult to articulate and subjective and explicit, that which is more objective. They go on to elaborate on the theory of organisational knowledge creation assuming that tacit and explicit knowledge interact. The model moves from tacit to explicit knowledge through an interplay of activities, starting with socialisation supporting claims that we learn in social contexts (Vygotsky, 1962). From tacit to explicit knowledge the model moves to externalisation by articulating the tacit knowledge acquired through socialisation into concepts. Remaining in the same mode of knowledge creation combination of knowledge is proposed. This takes place through the organising of the concepts involving explicit knowledge. Closing the process is the internalisation of knowledge which takes the individual forward by embedding the knowledge making it tacit. The authors refer to this phase as the learning by doing stage. It may be noted that this exhaustive model takes a different approach to the ones previously mentioned since it incorporates the build up of how knowledge evolves within the individual while acknowledging the relevance of the social aspect.

## 2.2 Issues with transfer from workplace learning

Vermeulen (2002) referred to issues of transfer from formal learning interventions claiming that the opportunities to apply new knowledge are not easy to find since organisations might not be flexible enough to allow the time and resources needed to facilitate transfer. Greeno et al (1993) made explicit reference to transfer in situated contexts. Acknowledging the challenges of transfer in such conditions they claimed that if

events are to be transferred, the learning needs to take place in a form that remains constant across situational changes or else allow flexibility and transfer as needed. Workplace characteristics, namely the work environment and contextual characteristics such as the nature of the task and the learning experience, need to be taken into consideration when planning for transfer (Belling et al., 2004). The study focused mainly on experiential learning while concerns related to the transfer of what is learned from a learning opportunity have not been given explicit attention. For the purpose of the current study, the term learning transfer is used interchangeably with the term application referring to application of newly learnt material to workplace situations.

## 3. Theoretical contribution

With the exception of the models proposed by Hoeksama et al. (2002) and Megginson (1996), most models of experiential learning mentioned imply reference to the acquisition of knowledge that takes place mainly informally, perhaps incidentally (Marsick and Watkins, 2001). Located at the heart of organisations and in social practices, situated learning is highly contextual embedded in experiences made by individuals while interacting together (Lave and Wenger, 1991). Involving knowledge building, it adds relevance to situations that provide learning opportunities McLellan (1996). This paper aims to propose advances on previous studies through the Situated Learning Transfer Model (Fig. 1).

### 3.1 The Situated Learning Transfer Model

The different components of the model represent factors that possibly impact instances of learning transfer. These instances could take place in communities of practice (Lave and Wenger, 1991) through incidental learning (Marsick and Watkins, 2001) and other events where knowledge is presented to individuals. Ultimately, the model is mobilised through an empirical investigation aiming to confirm factors that facilitate or inhibit transfer of learning. Being aware of these factors, could facilitate the design of processes and tools that enhance transfer of learning in situated conditions reflecting Billet's claim that "learning in any environment will be more or less transferable, depending on the quality of the learning processes experienced" (2001:21).

The proposed model looks at learning broadly in terms of formal and informal instances, assuming that in firms there is normally a combination of both. Often, employees bring with them a level of knowledge that they carry around by default. This knowledge could be in the form of certifications or other educational achievements, formally acquired. Know-how from previous workplaces or mere observations and the acquisition of knowledge from experience also flow into the organisation while individuals build a repertoire of tacit knowledge available in the firm (Smith, 2000). Both formal and informal learning are brought together in the model being proposed as the constituents of the individuals' personal knowledge. Various established models of experiential learning fail to acknowledge this dichotomy of personal knowledge explicitly.

Organisational level effect focuses on factors related to factual occurrences in the organisation as well as abstract facets. Strategies and policies and business goals represent the factual aspects of the organisational level effect. Lim & Johnson (2002) acknowledge the element of 'planning for future use' in their work which is highly relevant in the proposed model. On the other hand, work environment and supervisor/peer support and/or sanction are two factors that address concepts not necessarily related to black on white situations, but in many ways still affect the level of transfer of learning at the workplace and the dissemination of new knowledge. Work environment as a factor can be highly valuable as it is broad enough to consider varying issues. A work environment where communication is valued could prove to be a critical factor for the transfer of learning. The variables identified by Lim and Johnson (2002), such as 'supervisor's interest and involvement', 'planning for future use', and 'difficulty to apply due to organisational problems', were considered in terms of high or low levels of transfer. The concept of Fuller and Unwin's (2003) expansive learning and restrictive learning are also considered within the work environment which is aimed to extract information on the atmosphere at the workplace vis-à-vis the transfer of situated learning, as finding elements promoting an expansive culture is considered critical when highlighting factors affecting the transfer of learning.

The model also features a section dedicated to the individual level effect. This presents another area that appears to be missing form existing models of experiential learning since processes are viewed as relatively automatically without considering ancillary factors. Billet (2001) explored the interdependence of the social practice of work within the workplace and how individual roles come into play. Lave (1996) addresses the issue of multiple differences in how learners shape and use what they know. The proposed model refers to this as imported know-how, made up of cumulative experience that each employee brings to the organisation. The

individuals' know-how accumulated over the years through different experiences could be imported and used in the organisation as is or it may be adapted as a result of creative processes involving creative cognition. Different methods of problem solving or levels of mastering new techniques could potentially be shared at the workplace and advantage could be gained out of such experiences. The personality characteristics of individuals also make a valid ingredient that could potentially influence how and when learning is applied at the workplace (Billet, 2001). Self-efficacy is seen by Kirwan and Birchall (2006) as another major component linked to personality characteristics.

Finally, the proposed model looks at transfer climate. This is the medium that can motivate individuals to transfer new learning into the organisation. This presents a further element that misses explicit reference in existing models of experiential learning that primarily view learning as a process without exploring the external factors that may impinge on the success rate if the same process. It must be noted that transfer climate can also be positive thus facilitating the application of newly learned material or negative thus placing constraints on the process. Instances of poor transfer climates, risk making the work environment as non-conducive for the application of new learning. Brinkerhoff and Montesino (1995) reported lower levels of transfer where the supervisor had fewer interventions with workers, thus not providing a conducive learning transfer climate.

To summarise, building on previous work by established scholars, the Situated Learning Transfer Model aims develop a clearer understanding of the factors that may influence the application of situated and learning in the workplace through contextual elements at individual and organisational levels. model assumes that the criteria mentioned above influence the transfer climate within the organisation.
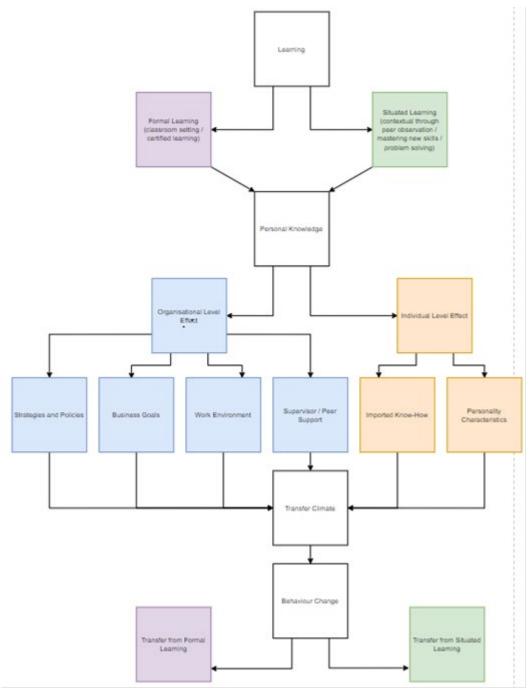
**Figure 1. Situated Learning Transfer Model**

## 4. The current study.

To validate the factors identified in the Situated Learning Transfer Model, a deductive study was designed to explore the following research questions:
1.  How do factors at the organisational-level influence transfer of knowledge in organisations?
2.  How do factors at the individual-level influence transfer of knowledge in organisations?
3.  Which factors emerge as determinants of the transfer climate that may facilitate transfer from situated learning in organisations?

## 5. Method

### 5.1 Research Design
Adopting a deductive approach, a qualitative design was identified as suitable this study since it provides the opportunity to explore data in more depth and detail. Interviews offer features that enable the researcher to

engage with the process of data collection by taking note of non-verbal responses and through the possibility to clarify any misunderstandings instantly (Patton, 1990). More specifically, semi-structured interviews were conducted. This method gives the possibility of a degree of standardization through the interviewing phase while maintaining the possibility to collect data rich in insights, opinions, values and feelings (May, 2001).

### 5.2 Participants

Two ICT organisations located in Malta (EU) took part in this study.  Established in 1996, both research organizations have considerable experience in the field of ICT solutions.  Both organisations were founded in the same year and experienced the same economic and social conditions presented on the island.  Both organisations fall under the SME category since they both employ less than 250 individuals each.

The sample comprised of 40 participants; 32 males and 8 females with an age range between 18 and 55 years. The participants occupied different roles within the research organisations.  This permitted a cross-sectional view of the concepts being explored. Purposive sampling was used to identify two organisations working in the ICT Sector in Malta (EU).

All the relevant ethical principles have been adhered to.  To preserve the identity of respondents all responses were pseudonymised.

Table 1 presents the categories of the participants that took part in the study.

**Table 1:** Categories of respondents

| Role | Number of Respondents |
|---|---|
| Managing Director | 2 |
| Manager | 6 |
| Team Member | 22 |
| Ancillary departments* | 10 |

*Ancillary departments: human resources, marketing, secretarial pool

## 6.  Data Analysis

Semi-structured interviews were conducted with the aim to elicit as much information and detail as possible. Each interview lasted approximately 60 minutes.  Directed content analysis (Hsieh and Shannon, 2005) was deemed to be an appropriate method to breakdown the data collected since it is in line with a theory building approach since the current research aims to fill gaps in the existing literature.  Directed content analysis was carried out using overarching themes, and themes identified in the Situated Learning Transfer Model as a template.  Codes and categories emerging from the data were also used.  After transcribing all the data from the semi-structured interviews, the transcript was read multiple times for familiarisation while highlighting instances in the text that stood out as representing the pre-set overarching themes and themes identified in the model. This was followed by allocating codes to the highlighted areas in the transcripts as appropriate. Any recurring themes that emerged that were not explicitly formulated in the model where given a new name.  Themes are not fixed. As abstract constructs, they emerge during the research process, (Denzin & Lincoln, 2003) even in deductive approaches.  It must be noted that trustworthiness in qualitative research is a way in which researchers make their work noticeable (Lincoln & Guba, 1985).  In the current study this was achieved through a reflexive process involving the questioning and reviewing of the process undertaken during the analysis. The entire process was carried out manually.

## 7.  Findings

Through the use of directed content analysis, the aim was to extract evidence from the transcripts to confirm or refute the Situated Learning Transfer Model. Table 2 highlights examples of the overarching themes and themes from the model, together with codes and categories that were identified from the text. A description of the key findings from the study ensues.

### 7.1  Perception of workplace learning.

Participants used action-oriented vocabulary to express their perceptions of workplace learning and its transfer. The most recurring action words used when referring to learning included: '/share/ or /sharing/, /observation/ or /observing/. Concepts of learning in a social context thus adding to the situativity of the nature of learning in

the workplace were also noted.  Instances of situated learning and its transfer were linked to the possibility of having opportunities for trial and error and problem-solving situations on the job.

**7.2   Factors affecting transfer of situated learning at the organisational level**
This section presents findings related to factors that influence the transfer or situated learning at the organisational level.

*7.2.1   Support for learning.*
Support emerged as a critical factor. Support through appreciation seems to be valued by employees and is indicative of learning-supportive culture. Feedback is also perceived as an important element of support in view of setting learning opportunities.  The lack of support emerged as an important factor impinging on the willingness to apply new learning.

*7.2.2   Opportunities for transfer.*
Finding opportunities to transfer techniques learned appeared to be a valued feature of situated learning for participants. Responses indicated that project-based tasks brought about openings where individuals could explore and practice their abilities.

Participants referred to the workload and time pressures as limitations that inhibit them from transferring new learning.

*7.2.3   The work environment*
The work environment provides a multitude of contextual factors that impinge on the possibility of transfer of new learning to the workplace.  The social aspect in an environment conducive to learning and the application of what is learned stood out in the elicited responses. Suggesting a work environment in which employees feel valued and confident, responses referred to a 'learning-supportive culture' where an interplay between values, practices and assumptions takes place.

Although most responses provided positive feedback about the work environment, elements of a restrictive learning culture, also emerged. In a particular interview a narrow scope for learning within the job was noticed.

**Table 2:** Sample themes, codes and categories

| **Overarching Theme:** Learning in the workplace | | |
|---|---|---|
| Theme:<br><br>Perceptions of learning from the point of view of respondents. | Code:<br><br>Sharing | Category:<br><br>Promoting insight |
| "…because colleagues will share with you their knowledge and work methodologies",<br>"…sharing of ideas and points of view might help in learning new skills etc. | | |
| | Code:<br><br>Observation | Category:<br><br>Promoting insight |
| "…you can also learn by observing because you will be seeing different people's working methods…" | | |
| | Code:<br><br>Practice | Category:<br><br>Promoting insight |
| Reading about it didn't help me much as actually getting my hands dirty and coding the actual application." | | |
| **Overarching Theme:** Factors affecting transfer of situated learning at an organisational level | | |
| Theme:<br><br>The work environment as a learning site | Code:<br><br>Opportunities | Category:<br><br>Opportunities to Apply Learning |
| "…new ideas that are encouraged is the type of code used (and the format with which is written (as long as the code is well documented)) and prioritising issues.  Projects are given to us and it is up to us to prioritise them as long as we finish before the deadlines." | | |
| Theme:<br><br>Support for learning | Code:<br><br>Instances | Category:<br><br>Supervisor Support |

| Overarching Theme: Learning in the workplace | | |
|---|---|---|
| "I feel that I am always learning something here. I get appreciation on the good things and also criticism which is also appreciated to help you improve your skills." | | |
| Theme:<br><br>Opportunities to Apply Learning in the Organisation | Code:<br><br>Opportunity | Category:<br><br>Experimentation |
| "…By giving you jobs which aren't of a normal routine or putting you in a situation where you have to use a new approach, like implementing new technology or a new methodology." | | |
| Theme:<br>Opportunities to Apply Learning in the Organisation | Code:<br><br>Time | Category:<br><br>Workload |
| "It (new learning) can't be because the implementation at work is very hard. It's ok to learn but finding the right time to use what is learnt is difficult." | | |
| Overarching Theme: Factors affecting transfer of situated learning at an individual level | | |
| Theme: Imported know-how | Code:<br><br>Awareness | Category:<br><br>Skills |
| "I think that I mostly brought around knowledge about programming, which is a pity given that I have much more knowledge in many other subjects other than computer areas." | | |
| Theme: Sharing of ideas | Code:<br><br>Interpersonal skills | Category:<br><br>Individual characteristics |
| "If the person is shy or has a low self-worth, then his idea will not go far" | | |
| Theme: Personality characteristics | Code:<br><br>Perception | Category:<br><br>Individual characteristics |
| "Being too pushy or too subdued might both fail to successfully implement new ideas. One needs a balance between confidence and diplomacy." | | |
| Theme: Willingness to contribute | Code:<br><br>Time | Category:<br><br>Cohesion |
| "At times when I find a problem, or maybe hear others talking about a problem, I don't always feel like sharing that information. If I tell others, at times it would take much longer to complete the job." | | |
| Overarching Theme: Transfer Climate | | |
| Theme: | Code:<br><br>Networks | Category:<br><br>Support |
| "My colleagues support me by asking questions and offering suggestions." | | |
| Theme: | Code:<br><br>Culture | Category:<br><br>Attitude |
| "Management need to develop a 'can-do' culture but at the same time allow for mistakes to happen and resources (money, time, etc) to be consumed during learning." | | |
| Theme: Communication | Code:<br><br>Network | Category:<br><br>Feedback |
| "We communicate to give feedback all the time. This feedback can be good or not so good. It usually leads to discussions on how we can improve." | | |

Most responses outlined a positive attitude from management indicating that the allocation of responsibility to staff could foster a conducive environment for learning at the workplace, thus potentially laying the foundations for the successful transfer of situated learning.

*7.2.4   Opportunities to Apply Situated Learning.*
Participants indicated an empowering mode of work organisation that is conducive to the application of learning. Interviews led to the understanding that 'the opportunity for use' also arises through 'empowerment' or by leaving individuals to come up with their own solutions.

The workplace environment has the potential to undermine as well as support the transfer process. Organisational deterrents for learning and its transfer include lack of time because of job pressures and responsibilities.

### 7.3 Factors affecting transfer of situated learning at the individual level
This section focuses on the role of the individual in relation to transfer of situated learning.

#### 7.3.1 Imported know-how
Participants were asked to think of what type of know-how they believe to have brought to the firms when they joined.  In a broad sense, however, participants tended to make a clear distinction between core technical skills required for the job and soft skills, and they were more inclined to respond in terms of technical skills perhaps due to the nature of their roles in the ICT sector.

#### 7.3.2 Personality characteristics
Previous research hinted at the role of individual agency and personality in the learning and transfer process. The findings confirmed that personality characteristics and their impact on human agency could influence the transfer of learning at the workplace. Participants recognized that in order to implement new knowledge certain qualities were necessary.  Although participants appeared to think that "certain personality types", referring to staff members who do not like change, may not openly enjoy learning, positive personality characteristics most frequently used were: /drivers/, /being positive/, /believing/, /risk takers/, /persistence/, /ability to find and use the right channels/, and /trust/ respectively.  The responses imply that an outgoing personality and a positive attitude are perceived to be desired personality attributes to implement changes as a result of new learning.

On the basis of these findings one may suggest that the impact of personality characteristics on the application of new learning needs to be recognized so that effective systems are designed to facilitate transfer. Individual personality is seen to be a powerful 'niche' that could be exploited to understand and enhance the transfer of situated learning and its transfer.

### 7.4 Transfer Climate
Findings from the current study indicate that something akin to a transfer-supporting climate existed in both research organisations.  Responses indicate that the climate established in the work environment can support or hinder the transfer of learning.  Some responses suggest, that the nature and quality of existing working relationships could also play an important role in the generation and implementation of new learning.  A high level of mutual support between co-workers also became apparent. Support networks, facilitative working relationships and constructive feedback arrangements, emerged as potential catalyst for the implementation of new learning.

The findings also show evidence indicating that the climate at the workplace contained aspects that were not so conducive to the of learning transfer.  The attitude of managers was seen to be central to the extent of which the workplace provides opportunities to transfer situated learning. The following section explores how communication can be seen as another contextual influence on learning transfer.

## 8. Discussion

Building on existing experiential learning models (Boud and Walker, 1990; Kolb, 1984; Hoeksama et al, 2011; Megginson, 1996), the current paper sought to identify and confirm a model that identified factors that may influence the transfer of learning.  Identified as appropriate to explore theory (Creswell, 2007), a deductive approach was used to analyse the data.  Overall, the proposed model has been confirmed through the emerging findings which in turn appear to support previous literature.  Instances of incidental learning (Marsik and Watkins, 2001) as well as aspects mentioned in other models including the experiential learning model by Kolb (1984) were observed.  Moreover, when looked at globally, the findings also show support for SECI model (Nonaka and Takeuchi 1995) through the interaction with knowledge in the form of a journey that starts with socialisation on the job that eventually leads to the internalisation of concepts. The findings also indicate support for findings by Lim and Johnson, (2002) at the organisational level with direct references made to supervisor support and the search for opportunities for future use. At the individual level, support for work by Kirwan and Birchall (2006) was evident through the descriptions in relation to personality characteristics implying the manifestation of self-efficacy when seeking opportunities to apply new knowledge.  Moreover, the individual differences in how learners interpret and choose to apply what they learn clearly reflects the work by Lave

(1996). All these elements appear to impinge on the intent to transfer new knowledge by creating the transfer climate. The findings from the study indicate that there is scope for a learning curriculum (Gherardi et al., 1998) in the workplace to stimulate and enhance learning under situated conditions while raising awareness about the opportunities to transfer the acquired knowledge to daily activities.

Initially, conceptualised as relevant, 'strategies and policies' and 'business goals' within the organisational level effect elements were made redundant since participants did not relate to them nor referred to them during the semi-structured interviews. They only appeared under the disguise of a sense of urgency in the business rather than as a potential learning tool. The data therefore suggests the need for revisions to the model. Confirmatory studies are required to further support the proposed model of situated learning transfer.

## 9. Limitations

In trying to operationalise the conceptual model, a small-scale study was carried out. Although using a qualitative approach one finds out more about the perceptions of participants, the numbers tend to be small leading to limited scope for generalisation. Moreover, the focus on one sector (IT) is another limitation since behaviour in other sectors may differ.

The study points to new directions for the development of fresh research. It must be noted that although the model was supported by the findings, it can still be considered as parsimonious since dynamics external to the research organisations were not considered in this study. Market forces could provide extensive possibilities for situated learning and its application at the workplace in order to ensure organisational survival.

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