Chapter 5

5.. DATA ANALYSIS AND INITIAL FINDINGS

5　Data Analysis and Initial Findings

5.1　Introduction

The previous chapter explored the initial question of this investigation, namely to identify the aspects of e-readiness of warehouse workers, and resulted in five subsequent questions. The analysis in chapter four also resulted in six categories as indicators of e-readiness of the warehouse workers: experience with technology, access to technology, attitudes and habits, organisational contributions and constraints, origins of motivation and cultural contributions and constraints. These categories (theory codes) have inspired and led to the formulating of the following research questions to explore the e-readiness of the warehouse workers:

- Sub-question 1: What technical experience do the warehouse workers have with technology that may impact on their e-readiness?
  This question refers to the technological experience the warehouse workers have at work, during their business activities or any other contact and use they may have with technology.

- Sub-question 2: What affective experience do the warehouse workers have with technology that may impact on their e-readiness?
  This question explores the affective experience of warehouse workers when using computer technology - their fears, anxieties, confidence and attitudes of contributing to their e-readiness.

- Sub-question 3: What aptitudes with regard to the use of the computers can be observed from warehouse workers to imply their e-readiness maturity?
  This question explores the warehouse workers' aptitude with computer technology as it has been observed during their daily tasks and related observations (Reeves, 1999).

- Sub-question 4: What origins of motivation may induce warehouse workers to become e-ready?
  This category explores the motivational aspects that the use of technology may have on the warehouse worker, and how these origins of motivation (Reeves, 1999) influence their e-readiness. Aspects such as extrinsic and intrinsic motivators are explored.

- Sub-question 5: How does access to technology contribute to the e-readiness of warehouse workers?
  The fifth question relates to their access to computer technology - the access and infrastructure available to the warehouse workers, and the effect it has on their e-readiness.

- Sub-question 6: In what way does the organisational culture influence the e-maturity of the warehouse workers?
  The contributions of the organisation are critical for the e-readiness of warehouse workers. This question explores the warehouse workers' organisation - and personal cultural habits of mind (Reeves, 1999) and how this affects their e-readiness.

With the above six research questions in mind, I conducted a grounded theory approach and conceptual analysis of my research data. The primary documents captured in Atlas.ti™ comprised of the interviews, questionnaires and observations on the SMEs, warehouse workers and their managers. The theory codes (categories) that emerged in chapter four were used to guide deductive coding of the research data.

In the following sections the six sub-questions will be explored.

5.2 Technical experience with computer technology (Sub-question 1)

The first category of e-readiness, Experience with technology consists of two areas of e-readiness.
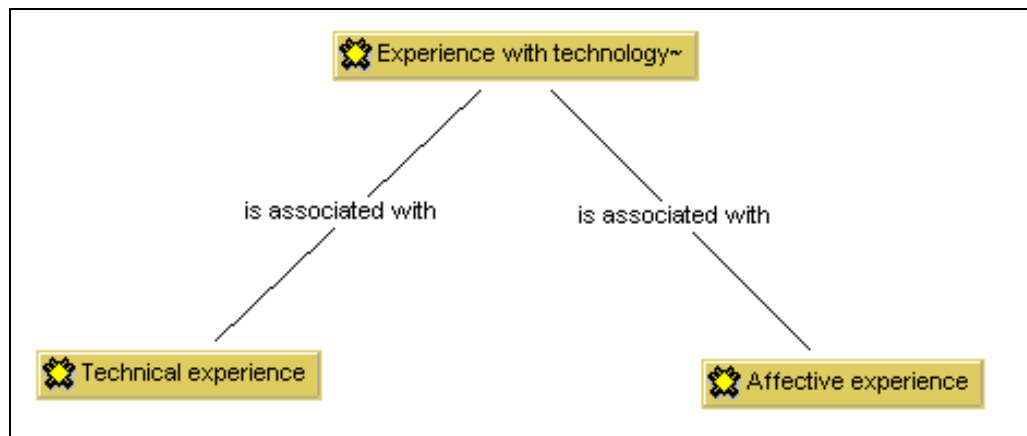
Figure 5.1   Experience with technology includes technical and affective involvement

The technological experience relates to the warehouse workers' encounters with computer technology, mainly the mainframe systems used within the organisation, their current training with technology, their use of e-mail within the organisation and the way they respond to technology. The affective experience with technology relates to the warehouse workers' aptitude, habits, attitudes and emotional responses when confronted with technology.

5.2.1 Technical experience with computers

SMEs indicated that computer use is essential to prepare warehouse workers for e-learning: *… to start e-learning, it is important that they have a basic knowledge of the computer, how to use the mouse, the keyboard - even if it* [the warehouse workers] *is slow* 1:298 (1814:1817).

During the interviews participants indicated that they would like to use the computer: *Yes, I like working on computers - a lot*! 2:297 (2077:2079), and my immediate opinion was that they may not know what it entails and their answers may be somewhat naïve. When I asked a respondent whether she would give up her tea and lunch breaks to do training I received an adamant response: [Not hesitating at all] *Yes! I would! Yes!* 2:181 (1167:1169). The category technical experience relates to

whether technology is a foreign experience for the warehouse workers, or whether they have been exposed to the technology often enough to counter arguments that they fear and are too scared to use computers.

From the questionnaires, during the interviews and the observations I learnt that the warehouse workers were not new to the use of computers and did not fear this medium.   This contradicted my initial perception that the warehouse workers' experiences were too limited for them to be e-ready.
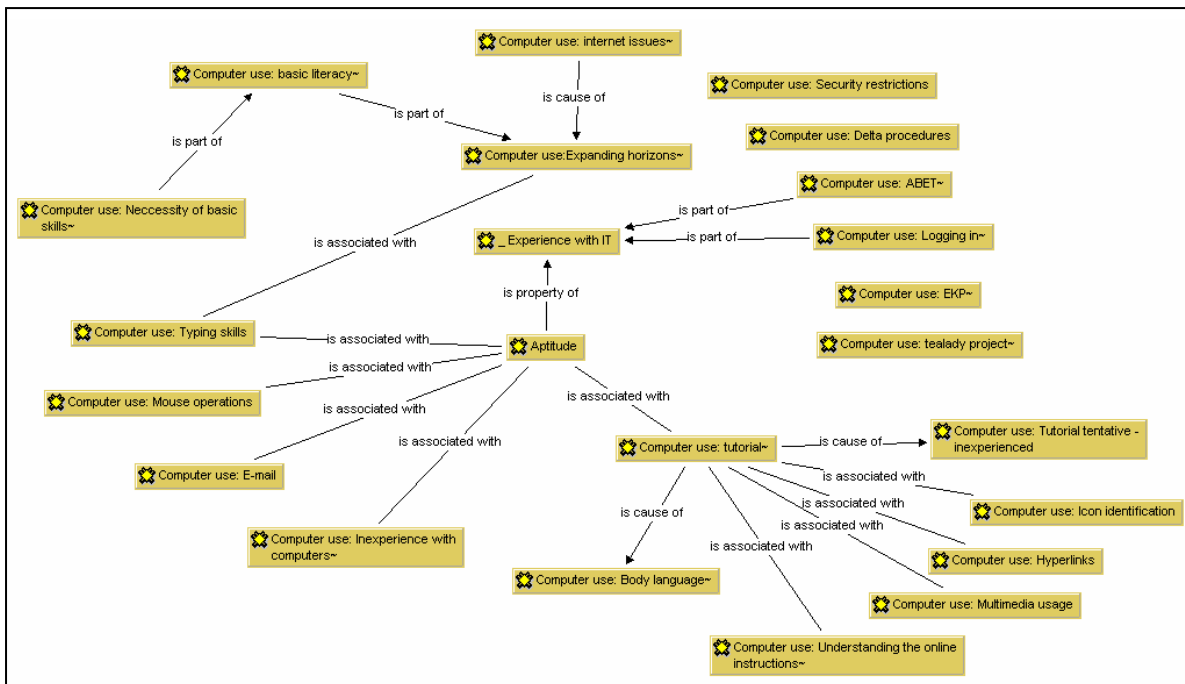
Figure 5.2   Encounters with computers as experienced by the warehouse workers

Figure 5.2 indicates the different encounters that warehouse workers have with computers or related technology.   Computer use refers to the daily tasks with the mainframe systems, e-mail use, internet connection and experience and the ABET classes for a number of warehouse workers. The diagram also refers to a tutorial that has been submitted to participants, and how they responded.   The diagram also shows the basic computer literacy activities.   The purpose of the diagram is to indicate the activities or ways that warehouse workers encounter computers. Some of these experiences include the use of cellular (mobile) phones, ATM's and a new procedure that has just been introduced to the IHD warehouses, picking stock with voice technology (Appendix3.13).

The following discussions analyse the contributions of the SMEs, warehouse workers and managers in relation to the technical experience the warehouse workers have gained with the mainframe system, ABET training, dealing with e-mail and internet activities. Figure 5.3 illustrates the experiences the warehouse workers have gained with computers during the course of their assigned responsibilities. Discussions follow to explore the experience warehouse workers have had with the business' mainframe system, ABET training, e-mail use and the internet.
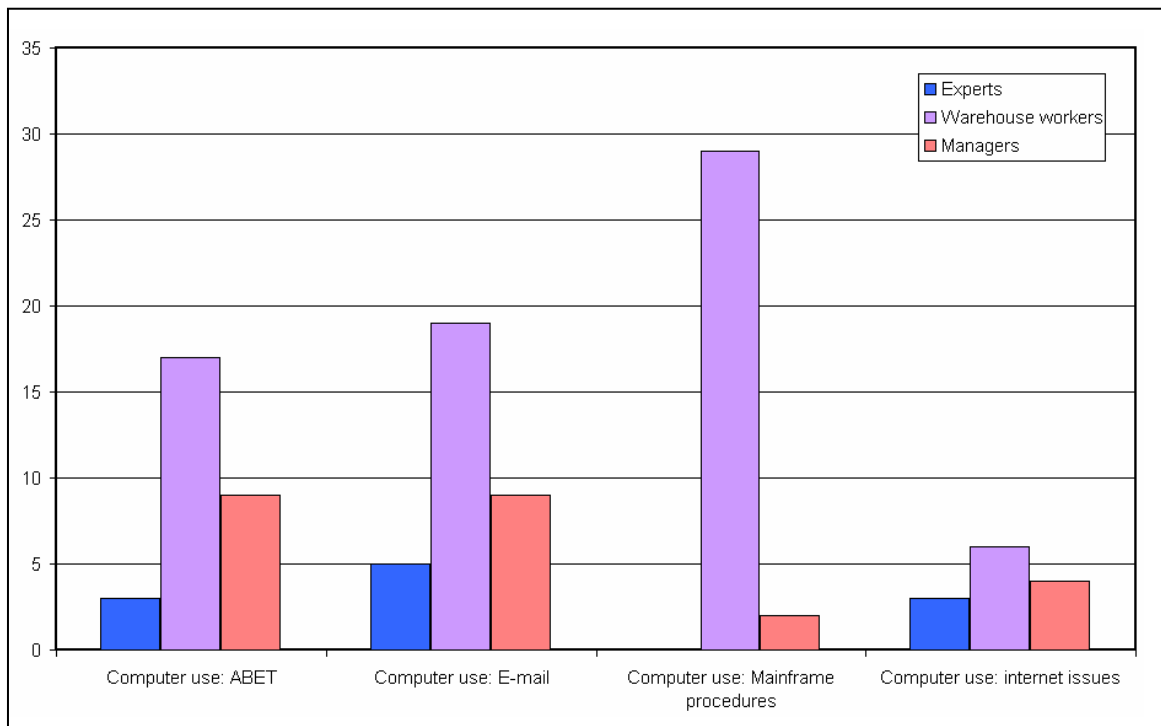
Figure 5.3   Work-related computer experience

Warehouse workers at IHD have to perform their daily tasks by interacting with a mainframe system. This entails actions to receive, register, post the stock to be stored for easy tracking and picking at a later stage, and lastly pack stock and generate invoices when stock is about to be delivered to customers (Figure 1.3), procedures that are supported and managed by the mainframe system. Users need to log in as an allocated user, with a password that expires every thirty days, and requires the user to select the required menu to perform his tasks.   Figure 5.3 refers to aspects of experience as regarded by SMEs, warehouse workers and managers. SMEs did not specifically refer to business systems, but have indicated the importance of computer experience, and regular practice: ...*if this learner is exposed to the medium in a gradual way; let him play and use the application for at least a month* 1:93 (487:489).

I observed six of the warehouse workers while performing their tasks on the mainframe system. The activities I observed were: two pickers picking stock, one male employee performing receiving duties, a female employee during the manifesting (packing) of stock, and another doing stock replenishments. I have also observed a female using the latest voice picking technology to pick stock by means of audio technology. I needed to determine whether they performed the computer activities by themselves or whether the responsibilities were passed on to some higher authority. I also wanted to establish whether they were actually interacting with computer technology. From my observations I noted:

- *… worker watches the monitor, reads the information as it is displayed on the screen; interprets the information by deliberately walking to a shelf where electronic lights indicate the quantity to pick …*2:457 (3046:3049)

- *briefly reads the screen, turns around to another shelf. He understood from the displayed information on the screen that there are more articles to be picked* 2:458 (3053:3055)

- *… while quickly scanning the new information on the monitor* 2:461 (3069:3070).

- *… checks the information on the monitor. Apparently satisfied that all is in order, she opens the tote* 2:479 (3223:3224).

- *… reads and interprets information on the screen. Verifies the information he sees with what he has on a paper document in front of him. He enters numbers in the computer by using the numeric keypad on the righthand side of the keyboard* 2:484 (3279:3283).

Figure 5.4   Receiving assistant using the mainframe system

Figure 5.4 illustrates an older respondent where he performed his receiving tasks on the mainframe system (Appendix 5.15). The observations gave me an indication of the warehouse workers' ability to understand and interpret the information to perform their daily duties. All the observed participants were experienced and knew what they were doing and how to interact with the information.

Although the procedures they had to perform were basic and only specified keys were used, the responsibilities required a deeper understanding of their tasks than merely pressing a number of keys. The participants needed to know the business procedures well:

- *It seems easy, as there are only a few basic procedures to be completed. No typing is required, merely the recognition and interpreting of information on the monitor* 2:464 (3094:3097)

- *The process is completed by pressing the F7 button to acknowledge the completion. The process is very basic, but very dependent on technology* 2:463 (3088:3091).

I tried to identify signs of attentiveness when they were interacting with the computers, but most of the participants were assured and confident during their mainframe activities (Appendices 5.1 – 5.6). The information from the questionnaires confirmed that they used the computers in their line of work (Appendix 3.4).

Table 5.1   Computer activities at work

Do you work on the computer?

All the time	25
Most of the time	23
Now and then	11
Not at all	9

Warehouse workers use computers at work. The grouping of the responses as listed in Table 5.1 indicates that most of the warehouse workers have experience with the computer at work (Appendices 5.1-5.10). It may be that they use it in a limited way, but the value here is that the experience may serve as valuable practice to prepare warehouse workers for e-learning. The interviews showed that the workers have experienced computer technology in several other ways too.

I observed three of the ABET sessions. During the first session I focused mostly on the participants' behaviour and not on the programs they were busy with. I focused on their basic attitude towards the computer technology and whether they were able to work independently. The first observation I made was the seemingly easy way they started the sessions:

> *Apparently neither of the two had any problems to switch on the PC's, type in the user ids and passwords to log on. Both watched patiently as they waited for the sign on process to be completed. Still no one spoke - It seemed as if they knew what to do to log in* 2:15 (74:76).

I got curious and walked past them to see whether they were successfully logged in:

> *Lady 1 was busy with the English literacy program, and was apparently listening to some instructions or explanations. At this stage there was no typing or any mouse activity. I could see that she found where she had last left the program, logged in and continued from where she had to…* 2:16 (84:88).

I observed that another respondent had problems with her initial log in and password. I was not sure whether she had already tried or not, but somehow now she had problems remembering the correct password for the training room computers. She called me for assistance when she saw me looking at her monitor. I showed her the user id (which was written permanently on one corner of the whiteboard for training purposes).   I reflected that there was little guidance and coaching from the HR department, and that they were basically left on their own with only minimum instructions. It was probably assumed that they were capable of getting all the computer logistics right by themselves. I further observed that:

> *She retyped the password. An error message appeared. In all cases in IHD, a password had to include at least one uppercase character, at least one or two numbers with the other lowercase characters. Minimum number of characters was six. In this case the password was Aug2005. I checked her keyboard and saw that the uppercase key was activated. I deactivated it and asked her to try again. I watched her as she tried again. She made another mistake. She could not activate the uppercase character. Eventually I logged in on her behalf* 2:20 (101:106).

The interactions during the ABET lessons were minimal. The warehouse workers seemed to be listening most of the time, and completing exercises in their books. They were guided by the audio instructions most of the time:

> - *I could not hear anything at this stage, but I assumed she was listening to instructions or explanations. I waited to see her type, but after a while she started writing in the textbook again* 2:23 (122:125).

- *They both carried on in the same way, now very involved in their assignments. Occasional typing, supported by mouse activities and writing in their workbooks. Mostly listening.* 2:23 (153:155).

During this hour that I had been observing them nobody from the HR training department visited them. They seemed to be used to being left on their own. This did not seem to bother them, each of the participants worked on their own, with their own learning programmes. I asked one of the warehouse workers what happened if they experienced problems? She replied that they did not normally experience any problems. I thought to myself that they would probably leave if network or technical problems prevented them from working. My initial reaction was an irritation about the irresponsibility of the training department to leave the participants without any assistance, because it really appeared as if some of them needed guidance. I later reflected that it may help my cause: e-Learning is a strategy where the learner needs to draw on his own resources to find solutions, and this was an opportunity to see how they responded to such a challenge.

The next day I decided to focus on their computer skills and the applications they were interacting with. It was a different group from the previous day. This time four warehouse workers arrived for the training session. They seemed to be clear on what they had to do. I concentrated on the way they logged in. One respondent had a problem with the Windows log in again, but the rest logged in easily and started working. Their basic computer literacy seemed to be slow, but sufficient:

- *I could not see her screen, but watched her hands. She operated the mouse well, as if she knew what to expect every time she clicked.   She put on the headphones and I watched to see when she would start typing* 2:38 (200:204)

- *... I heard the Windows chimes to indicate that he has logged in successfully. He put on the headphones and started working on the PC. His mouse operating skills were fair, and he typed slow, but deliberately* 2:41 (211:213).

The warehouse workers' mouse skills were less than fluent, but they showed progress. I had observed previously that new users often struggle to perform the double click and wanted to see how the warehouse workers were doing:

> *I could not see any activities that suggested that they had to double click or not. Their hands indicated that they were aware of the abilities of the mouse operation* 2:45 (228:231).

One of the warehouse workers even indicated that he knew what to do with a "sticky" mouse:

> *The training room's PC's are used by many and maintained by few. He showed his irritation by picking the mouse up and fiddled with the mechanism* 2:47 (233:237).

I could not determine whether their interactions were correct or not. They used exercise books and interacted a little with the computer. I was not sure if the HR department used their results and if they passed by merely completing the exercises or if they had to be formally assessed. The activities seemed to be very one-sided and simple. ABET assignments are guided exercises where they could write the results either in the exercise books or enter their answers on the computers.

In their interviews both managers and SMEs presented less information regarding ABET training. SMEs briefly referred to ABET training, which implied that they were aware of these bridging programmes. Managers accepted it as a training strategy to be presented to their staff, even though

the purpose of this training was not always clear to them: *And do you feel that ABET is giving you a good enough platform to move on? Ah, I'm really not sure, but at the moment they push me a little bit up* 3:156 (914:917).

The ABET observations gave me an indication that the warehouse workers have the basic knowledge to continue on their own. The self-driven computer-assisted lessons gave them the opportunity to be independently in contact with computer technology. From an e-learning point of view, it indicated to me that the unit of analysis could operate independently. Regardless of the lack of supervision, most had a basic knowledge of the computers and the ABET program to work independently, and at their own tempo. But there were suggestions during the observations that indicated that some warehouse workers may need a lot of initial assistance. The logging in process where the respondent struggled with the password indicates initial guidance is required.

The warehouse workers' interactions with the ABET training program indicated that the workers were ready to work on basic e-learning assignments if thorough guidance and purpose are provided.

Next I focused on e-mail. All employees at IHD have the privilege of an e-mail address and access to an e-mail box. e-Mail experience can contribute significantly to the e-readiness level of warehouse workers as declared by an SME:

> *e-Mail skills are the first things they learn. It's also an excellent tool to become computer literate. Let them write messages to one another. Let them learn how to use Outlook and how to organize their own lives* 1:519 (3214:3218).

Most participants have indicated on the questionnaires that they did have access to e-mail, a good position to get ready for e-learning. Table 5.2 refers to the responses re e-mail experience.

Table 5.2   Warehouse workers' e-mail experience

Do you receive e-mail messages?

Responses to the receipt of e – Mail	
Yes	53
No	14
Don't know	0

Can you send an e-mail message?

Responses wrt sending of e-mail	
Yes	50
With help	3
No – don't know how	14

In addition, the interviews yielded significant comments regarding e-mail. The use of e-mail seemed to be limited due to a lack of skill and knowledge. One responded that he can send e-mail messages, but didn't know how to open attachments, while another responded:

- *Um, yes we do receive e-mail, especially now with the company policy from HR to highlight to us what goes on with the meetings and so on. I don't have a problem with that* 2:189 (1243:1246)

- *Definitely. I read all the e-mails but I don't even know how to send them. Tough luck* 2:256 (1726:1727)

- *No, I can't open the attachments* 2:164 (1069).

I video recorded a worker in Bloemfontein (Appendices 5.5-5.10). I wanted him to demonstrate to me how to open his mailbox and show me how to send mail. I transcribed his actions as follow:

- *He immediately responded by using the mouse, explained that he goes to Outlook to do this. He double clicked the icon on the desktop, and the MS Outlook application opened. His list of messages was visible* 2:506 (3462:3466).

- *He clicked on the message to open it. There was still no indication that he was tentative, or uncertain* 2:507 (3468:3470).

I asked him to reply to a received message: *He moved the cursor to the "Reply"-function, and said "I click it there". He indicated the correct procedure, but at this time I detected that he was not so sure anymore* 2:508 (3474:3476). He stopped and did not know exactly how to continue. He made the excuse that they did not have time to send messages. He explained the meaning of the "forward" function. He said: *Forward means I send a reply, maybe I write something there, and then forward to persons I want to send it to* 2:510 (3480:3482). He had the basic idea, but was not able to use it. My impression was that he needed relevant experience.

Apparently the warehouse workers were used to find information sent to them via e-mail, but it seemed to be less important for them to convey information to other workers. I observed that they had the skills to open and read the mail, but were tentative and less assured when required to send or reply to messages.   The respondent in the previous paragraph explained the forward function accurately, but did not have the confidence to demonstrate his competency with this facility.   There was no demand for this skill, and consequently not used by the workers. It includes the sending and receiving of attachments. Figure 5.5 shows an example of an e-mail I received from a respondent in Linbro Park When I interviewed the participants, I took a picture of each of them with a digital camera. I promised them that I'd send them the photos when I got back to my office. I requested them to reply on my mail. I sent twelve e-mails to participants, but received only five responses (Appendix 5.11). . The e-mail message illustrated in Figure 5.5 is one of the received e-mail messages.
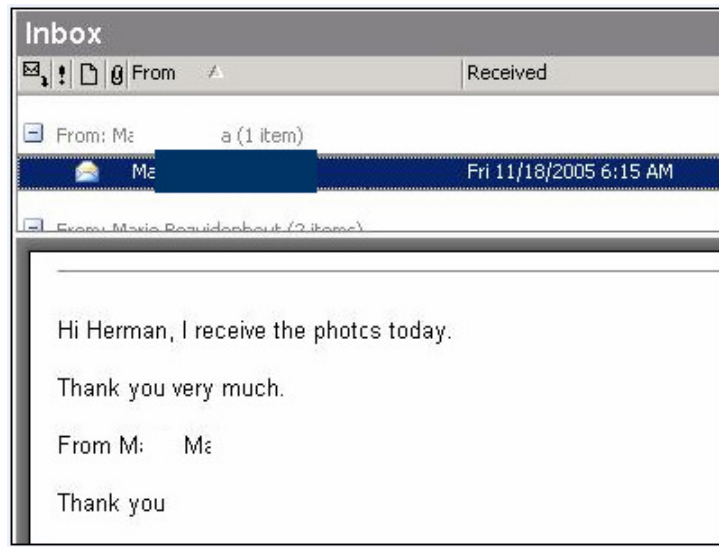
Figure 5.5   Examples of e-mail replies from warehouse workers

SMEs believe that e-mail is a useful facility to prepare aspiring workers for e-learning. The warehouse workers have access to this facility and are positively positioned with regard to e-mail access. It is available to all, and the warehouse workers indicated that they know how to use the e-mail facility, mostly to receive information, but it appeared that their knowledge and skill was limited of the uses of this facility. Regardless of their limitations to send e-mail and open attachments, the experiences the warehouse workers have with e-mail enhance the argument that they have technical experience with computer technology to be e-ready.

Use of the internet may give an indication of a warehouse worker's ability to interact with the technology. At the same time it would tell me whether the workers have access to this communication facility. The responses from the questionnaires indicated that the warehouse workers were aware of their internet and intranet access.

Table 5.3   Warehouse workers' access to internet

Do you have access to the company intranet?

Responses wrt company intranet	
Yes	32
No	9
Don't know	1

Do you have access to the internet?

Responses wrt internet access	
Yes	31
No	11
Don't know	0

SMEs believed that internet use prepare the workers for the interactivity needed with e-learning. An SME commented as follow on the ability to learn browsing on the internet: *… it is surprising how quick*

people are when learning how to browse...[15] 1:287 (1651:1652). The workers agreed that they did have access to the organisation's intranet and internet. It indicated that they are acquainted with the internet and intranet, knew that it was available. Access was given to them at a communal computer in the cafeteria, but most also had access through the computers they used, at their workstations.

A few of the interviewees confirmed that they did make use of the internet, but only to a very limited extent: *Ah, not time to time, because basically I'm not using the internet. Sometimes just checking things* 2:121 (734:735). Another respondent confirmed that the intranet was functional to confirm company standard operating procedures: *Yes, because even the SOPs we get it on the intranet. Just when one asks a question you go and look on the intranet* 3:167 (1027:1032).

The computers they had access to were popularly known as "dumb terminals" to grant access to the mainframe and e-mail only. Some of the responses during the interviews indicated that they were not aware of internet access:

> *You know with me, I don't have a problem but the thing is, we don't really have access to go wherever [we] want to, you know it's like limited, [sic] you only go to the mainframe system and from there you can read the e-mail. From there you can't do anything with the computer at all* 2:190 (1252:1257).

For some the hardware provided to them are regarded to be inferior and restricting:

> *No, we don't have any access. We can only go to Delta [the mainframe system] and check the e-mail. You know it's one of the things they keep us like [laughs] you know you can't ...if you've finished Delta and read the mail there's nothing. It's like ... "oogklappe" [blinkers] [Laughs]* 2:225 (1504:1509).

The responsible network engineer at IHD revealed later that these dumb terminals were in fact web based machines:

> *They don't know, because the internet in the warehouse is actually their e-mail. It is web-based. So when they open their e-mail, they're actually opening the internet browser, which to them - they think it is just e-mail* 3:223 (1421:1424).

He confirmed that the computers had access to the internet: *Just about every machine in the company has internet access* 3:220 (1408:1409). Computer viruses may hurt companies badly, therefore the restricted access. IHD has an Information Security Policy that the internet is there to be used by every employee, but within specified regulations (Appendix 5.12). This may be one of the reasons why access to the internet is not promoted.

The SMEs, warehouse workers and managers regarded the internet to be of importance to get used to the interactivity of computer programs. The warehouse workers were unfamiliar in the use of the internet. I got the impression that it was frowned upon when used within working hours as if no clear purpose existed for internet use. My interpretation at this stage is that there are no relevancy of the workers' needs and the use of the internet other than mere entertainment. Therefore the warehouse workers' negative attitude – it was not related to their work and was looked upon as a waste of time. The freedom to use it and resulting experience was lacking.

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[15] "...ouens is verbasend gou ... wat beteken dit om te browse".

The clear objectives and relevancy of the mainframe systems and ABET use are in contrast to the lack of objectives for the use of the internet. The use of the internet may hold long-term advantages for the workers to prepare them for self-driven learning, but there are no defined needs at present. The skill to use the internet may be more beneficial to the warehouse workers in the long run, due to the advantages browsing skills have for self-driven learning. This makes it a valuable skill to master for e-learning. It also suggests that clear objectives may induce the warehouse workers to make use of a specified strategy if needed.

Enterprise Knowledge Platform (EKP) is a series of e-learning lessons from Laraghskills® that are available to all aspiring employees. Lessons include basic typing and word processing to complex programming and even soft-skill courses. Workers are enrolled in these courses after application, consultation and approval by their managers. These are typical computer-based training (CBT) classes and students have to complete the lessons in their own time and tempo. Very few warehouse workers are enrolled for the EKP courses. I could find only a few workers in the remote DCs who had experience with EKP, although it is widely used by many office workers in IHD. Nevertheless, it provides another platform from which to be involved with computers and to gain experience with computer technology. A respondent from Cape Town indicated that he knew about the EKP courses: *… we had these other courses, e-learning courses, not a problem for me…*[16] 2:148 (957:959).

The questionnaire (Appendix 3.6) requested participants to give an indication of their knowledge about computers. The responses are untested and debatable, but the purpose of these responses was that it gave me an indication to their computer confidence and awareness. Most of the participants admitted that they had an average knowledge or knew little about computers. Seven of forty one participants who completed this section indicated that they had enough confidence to show other workers how to use the computer for basic work-related tasks. Basic typing and mouse skills elicited confident responses from most of the participants.

I reflected that the warehouse workers had already broken through the first barrier, the novelty had worn off, and that computers were not foreign to them anymore. As described by a warehouse manager: *That first fear of this machinery, they're beyond that already* 3:180 (1087:1088).

5.2.2 Conclusion about technical experience of warehouse workers

In this chapter, I have explored the first of six theory codes (categories) of e-readiness and presented the technical experience warehouse workers have with technology. The data have been collected from three primary documents generated from interviews, questionnaires and observations conducted with SME's, warehouse workers and warehouse managers. The data have been constructed from an inductive analysis of the data by using Atlas.ti™. I concluded that the warehouse workers are subjected to various types of technical experience in the course of their daily responsibilities.

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[16] Umm, 'n ander probleem is.. kyk ons het mos daardie ander "e-learning" goed gehad (EKP) daar is nie …, dis nie 'n probleem vir my nie…

Figure 5.6 illustrates twenty two conceptual codes of warehouse worker involvement with computers. These codes emerged from the interviews with SMEs, warehouse workers and managers and observations of warehouse workers. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
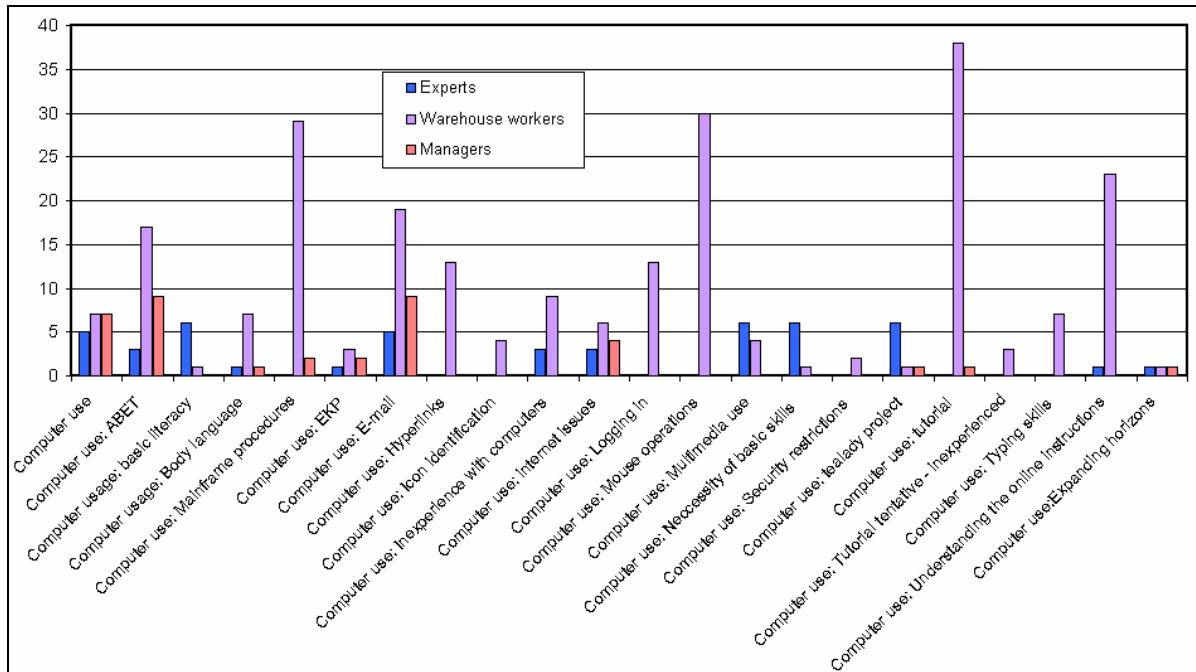
Figure 5.6   Warehouse workers' technical encounters with computers

By means of the grounded-theory approach, and by means of inductive analysis of my research data, I have identified the following new and additional theory codes relating to experience with technology (not affective) that may assist in exploring the e-readiness of warehouse workers:

Technical experience with computer technology:

- promotes warehouse workers' overall *encounters with IT*
- enhances the *viability of e-learning* in the workplace of warehouse workers
- influences warehouse workers' *learning preferences*
- affects the required *guidance and support* to warehouse workers
- alleviates warehouse workers' *anxiety* with computers
- influences the *attitude* of the workers
- improves the warehouse workers' *computer literacy, and*
- affects the warehouse workers' *knowledge of e-learning.*

Table 5.4 summarizes the conceptual codes that were the most prominent during the technical experience warehouse workers had with computers. Technical experience impacts the warehouse workers in the following conceptual codes of e-readiness.

Table 5.4   **Technical experience as related to conceptual codes**

	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Encounters with IT	Facilitator	Financial aspects	Guidance & support	Knowledge of e-learning	Learner frustrations	Learning plan	Learning preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
	Conceptual codes of e-readiness																			
Tech. Exp.		x	x		x		x			x				x						x

This section has explored the technical experience of the warehouse workers and consequently the theory code – technical experience – is related to the conceptual codes as supported by the following data obtained:

Warehouse workers demonstrated their technical experience in that they:

- logged in regularly to access business systems
- typed passwords with the required upper and lower case characters to gain access
- changed passwords monthly to conform to security
- navigated the mainframe system to access the correct application
- interpreted information and responded to instructions on the mainframe system
- were able to communicate via e-mail:
  - received and opened e-mail messages
  - could send e-mail messages, but
  - had problems sending attachments
- were involved with ABET training and sporadic e-learning lessons (EKP)
  - worked without supervision
  - took control of own learning plan
  - showed discipline to complete assignments
  - solved elementary training problems on their own
- had limited access to the internet
- browsed occasionally on the internet and intranet
- demonstrated basic computer skills
- typed and entered required information on the mainframe system
- performed basic mouse operations.

5.3 Affective experience with technology (Sub-question 2)

The knowledge that the warehouse workers accrue through technical experience with technology, sets up the next research question. This next section addresses the affective experiences that emerged during the encounters warehouse workers had with technology. Several encounters with computer technology have shown that the warehouse workers are not strangers to the world of technology. How do the warehouse workers experience computers affectively and how does this affective experience influence their e-readiness? The theory code *Experience with technology* also includes the affective experiences warehouse workers have when using computer technology - their fears, anxieties, confidence and attitudes of the warehouse workers contribute to their e-readiness (Figure 5.1).

5.3.1 Affective experiences

The previous section has indicated that experience with computers consists of two main areas that may contribute to e-readiness – computer experience and affective experience (Figure 5.1). The experiences with the business systems, ABET training, e-mail and occasional internet interactions have indicated that the opportunity exists to gain experience and work with computer technology almost on a daily basis. But it was not clear how they related to the computer technology emotionally, and whether their attitudes, anxieties, and frustrations hindered them from achieving e-readiness maturity. Figure 5.7 illustrates the relationships of quotes by the SMEs, managers and warehouse workers with regard to attitude, anxiety and frustrations as aspects of affective experiences to be explored.
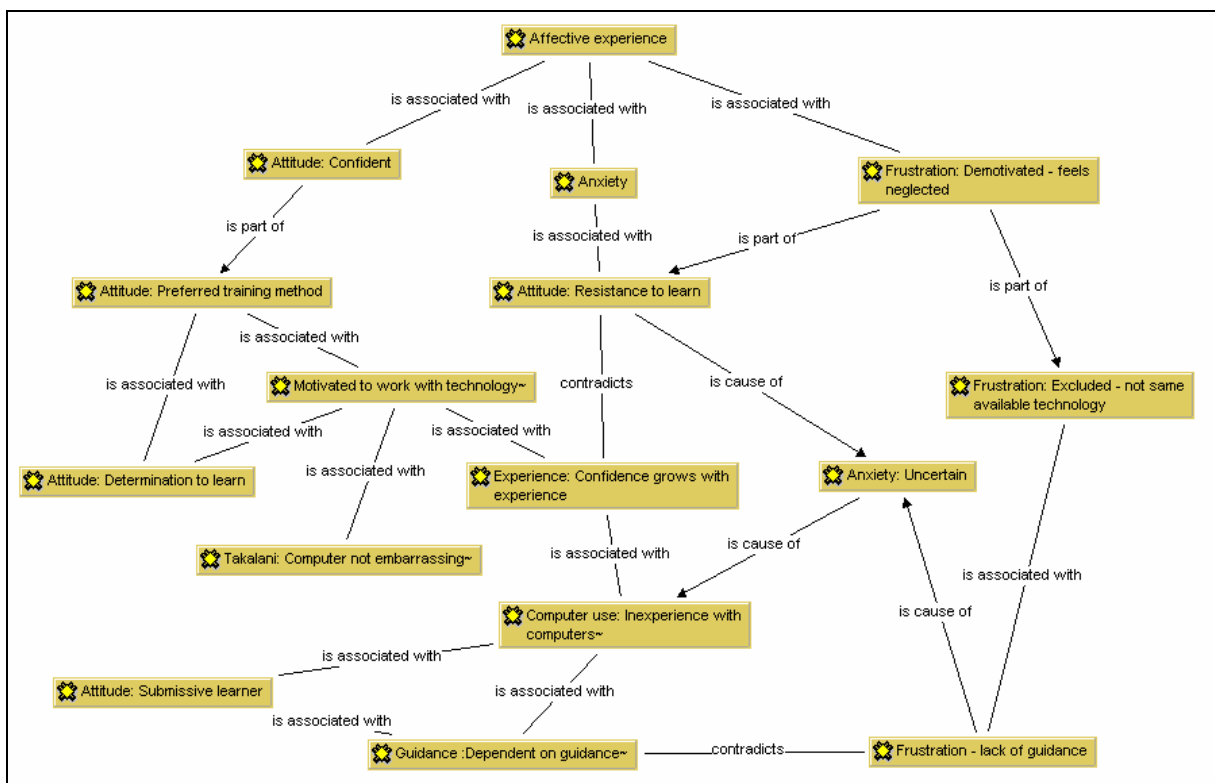
Figure 5.7   Relations of warehouse workers' affective experiences with computers

New and infrequent users often experience anxiety and angst when using computers. Emotions are experienced from the warehouse workers' exposure to the use of computers. These emotions were theorised as confident attitudes, anxiety and frustration. These attitudes may play an important role in the e-readiness of warehouse workers.

5.3.2 Anxiety of warehouse workers as affective experience

Many people experience anxiety when changes are introduced in their immediate environments. The SMEs and warehouse workers have both conceded that anxiety is present when computer technology is encountered. Figure 5.6 illustrates the identified dimensions of anxiety as it emerged from the data.

The y-axis represents the frequency the dimension was identified, while the x-axis represents the theoretical dimension of e-readiness.
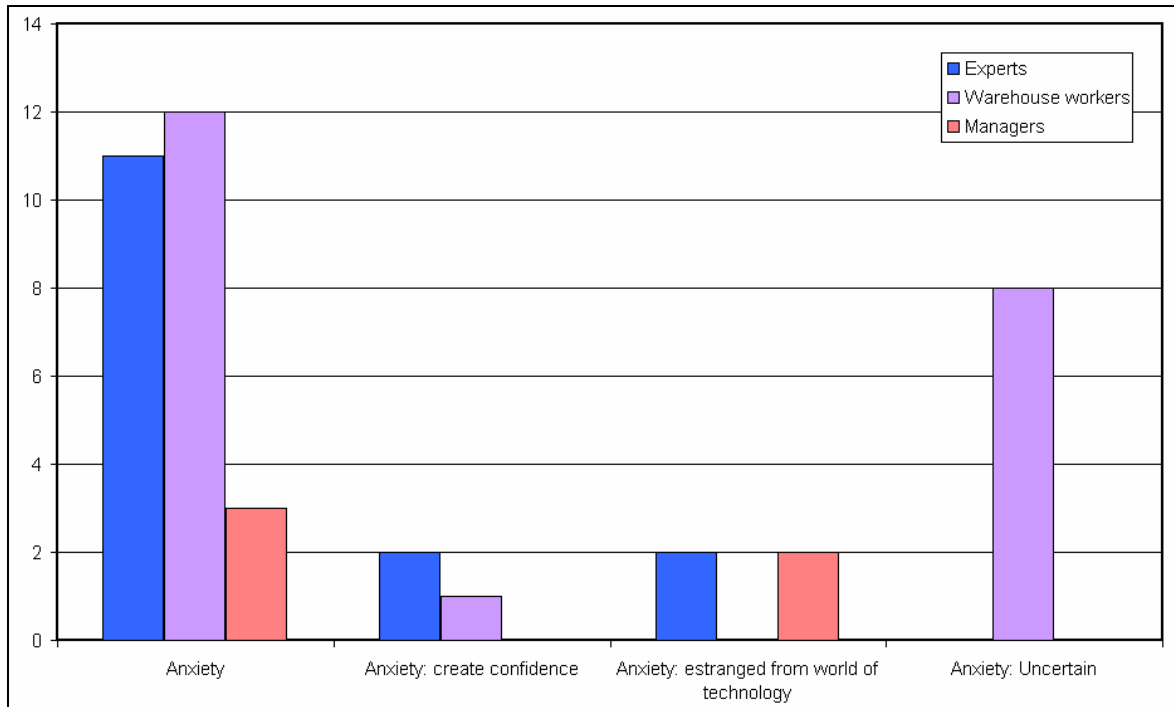
Figure 5.8   Experiences of anxiety by warehouse workers when using computers

Anxiety elicited frequent responses from both SMEs and warehouse workers. SMEs advised that a gradual approach has to be considered to develop confidence before embarking on any e-learning projects: *Keep this up until he is comfortable and confident. This is a time-consuming process and takes time* 1:465 (2970:2972).   The SME warned further that a lack of skill may lead to anxiety:

- *If they don't have the necessary skill they will be anxious* 1:95 (509:510).

- *Many people have a fear of computers when they start. They think of the computer, and wrongly assume that they need to know it before being able to use it* 1:157 (763:766).

The SMEs implied that a lack of knowledge increased anxiety levels, and may lead to avoidance: Many students do not enroll out of fear and anxiety 1:212 (1007). Anxiety is experienced through a lack of knowledge and the limited skills users have when they need to be involved in computer technology.

The SMEs advocated a slow and gradual introduction to computers:

Yes, first you need to introduce the system, put them at ease by demonstrating the system, and show them the system does not need to be feared. Then short basic and simple exercises to get to know the system. For example how to use the mouse, etc 1:470 (2984:2988).

When I observed the groups of ABET warehouse workers, I could not detect any anxiousness or confidence either. What I saw was more a kind of apprehensiveness.

It was as if they just sat back to allow the system to do its own thing. Both watched patiently as they waited for the sign on process to be complete. Still no one spoke - It seemed as if they knew what to do to log in. Nothing in their behaviour suggested that they were scared or tentative when they started to work on the computers 2:15 (71:76).

However, when I confronted some of the warehouse workers doing ABET training, they conceded anxiety:

- *We were a little bit worried when we were shown out to use these computers* 2:83 (462:463)

- *I do, because I want to go here, there and there, but I can't* 2:260 (1763:1764).

Their opinions and experiences of anxiety were confirmed later during a tutorial observation:

- *… admitted that he was a little stressed and not sure about the "next" and "back" buttons* 2:329 (2403:2405).

- *Indicated that she felt very anxious "whatever I am going to learn here."* 2:405 (2763:2765).

Anxiety was fuelled by uncertainty, limited knowledge and skills as confirmed by a warehouse manager: *Some of them wherever they come from, have never touched a computer before. They really have a problem to just to try and look at things which is on computers* 3:177 (1076:1079).

In contrast, regardless of this anxiety, the participants did not hesitate to express their – sometimes naïve – intentions to get involved in learning with computers. A question referring to the use and learning with a computer received the response: *No, I am not scared. I can do it. I can get the proper training and I am not afraid* 3:153 (898:899). A warehouse manager explained that the motivation to get involved with computers seems to be a stronger attraction than the barrier of anxiety: *Even if they are taken out of here, but as long as they are on the computers they feel that they are doing something new, because they have not been in a classroom with computers before* 3:174 (1064:1067).

Interestingly, the anxiety I observed could easily have been frustration due to lack of skills. The computer technology was regarded as strange and unfamiliar. The fact that the warehouse workers also experienced frustration implied that not only were they anxious, but also became impatient when they used the computers.

5.3.3 Experience with technology also led to warehouse worker frustrations

The warehouse workers experienced frustration when their computer related objectives were not realized. I have observed the warehouse workers' frustrations which were caused by being restricted to certain actions and access, limited guidance, slow systems and different technology from the rest of the company. What is inductively implicated is the fact that the warehouse workers displayed some basic knowledge and awareness to assess what should be happening, viz what is actually happening. It implied that the knowledge and awareness of the computer technology exists, but a physical or external barrier prevents the workers from achieving their objectives.

Figure 5.9 illustrates the typical types of frustration with regard to access to the computer technology, lack of guidance, slow systems, feeling neglected, getting limited opportunities and the limited use of IT. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
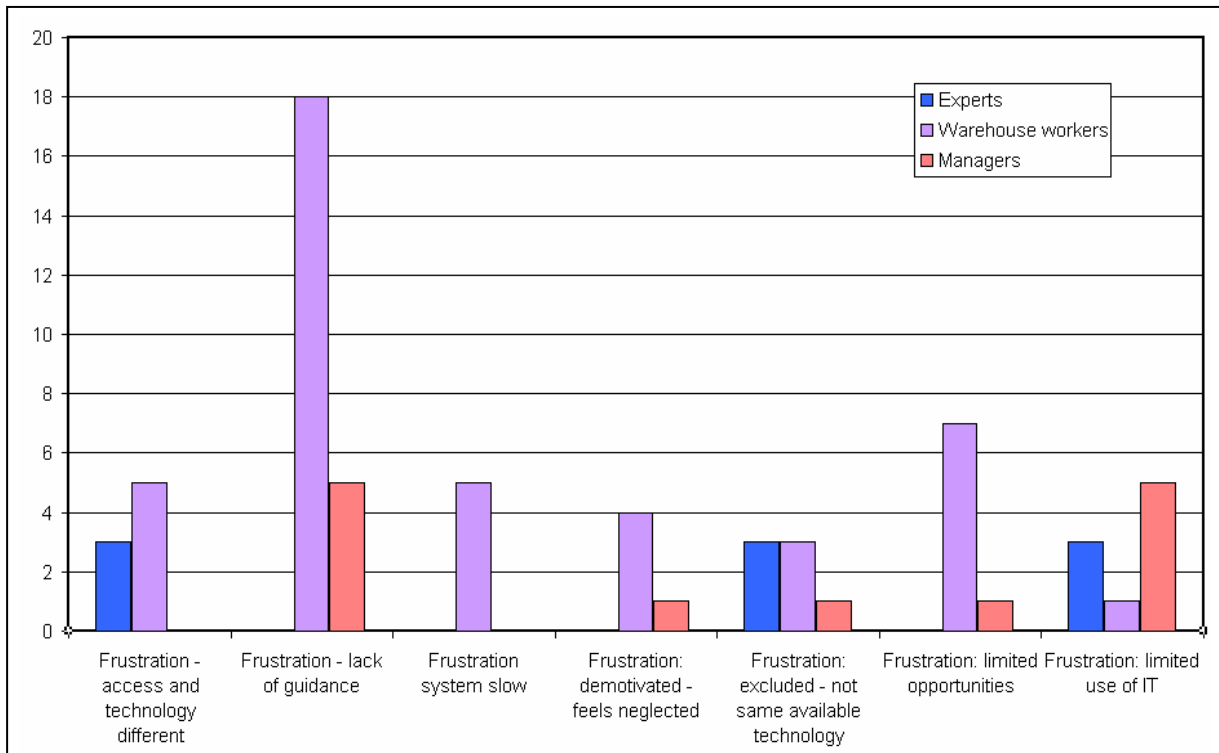
Figure 5.9   Experience with computers led to warehouse worker frustration

The most frequent responses were received from the warehouse workers themselves when frustrations were mentioned during interviews. Figure 5.9 indicates that the warehouse workers had numerous instances of frustration where guidance and support was concerned.

The warehouse workers indicated that they experienced frustrations related to restricted access to the computer technology. One such example was where a change had been made with regard to the help functions available to the workers:

- *I think maybe they should confront the people that did that. And now that I think of it, it makes me feel bad because they think that we're all stupid now. And mistakes are there to be made that's why you learn from the mistakes* 2:171 (1110:1114*).*

- *Now they think that it is everybody. You are not supposed to use F2, you have to call the supervisor. And I think it is not right for me, because you know what you are doing but all of a sudden they deprive you because they are afraid of mistakes* 2:170 (1106:1110).

The warehouse workers suggested an awareness of the potentials of computer technology and the ability to discern changes to their access and rights on the available systems. The restrictions frustrated several of the participants:

- *No, we don't have any access. We can only go to [the mainframe system] and check the e-mail.   ...if you've finished with* [the mainframe system]... *and read the mail there's nothing. It's like ... "oogklappe" [blinkers]* 2:2225 (1504:1509*).*

- *Like when you want to go to the internet to see what goes on there... and you can't because you don't know how to enter* 2:248 (1656:1658).

- *No, we don't have any access. We can only go to the mainframe system and check the e-mail* 2:225 (1504:1505).

Frustrations also emerged out of the lack of guidance as experienced during the ABET and EKP learning sessions where they were left on their own, and were not used to it:

- *It's frustrating, it is not very clear, and you're doing it on your own time. Maybe for half an hour, an hour, but you struggle all the time. You don't know which way to go…* [17] 2:150 (963:967)

- *So I think it is much better to have somebody in front whenever there is a question. You put the question directly than reserving the question. You reserve the question to tomorrow when I get it and hope to find someone to answer* 2:81 (444:4490)

- *I think to allow me to train, there in the computer department. I sometimes think and ask myself am I going to work here at manifesting for the rest of my life. It makes me so sad. I feel people have to know more* 2:182 (1171:1173).

Consequently, one respondent complained because his peers bothered him when they were busy with ABET training. The interruptions frustrated him:

> *I've experienced some other problems that whenever I'm trying to concentrate on my work, and then somebody is calling me to come 'what can I do?' So now I'm stopping my share to concentrate on other people* 2:79 (433:437).

This frustration emanated from the fact that they continuously asked him questions or assistance when he was busy with his own learning.

I even observed frustration due to system performance: A female warehouse employee wanted to open the mainframe system to start a picking process. She knew I was recording her actions and wanted to impress me. Due to a limited bandwidth, the system was slow to respond (Appendix 5.13):

> *She opened the program by clicking on a specified application on the desktop. The system was very slow to respond, and I could sense her frustration. She was aware of the fact that she was being videotaped, and I got the impression she wanted to show her skill with the computer. She clicked on several areas and eventually a program opened. Her frustration was obvious, she clearly demonstrated that she was aware that the system was slow to respond. As I looked at the screen, I could see her impatience as she moved the cursor around. She never waited for the programs to execute, she kept on clicking. It was not as if she did not know what to expect. She wanted something specific, and I wondered if she would know whether it had arrived. A program opened, but it was not what she wanted, she fiddled the mouse around, exclaimed, turned around to speak to a colleague 2:466 (3116:3132).*

I reflected briefly that the actions I had just observed were no different than any other I had seen numerous times from experienced programmers or any other seasoned computer users. I thought that it must be significant when warehouse workers experience frustrations on the performance of the system and not necessarily their own skill limitations. The slowness of the system aggravates all users, even those with limited experience. In spite of her frustrations, she also presented an aura of confidence whilst working on the main frame system (Appendix 5.14).

During the observations of the ABET warehouse workers, the mainframe system operators and the tutorial experiment, I focused on their body language from time to time to see if they were tentative or whether any type of behaviour demonstrated whether they could not cope. I observed to see if I could see them looking around, to search for signs of the lack of activity, unnecessary fidgeting or any other sign that would give me an impression that they did not know what to do. I observed the following:

- *… all three were concentrating and focused on the job at hand* 2:421 (218:220)

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[17] Dis nie mooi duidelik nie, en dis frustrerend, kyk jy doen dit op jou eie tyd. Nou sukkel jy, jy het miskien net 'n halfuur of 'n uur, sukkel jy die heeltyd met daardie problem, jy weet nie watter kant toe om te gaan nie.

- *After a few moments he clicked the correct button to open the next screen. This screen simulated the opening of the IHD Intranet, using the explorer* 2:333 (2419:2422)

- *She continued reading, and at one stage leant forward, as if trying to see* better 2:422 (2820:2821)

- *The way he read the monitor indicated that he was not young any more. When he looked up he needed to use the bottom part of his glasses. He tilted his head backwards to enable himself to read the screen. This did not hinder him at all, he read from a document, and typed the figures on the keyboard in front of him* 2:487 (3306:3311) (Appendix 5.15).

The applications and input required from them were very basic, but I did not once get the impression that any of the participants experienced problems that prevented their progress. Judging their body language, most seemed to be capable and ready to use the technology offered to them.

The computer activities the warehouse workers were involved in were not very demanding, and they did not have to solve any problems. In most cases they performed their tasks with assurance and acted with confidence because they were used to the work. Admittedly, none of the activities were focused on solving any problems or where warehouse workers were left on their own, it was merely an observation on how they experienced the computer with what they were already doing at work. The workers experienced frustrations due to expectations that were not met during the course of their work.

5.3.4 Warehouse workers' attitudes as affected by computer experience

Attitude is described to be the way someone thinks or feels about something. My hypothesis was that the experience with computers has left the warehouse workers with a settled opinion that may influence their eventual e-readiness. This opinion may be a feeling of apprehension that may have made them feel inept or to view computer technology as a summons to participate. It refers to the characteristics a learner brings to the learning environment, and includes the aptitude, attitude, skills and abilities of the learner, determination, preferences, resistances, interests, learning habits and any other aspects of the learner that has to be explored to assess the e-readiness (Reeves, 1999).

Figure 5.10 illustrates the four codes relating to attitude that was determined during the interviews and observations of the SMEs, warehouse workers and managers. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness
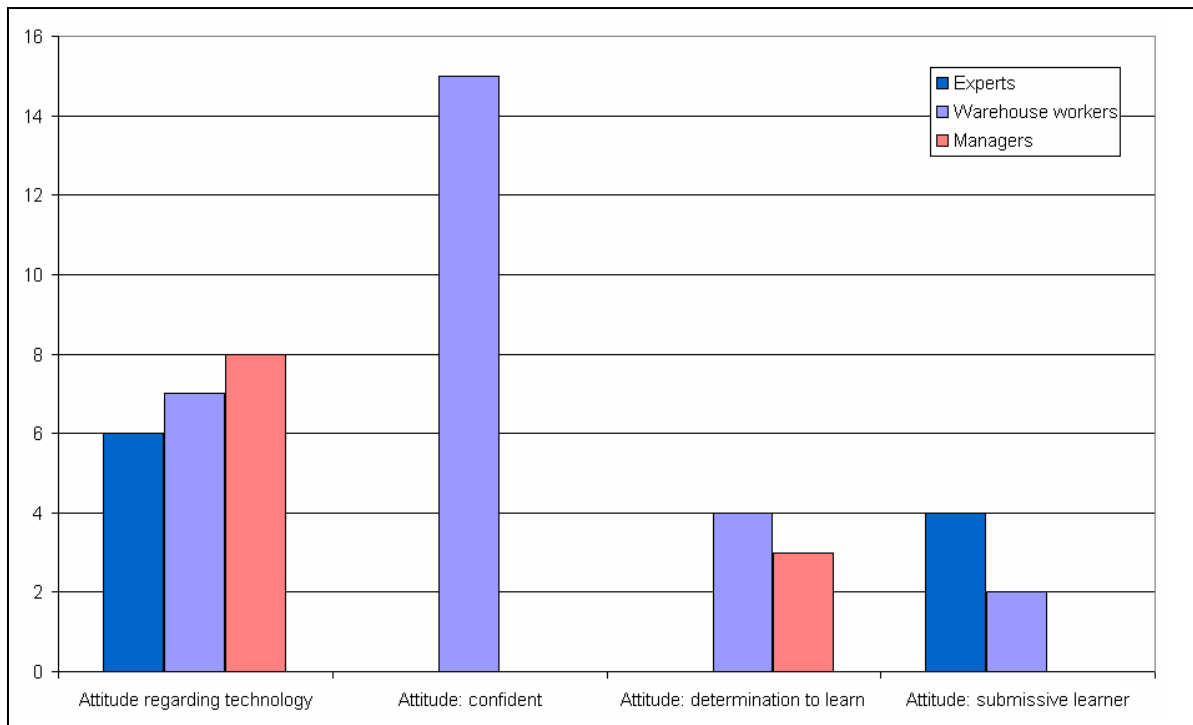
Figure 5.10   Affective encounters with computers affect attitudes of warehouse workers

Attitudes of the warehouse workers are influenced by the confidence they have accumulated during their experience with computer technology, determination they have shown to master the skills and to accept the responsibility to respond to the challenges that confronted them. The codes are the responses and observations with regard to attitude regarding technology, confidence, determination to learn and attitudes of submissive learners.

The warehouse workers' attitude towards technology can be a powerful catalyst to transform the worker to become a skilled computer learner. If the warehouse worker experiences frustration and consequently becomes negative towards computer technology, an attitude may develop to avoid the use and any involvement with computers. Views reflected by some of the SMEs are:

- *Especially regarding the attitude towards technology. Some are quick to respond to the challenge, while others are more hesitant, and very aware that they do not have the confidence to work on the PC* 1:296 (1810:1814)

- *I found that warehouse workers with very limited skills enjoyed the challenge and wanted to improve their PC skills.   Motivation wasn't really an issue* 1:301 (1836:1838)

- *Attitude in my book is a very powerful driver. I can go much further with a person with limited skill, knowledge with a positive attitude, than with a skilled negative person. To swing a negative attitude is a huge challenge. e-Learning will not do anything to swing an attitude…* 1:512 (3189:3193).

These comments from the group of SMEs confirmed my observations and I am convinced that a positive attitude from warehouse workers is needed to transform training to e-learning.
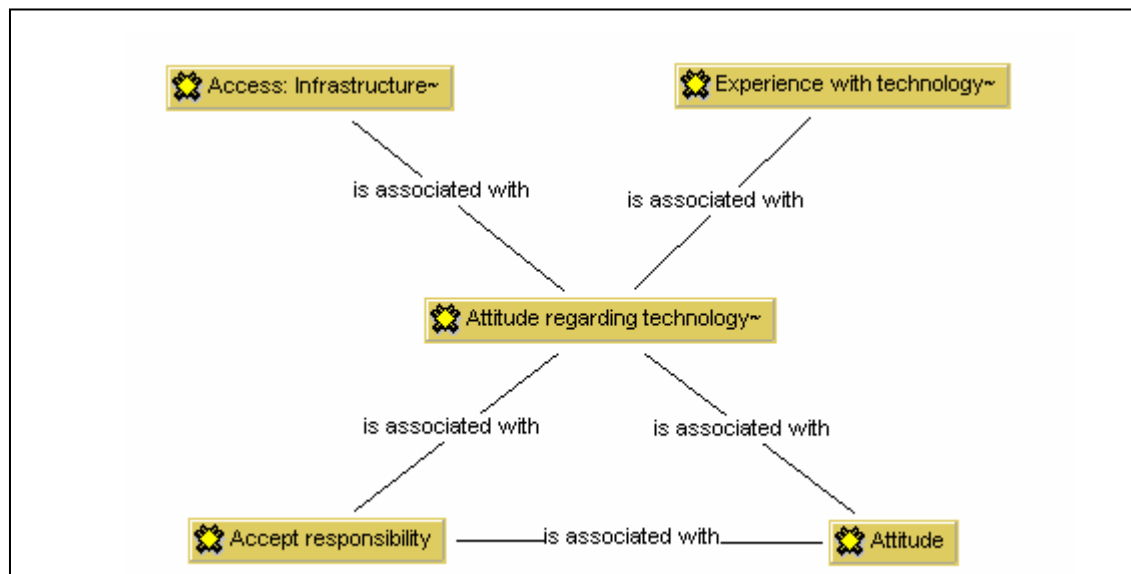
Figure 5.11   Warehouse workers' attitude towards technology affects their e-readiness

Figure 5.11 illustrates the codes of information as it emerged from the data analysis. The central theme namely attitude towards technology is seen to be the result of the workers' experience and involvement with technology and the available infrastructure. By accepting responsibility and with the right attitude, the workers may develop an attitude towards technology to be ready for e-learning.

Some of the warehouse workers I have interviewed had a very specific and mostly positive opinion towards the computers and the possibility of computer training. Some comments I received were: *I work on it. I do have it at home, but I never learned or worked on it at school. I know it practically* 2:98 (582:583). This specific respondent was very adamant that he would love to get involved in computer training, and showed his determination by buying a computer for himself to have at home, and with internet connection. Warehouse workers often expressed their intentions to learn and that they would like to get the opportunity to learn using computers:

- *If you get learning, you get more accurate in what you are doing because you learn a lot of things for your future* 2:103 (622:624)

- *I don't think I can drop from learning. Yeah I can't, I can't! I can't drop from learning. I got so much experience coming to work, I mean I've been struggling for a long time* 2:111 (685:687)

- *You know, I'd like to know much about the computers, I wish the company can help to train us on the computer* 2:240 (1613:1615).

These few quotes suggest that the warehouse workers' attitudes towards training were positive and that they were keen to learn. However, I regarded some of the perceptions of the warehouse workers to be somewhat naïve:

- *I think with a computer it is not going to be too difficult. It is like a person. Whatever you do to the computer it is answering you back. I don't see a problem* 2:217 (1451:1454)

- *Yes!* [very adamant] *I wish I can. Because I think I can gain more experience. Because I never went for training on a computer, and I wish I can* 2:191 (1259:1261).

In contrast to the positive attitude reflected by the warehouse workers, one of the managers expressed the following perspective: *… then you get the guys with a wrong attitude and expecting everything on a tray* [18] 4:38 (315:317). In support of this perspective, some SMEs had strong reservations regarding the inner drive and motivation of warehouse workers to take responsibility for their own development:

- *I find that there's resistance to learn, and to do more from your own point of view, that self-driven warehouse workers are really very, very scarce* 1:4829 (3046:3048)

- *Computer literacy is important, but the capability to learn on his own is even more important…*[19] 1:417 (2703:2704).

From the data two distinct opinions emerged. The warehouse workers were naïvely positive and expressed their capability to learn with computers, while the SMEs had some reservations about the inner motivations. SME advice included that an intensive management strategy devoted to change may be needed to transform the workers to become self-driven learners: *… there is a change management process that has to be included here … where you have a lot of blue collar workers, we used three different strategies, tutorials, demonstrations and simulations*[20] 1:447 (2848:2852).

Regardless of the naïvete shown by the warehouse workers, they reflected a confidence and determination to get involved in computer technology: *I think it is a challenge, and, if you are determined to achieve something out of it, it won't be too difficult* 2:286 (1961:1962). The findings from the data analysis supported the positive attitude the warehouse workers expressed and that they wanted to get more involved in computer technology.

I observed both a confidence and a lack thereof in the warehouse worker interviews and observations. I have observed the warehouse workers during the ABET sessions:

- *He briefly looked at the whiteboard, confirmed the user id and typed it in* 2:60 (315:316)

- *He found his name on the list, clicked once to open the lesson where he had left it the last time* 2:63 (334:335).

Both actions indicated an assuredness and confidence in what they were doing. Questions during the interviews regarding the ability of computer training were often met with an almost arrogant and overconfident manner: *No, I'm OK with the computer* [Not hesitant at all, not even giving it a second thought] *If I did a basic course, I'll do it* 2:268 (1841:1843). I don't think I would have received a negative response anyway, but I tried to detect insecurity which I could not find.

Information in Figure 5.12 indicates the relations of participants' observations with regard to confident attitudes. The data analysis implies that a positive attitude with regard to technology will be established when access and regular use of the computers are promoted. The regular use develops a basic literacy which in turn adds to a positive attitude. This attitude may be exploited later to support

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[18] En dan kry jy die ouens wat glad nie die potensiaal het nie, maar hulle "attitude" is verkeerd en hulle dink hulle gaan als op 'n skinkbord kry.

[19] Een ding is "computer literacy", maar wat dalk nog belangriker is, is die ou se vermoë om self te leer (sic).

[20] Daar is 'n hele "change management" proses wat hierby moet aansluit. … waar daar 'n groot deel "blue collar workers" is, het ons drie strategiee gebruik –" tutorials", demonstrasies en simulasie.

and develop e-learning through guidance and support and the relevant knowledge of learning objectives.
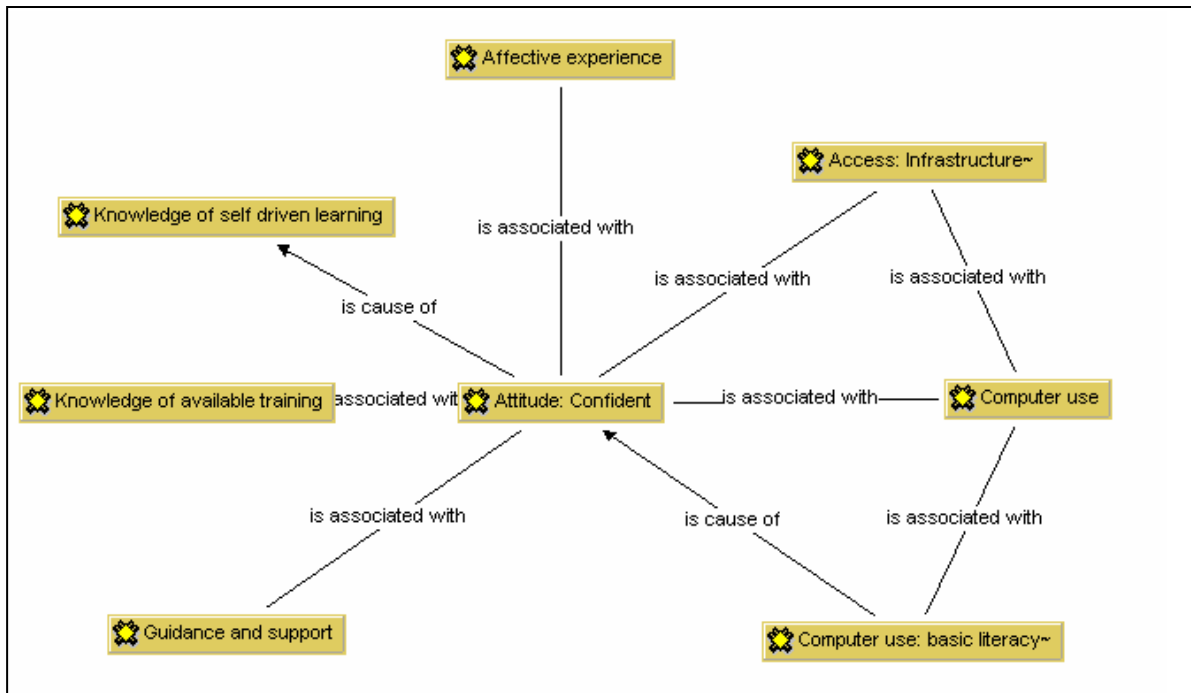
Figure 5.12   Confident attitudes developed through experience with technology

Observations of warehouse workers performing mainframe system activities illustrated that they were confident where the skill and competence measured up to the requirements for the job at hand. An observation during one of the mainframe system observations was:

> *Judging her behaviour and response to the PC, she clearly has no fear for the machine.   It may be that she never learnt to use the Windows menus, but she knew that she had to use the menus to find her application* 2:477 (3158:3162) (Appendices 5.13-14).

I could not detect uncertainty while the workers were busy with the mainframe system procedures: *His computer skills seemed to be fair, and to be honest, I did not detect or interpret any sign of apprehension towards the computer* 2:489 (3317:3319). In Bloemfontein, I confronted and queried the actions of one of the participants while he was completing his tasks on the mainframe system:

> *He was assured, knew what he was doing, and could explain the process to me without hesitation. He then proceeded to process the product quantities to be moved from the bulk area to the fine pick area or "flow racks" as it is known* 2:501 (3423:3427) (Appendices 5.5 – 5.7).

Interestingly, this same respondent became increasingly more tentative and less assured when I asked him to demonstrate some e-mail procedures (Appendices 5.8 - 5.10). At first he was confident:

- *He immediately clicked on the message to open it. There was still not indication that he was tentative, or uncertain* 2:507 (3468:3470)

- *He moved the cursor to the "Reply"-function, and said "I click it there". He indicated the correct procedure, but at this time I detected that he was not so sure anymore* 2:508 (3474:3476)

- *My perception of his e-mail abilities was that he was fairly capable, but lacked experience. The need of e-mail usage at this stage, was to receive information, and not really to pass it on* 2:515 (3504:3507).

From the above observations I concluded that workers were less confident when they worked with unfamiliar computer procedures. When the objectives were clear, and when the medium was known, the warehouse workers were confident with the computer technology. I reflected that it was this confidence with known and familiar procedures that convinced them to express, almost naïvely, that they would not experience any problems to learn more about computer technology.

Consequently, the warehouse workers were determined to learn and use the computers: *I think it is a challenge, but if you are determined to achieve something out of it, it won't be too difficult* 2:286 (1961:1962). Some participants reiterated that it was not just the fascination of computer learning that attracted their attention, for some it was a priority to develop: *I can do the eighteen months and you can go to UNISA and do the correspondence, they will help you. Then I go there, then I finish you see* 2:312 (2226:2229). This determination to try and explore the new technology was summarized by a warehouse manager:

> *These guys, if you consider the cultures where they came from. Ten years ago they would sit back and be afraid that they will make mistakes. Today they confront the computer and say to themselves, "Hey, how does this thing work? I'd like to try it out…*[21] 4:53 (55:60).

Such a determination to learn is viewed by the SMEs to be of inestimable value to establish a learning culture for e-learning: [to determine] *a mindset, I must go on my own, see what is expected from me, get the due dates, study the outcomes and take the responsibility to make it work…*[22] 1:257 (1355:1360). The determination to learn and the attitude needed to develop a culture to learn on their own can be encouraged by the availability and regular use of computer technology. A manager commented:

> *Even if they are taken out of here, but as long as they are on the computers, they feel that they are doing something new, because they have not been in a classroom with computers before* 3:174 (1064:1067).

Figure 5.13 indicates the identified relationships of warehouse workers' determination to learn about applicable technology. The basic learning styles, along with the motivation to work with technology and preferred training strategy may bolster the determination to learn. This determination could influence a worker to take responsibility of his own development if the objectives and outcomes are known. It may eventually affect his aptitude for e-maturity of e-readiness.

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[21] Hierdie outjies, as jy kyk na die kultuur, waar hulle vandaan kom, en tien jaar terug was daar altyd die vrees dat "ek gaan 'n fout maak", nie net op die rekenaar nie, maar op alle gebiede. So ek dink deesdae is dit meer van voor-op-die-stoel sit, van "hey" ek wil begin "check" hoe werk hierdie muis, ek wil dinge begin "try" - dis wat ek dink

[22] … "mind-set" van ek moet eintlik self gaan soek, ek moet gaan kyk wat word van my verwag, ek moet die "due-dates" gaan bestudeer, ek moet die uitkomste bestudeer, ek is self verantwoordelik om hierdie ding te maak werk.
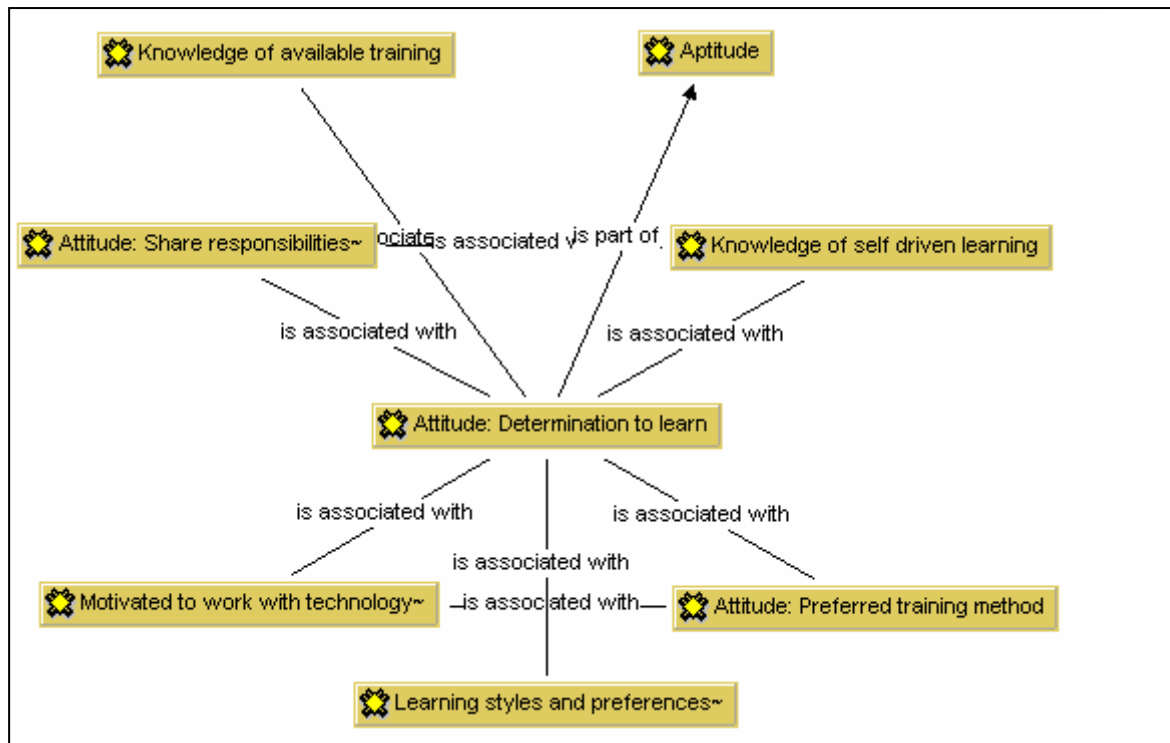
Figure 5.13   Determination to learn is regarded to be a valuable attitude for e-readiness

The attitude and determination can be established with careful facilitation according to SMEs: *Attitude can only change when the benefits are experienced and seen. Your main focus should be to remove the threat and focus on the positives* 1:513 (3195:3197). Accordingly, some managers also indicate a willingness to make use of the computer to train their staff: *With my staff I would prefer computerized training because then it is up to me and it's easier to manage, and co-ordinate with the time I have available* 3:106 (570:572).

The determined attitude of the warehouse workers to work and learn computer technology and the willingness of some of the managers contribute significantly to the e-readiness of warehouse workers. It may set up a positive platform from which to launch e-learning programs. However, not all workers are this confident, and several SMEs and managers indicated a concern on the learning styles of the warehouse workers:

- *… they have the potential, but never apply for promotion. Happy where they are. They never speak to their managers, happy where they are…[23]* 4:37 (311:315)

- *I find that there's resistance to learn, and to do more from your own point of view, that self-driven learners are really very, very scarce* 1:482 (3046:3048)

- *… find that there are two extremes, on the one side there are the passive worker without any wish to progress further, he is unsure of himself, know his education is limited, doesn't read very well and doesn't know what to do next. On the other hand, you find an arrogant person who demands attention, and see it as his right to develop* 1:501 (3123:3128).

SMEs also indicated that a self-driven learning culture does not exist in the typical workers' community:

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[23] …wat baie [sic] potensiaal het, maar hulle is gelukkig [sic] waar hulle is. Hulle wil nooit aansoek doen nie, skrikkerig vir een of ander rede. Hulle sal ook nie openlik met die bestuurder praat oor hulle nie aansoek doen nie, hulle is gelukkig daar.

… while we found that at companies like Escom, Randwater, the typical worker has not developed the skill to become a self driven learner. They are being scheduled for training, attend and afterwards they are only interested in the attendance certificate. Whether they learnt anything, is irrelevant to them[24] 1:420 (2713:2718).

The purpose of this paper is not to seek a solution to these problems but to understand it. Tema (2002) stated "the traditional classroom which Dewey (1949) described as 'having fixed rows of desks and a military regimen of pupils who were permitted to move only at certain fixed signals', are still the norm in Africa" (p. 137). The same author added that in the climate of change in South Africa, pupils should be allowed to pursue a strategy to develop self-correcting strategies, and an awareness of the possibility to enforce changes. The point that I try to bring across is that the warehouse worker should be allowed to decide for himself. Attitudes differ, some need more guidance and support than others, but in the end the individual's learning style and preferences may be the deciding factor to determine his e-readiness. Figure 5.14 illustrates the attitude of submissive learners and the initial dependency on guidance and direction.
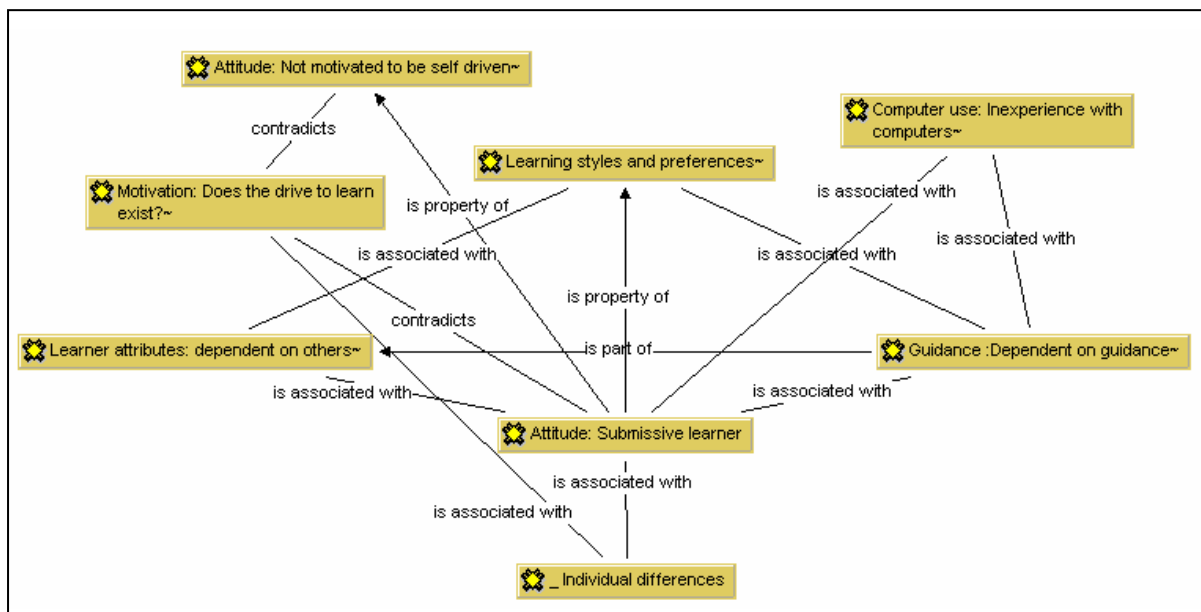
Figure 5.14   Attitude and e-readiness of submissive learners

Submissive learners may be insecure and feel even more threatened due to their inexperience with computers. With guidance and motivation and support such warehouse workers may develop a learning style to be e-ready. But the following comment by a female respondent suggested that guidance is needed, but it should be a mutual process:

Rather than when I take the course because you said I must take the course! [Anger showing] *Then I'm gonna sit in the classroom*? [Incredulous - voice pitch rises significantly]*.   Does that mean that I'm going to concentrate? Better if you sit down and talk. I'll have a direction!* 2:214 (1422:1427).

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[24] terwyl ons gevind het dat by plekke soos Eskom, Randwater - die tipiese arbeider - het nog nie hierdie vermoë aangeleer nie. Dit bestaan nie by hulle nie. Hulle word geskeduleer, woon by en stel bloot belang in die bywoningsertifikaat na die tyd.   Of hy iets geleer het of nie, is irrelevant.

The attitude displayed by this respondent summarizes the awareness of the warehouse workers. It seems as if guidance is needed, and that direction should be provided, but only when they are active participants in the direction they are sent to.

5.3.5 Conclusions on warehouse workers' affective experience of computers to determine e-readiness

The second sub-question explored the affective experience of warehouse workers and the impact it has on the e-readiness of the warehouse workers. I have inductively explored the presence and relation of the warehouse workers with regard to anxiety, frustration and attitude to determine the effects these emotions had on the warehouse workers' e-readiness. The analysis has confirmed my hypothesis that warehouse workers experience computers affectively and that it indeed has an effect on their e-readiness.

However, affective emotions like anxiety resulting from experiences with computers did not seem to deter the warehouse workers from getting involved with the challenges that computer technology holds in their working environments. Some workers tended to be more determined and confident when responding to the challenges of technology. Others responded less assured, and sought guidance and direction to ensure them that they were moving in the right direction. The anxiety and lack of confidence can be directly associated with the warehouse workers limited knowledge of learning with computers. They had never been placed in a position before where they needed to take responsibility for their own training, and experienced the computer learning mostly as an extension of the classroom where a presenter would guide and direct their activities.

The frustrated reaction of some participants reflected familiarity with some of the computer tasks and confirmed that a comfort zone had been achieved with regard to computer use on the mainframe systems. Other frustrations were lack of access to and differences about the technology that are available to them.

The following additional and new theory codes relating to affective experience with technology have emerged after following a grounded theory approach and inductive analysis of the research data. Affective experience with computer technology:

- increases warehouse workers' *encounters with IT*
- promotes warehouse workers' freedom to *use computer* technology
- improves warehouse workers' *computer literacy*
- alleviates *anxiety* of warehouse workers to be involved with computer technology
- affects the *attitude* of the workers to computer technology
- alleviates *frustrations* regarding the use and knowledge of computer technology
- affects the workers' *learning styles and preferences*
- increases the warehouse workers' *skills and abilities* with computer technology
- affects the warehouse workers' *knowledge of e-learning*
- affects warehouse workers' required *guidance and support* when working on computer technology

Table 5.5 summarizes the conceptual codes that emerged to be the most prominent during the affective experience warehouse workers had with computers. The theory code affective experience, impacts the warehouse workers in the following conceptual codes of e-readiness.

Table 5.5   Theory code "Affective experience" relating to conceptual codes

	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Encounters with IT	Facilitator	Financial aspects	Guidance & Support	Knowledge of e-learning	Learner Frustrations	Learning plan	Learning Preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
Aff. Exp.		x	x		x	x	x			x	x	x		x				x		

These listed conceptual codes are supported by the information that has emerged during the interviews with SMEs, warehouse workers and managers, and observations of warehouse workers.

The warehouse workers' attitudes indicated that they:

- were confident that they could master computer training and learning strategies
- were anxious and frustrated but this did not prevent their participation
- enjoyed the access and use of computer technology
- hoped to make more use of computers
- needed guidance and support to use the computers more purposefully
- would like to be involved in decision-making processes regarding their computer use.

The warehouse workers experienced anxiety:

- when computer actions were unfamiliar due to skill limitations
- due to lack of knowledge of computer use
- due to lack of guidance and support
- but were not deterred from using computers.

Warehouse workers also experienced frustration when they:

- worked without supervision and if interrupted by co-workers
- experienced restrictions to the access of computer technology
- lacked guidance and support when training with computers
- experienced slow system responses and if their expectations were not met.

5.4 Observed aptitude as evidence of e-readiness (Sub-question 3)

The third sub-question explored the warehouse workers observed aptitude with computers to determine their e-readiness relating to computer skills and competencies. Aptitude refers to the individual characteristics or propensity of the learner to make sense of the learning objective. This aptitude or ability includes the locus of control, learning styles, prior experience, attitudes, interests and other personal attributes a learner uses to address the challenges posed (Reeves, 1999). The previous two questions discussed the warehouse workers' experiences and affective experiences about computer technology. This section explores the aptitudes the warehouse workers display while being challenged with computer technology.

Warehouse workers' aptitude is described to be the way the warehouse workers were able to negotiate the demands of the systems they were confronted with. During the interviews and observations, I mostly focused on three areas of e-maturity. They are the ability to interpret online instructions, typing and mouse skills. Figure 5.15 illustrates these three codes' relation to the knowledge to learn with computers and the workers' observed abilities to complete tutorials. Aptitudes of warehouse workers are seen to be a combination of these skills together with the learning styles of individuals.
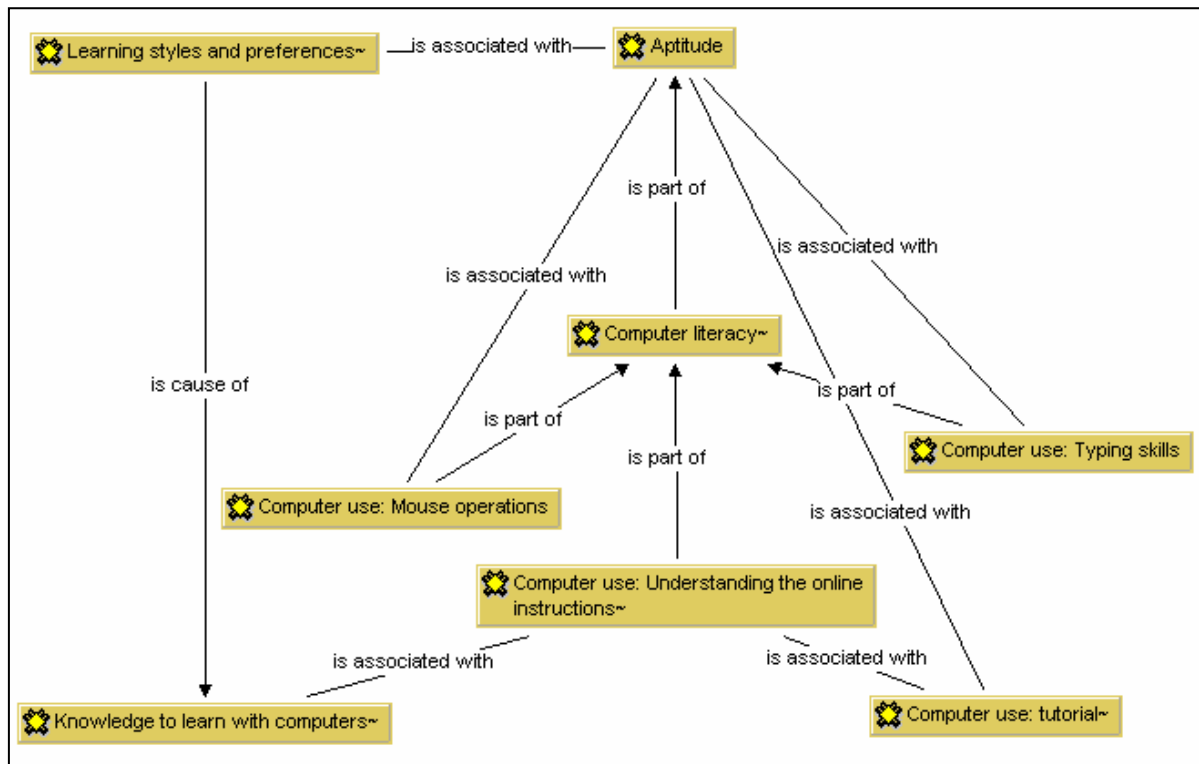
Figure 5.15   e-Readiness aptitude – observed codes of computer literacy

The SMEs emphasised the importance of computer literacy especially to enable warehouse workers to be confident when they need to work independently on computers:

- *Not only IT literacy, but also the skill to search for information, find, analyse and to use it is important* [25] 1:234 (1134:1159)

- *The capability to work on operating systems and to follow logical paths that are used in e-learning strategies…*[26] 1:235 (1194:1195).

The SME's also agreed that different levels of computer literacy existed, and that, regardless of the tempo, competency was important:

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[25] … so dis nie net 'n "IT literacy", hy moenie net tuis wees met die rekenaar omgewing nie, maar hy moet tuis wees met die vermoë om inligting te gaan soek en dan om daai inligting te analiseer en te integreer en iets daarmee te maak (sic).
[26] "operating systems" kan hanteer, hy moet kan 'n logiese pad volg wat in 'n "e-learning" omgewing moet kan optree

Different levels of literacy exist. Some are quick to respond to the challenge, while others are more hesitant, and very aware that they do not have the confidence to work on the PC. Scared that they may make mistakes. To start e-learning, it is important that they have a basic knowledge of the computer, how to use the mouse, the keyboard - even if it is slow 1:295 (1810:1817).

The above quote indicates the challenges that confront warehouse workers to try and make sense of their environments according to their personal skills, competencies and knowledge. Figure 5.16 illustrates the frequencies and the participation of the SMEs and warehouse workers during the interviews and observations of computer literacy. SMEs mostly discussed aspects such as the importance and the influence that workers' aptitudes have on the e-readiness of such groups. The input received from the workers, were the frequent observations during their mainframe, ABET and other observed activities. Figure 5.16 illustrate the frequency of responses wrt to computer literacy. Figure 5.10 illustrates the four codes relating to attitude that was determined during the interviews and observations of the SMEs, warehouse workers and managers. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
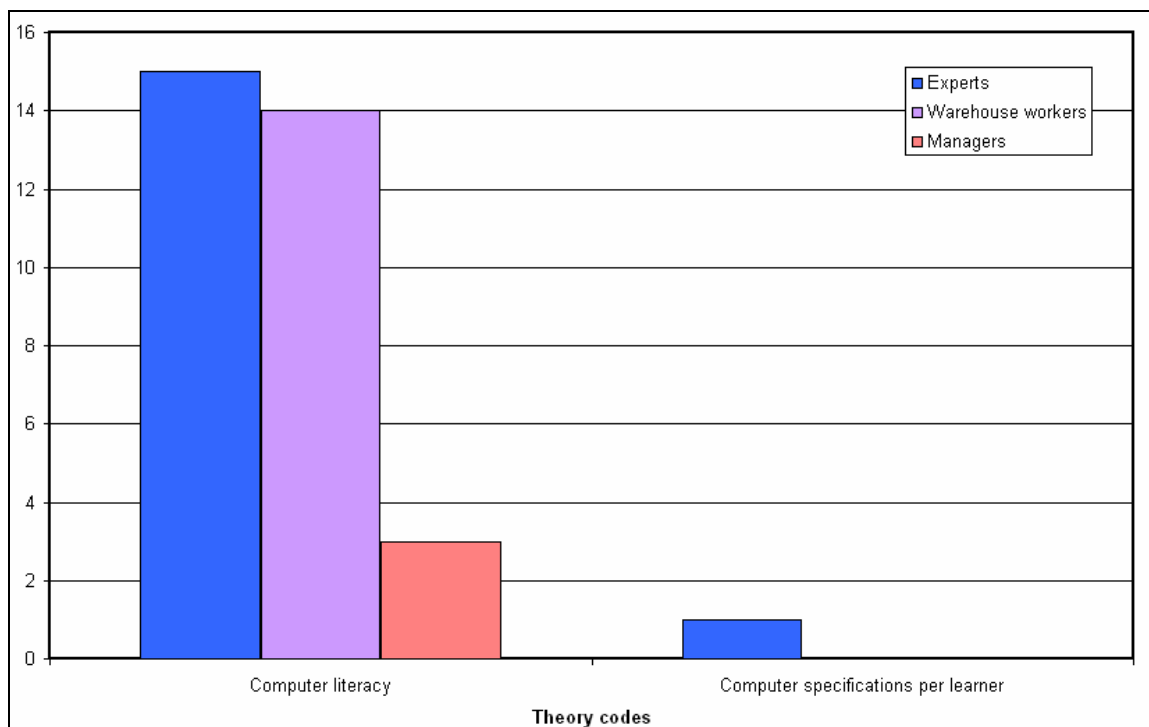
Figure 5.16   Computer literacy a required aptitude for e-readiness

One SME commented on reading literacy and the expected computer literacy: *My experience is that many of them are not even literate, which makes computer literacy even a bigger issue. This becomes a huge challenge* 1:462 (2956:2958). If the warehouse workers experienced problems with literacy, it meant that they would not be able to interpret messages or information sent to them on the mainframe system.

When I observed the five participants during their mainframe system activities, they all seemed to be competent enough to read and interpret the information from the computer:

- *…watches the monitor, reads the information as it is displayed on the screen. Interprets the information by deliberately walking to a shelf where electronic lights indicate the quantity to pick* 2:457 (3046:3049)

- *… briefly reads the screen, turns around to another shelf. He understood from the displayed information on the screen that there are more articles to be picked* 2:458 (3053:3055)

- *He accurately interprets from the displayed information that there is no more stock to pick* 2:459 (3061:3062).

None of the observed participants indicated any problems to interpret information from the computers, in fact, most reflected a confident, knowledgeable attitude as far as the mainframe information was concerned.

However, one has to admit the actions were taught, drilled responses, which they perform literally hundred times per day. Information to be interpreted from the monitors is a few single fields to confirm accuracy. No complex judgements are needed. It would be short-sighted to compare these to the exercises in e-learning where students are subjected to a more constructivist learning approach. In spite of the simplicity, it is a very critical procedure and mistakes will have severe financial repercussions for the organisation. Instructions can be read and interpreted from computer technology. Guidance may be needed if more complex applications and software are used.

The warehouse workers' experience with the available systems at work gives them a basic exposure to practice their typing skills. My observations during the mainframe system activities, ABET training sessions and interviews indicated that they have already laid the first foundation of literacy. There were definite differences between individuals, some had problems when the caps lock was on, and others typed slower, but in general I had the impression that their general computer literacy was good:

- *Lady 1's typing was not fast, but seemed adequate* 2:26 (130:131)

- *… occasional typing, supported by mouse activities and writing in their work books* 2:31 (154:155).

From the above, one could sense the confidence and purposeful manner in which they completed their tasks. The typing demands from both the mainframe system and the ABET lessons were not complex, and required a few single keystrokes only, and for this the warehouse workers seemed to be in control and confident.

However, some of the participants were overly confident regarding their computer literacy:

Yes I type quite well. We work on the computers since this year 2165 (1072:1075).

When I asked her to rate her tying skills out of ten, she replied:

Oh I think it's a ten. [Laughs - seemed very sure but the reaction is probably one of embarrassment at her own arrogance] *I'll give myself ten* 2:180 (1163:1165). [I wondered briefly if she has ever seen a real typist in action].

This overly confident attitude made me wary and suspicious that the warehouse workers may underestimate the demands that are required from e-learning. I was aware that their confidence emanated mostly from their previous experience.

Another respondent displayed his unique way of typing: *His typing actions were with one hand only, using only his middle finger to type, right hand resting between the numeric keypad and the mouse* 2:498 (3401:3410) (Appendix 5.15). Several participants indicated to me that they had never received formal training to type; it was learnt on the job. One respondent complained about being thrown in at the deep end: *... nobody gave you a manual to help you learn new strategies, we had to learn ourselves ...*[27] 2:516 (818:823). From the way most of the workers typed I assumed that none had received formal training on these skills either. The indications I received from such data were that the warehouse workers mostly taught themselves how to type. Their typing skills were basic but adequate for the demands of the job. (Appendices 5.1 to 5.15). The warehouse workers seemed to be e-mature with regard to their aptitude to type basic commands.

Operating the mouse did not really pose problems but from observations I could detect that they did not use the mouse very often. The mainframe system doesn't require much mouse operation, but to log in they had to place the cursor in the right field. When I asked the respondent in Bloemfontein to show me his e-mail skills I noted the following regarding his mouse skills: *... put his right hand on the mouse and started. He had a confident manner in which he used the mouse, not hesitant at all* 2:326 (2389:2391). They used the mouse mostly to activate a field where input was needed. These actions seemed to be confident.

The double clicking to select and open files proved a little different. They were not used to this: *He clicked once, too slow, but got the double click right with the second attempt. When the hourglass appeared on the screen he released the mouse ...* 2:327 (2391:2393). This was during a tutorial experiment, where the participants had to work through a tutorial. I detected a definite difference where a double click action was required. This was a less familiar action, but the participants caught on quickly once they learnt the purpose.

The basic computer literacy of the warehouse workers appeared to be sufficient for the requirements of the computer activities they were involved in. Interpreting the information from the monitors, typing and mouse operations were basic, but still provided a very good platform for expansion. However, these observations were made when warehouse workers performed well-known tasks and knew what was required and what should be done.

The computer literacy of the warehouse workers seemed to be good enough to support the hypothesis that they are e-ready as far as interpreting the mainframe information, basic typing and mouse skills are concerned. The opinion of the SMEs was that once the learner knows his way around, the rest follows more readily: *... once a learner got used to the way a computer program works and he learnt his way around it, they become eager for more* 1:149 (728:730).

The previous section suggested that warehouse workers were confident that they would be able to cope with the computer technology. Their computer literacy supported their confidence, and I became

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[27] Hier gooi hulle mos vir jou by die diepkant in. Ons het nie "training" gekry nie. hulle het nie vir ons gesê hier is vir jou 'n "manual" om dit te leer nie, ons moes maar self leer.

curious about their knowledge of learning with computers. SMEs related that students often don't know what are expected of them during online lessons. *A problem we experience is that line managers do not relate to the e-learning initiative, and don't really support the workers to complete their tasks on computers* 1:304 (1845:1847).
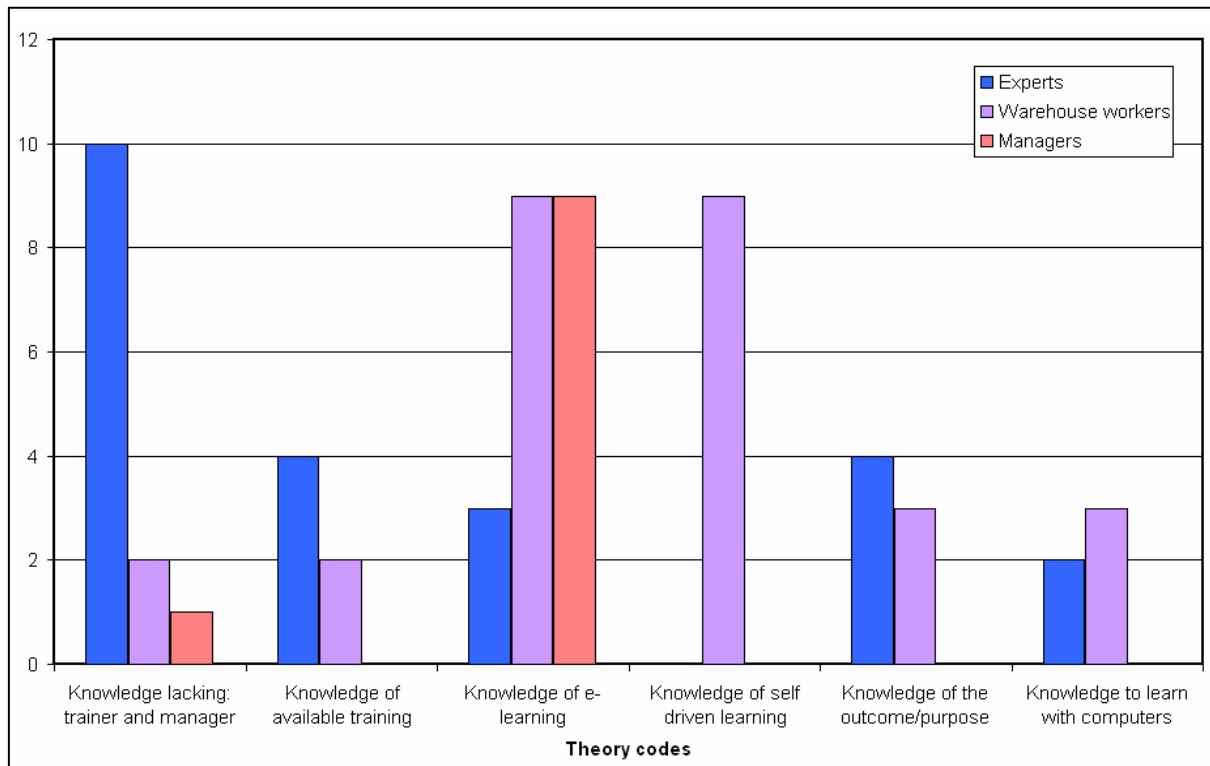
Figure 5.17   e-Readiness aptitude and knowledge of e-learning

Figure 5.17 illustrates the collected data from the interviews and observation with regard to the participants' knowledge of e-learning. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness. Two code types are prominent where warehouse workers made frequent contributions during the interviews and observations, knowledge of computer training and self-driven learning. The SMEs frequently reported about the lack of knowledge from responsible managers and the training staff. The HR training manager gave an honest reply regarding his knowledge of e-learning:

- *I'm not who is aversed to e-learning, and that… It's not as if I do not support it, but I believe if it is well monitored it can yield great results. It is not that I am not at ease with that* 3:71 (381:386).

- *But, I don't know really. I don't know how you drive it, I don't know much about e-learning, I must be honest. I don't know how you actually encourage the people to go in that direction. I don't know much about it* 3:75 (397:400*).*

I asked one of the participants during an interview if he knew what e-learning was. *He answered negatively, shaking his head, he did not know what it wa*s 2:322 (2369:2371).   In contrast very few of the participants reacted negatively when I asked them if they would be able to learn with computers. Most were confident that they would be able to do computer training if it is made available to them, regardless of the limited knowledge.

Interestingly, one has to argue that if the HR manager who has the responsibility to prepare and develop training admits that he does not know what e-learning is, the chances are quite high that the warehouse staff may know even less. Their admissions that they would like computer training may be valid, but it may be a risky assumption that they would be able to do it just on these indications. If their answers were naïve to seek interviewer approval, and if they really have a limited knowledge of e-learning, such a limitation immediately questions the wisdom to present the warehouse workers with a self driven learning strategy.

The participants were overly positive on their capabilities to do e-learning, and this made me suspicious, due to the possible limitations about their knowledge of e-learning. I ran an additional questionnaire to ten randomly selected users in the Port Elizabeth DC to probe their e-learning knowledge (Appendix 3.6).

Table 5.6   Warehouse workers' own account about their knowledge of e-learning

Question	Yes	No	Little
Do you know what e-learning is?	7	1	2
Have you ever taken a course with a computer?	8	2	0
Have you ever completed one of the EKP courses available?	7	3	0
Do you operate the computer during any of the processes here at IHD?	10	0	0
I need assistance to guide my future as an employee	9	0	0
I am not interested to learn further – happy with what I am doing	4	6	0
I have enough time to learn more	5	5	0

Which do you prefer:
    Classroom training
    On my own
    Doesn't matter to me
	4
	0
	5
		0	0

Table 5.6 shows the feedback of this questionnaire on knowledge of e-learning. They claim to know what e-learning is and, according to the indicators, they have been involved in e-learning lessons in the past. The EKP courses they refer to are online courses provided by the organisation. According to the data from Table 5.6, one may conclude that they have a basic idea what e-learning consists of.

I decided to do an observation with a tutorial that is relevant to all staff working for IHD (Appendix 3.14). Participants indicated during the interviews and questionnaires that they were capable and interested in learning with computers. The e-learning I had in mind and what they were thinking of were probably worlds apart, but I became increasingly curious whether they would be able to show signs of independent learning and the capability to progress on their own, or whether their attitudes will remain as confident.

Figure 5.18 illustrates the different physical aspects a learner is subjected when completing a tutorial The activities I observed were icon identification, working with hyperlinks, multimedia, reading and understanding the instructions, outward signs of tentativeness and body language. (Appendices 5.16-5.44).
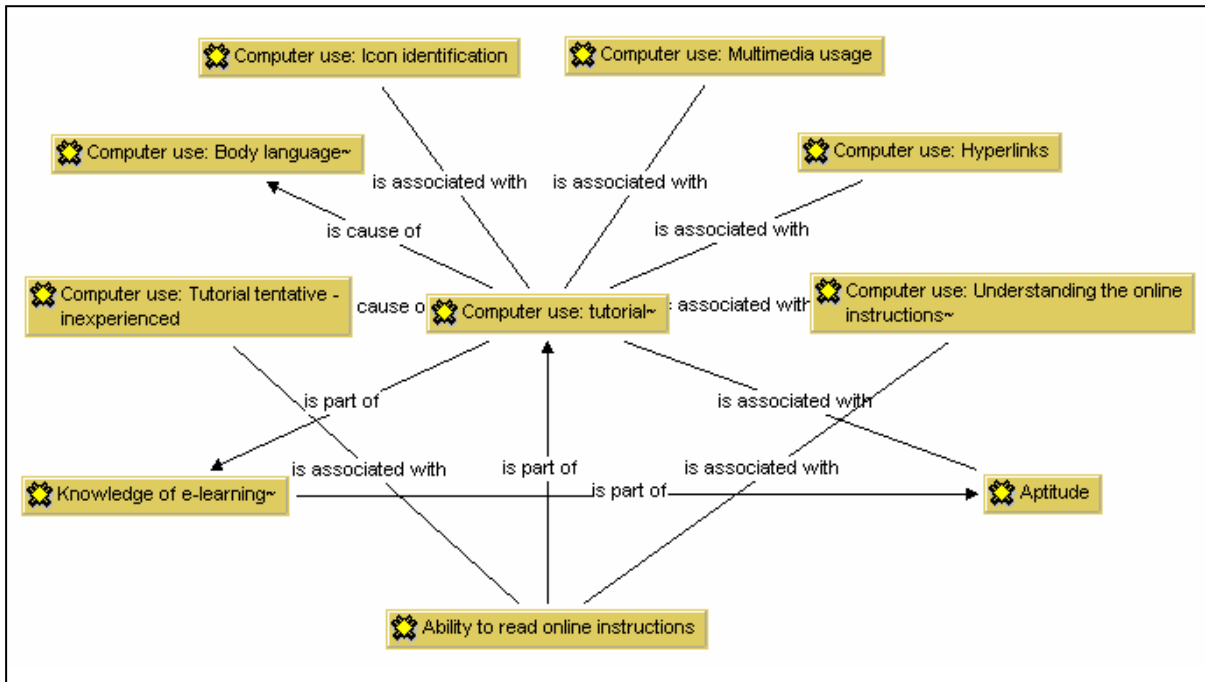
Figure 5.18   Warehouse worker aptitude during tutorial observation

One of the SMEs had warned me earlier that many of the warehouse workers he used to work with, did not understand the online instructions. He added that he got the impression that the warehouse workers didn't read properly.[28] This made me curious to see how the warehouse workers would respond to a challenge like this. To start the tutorial, they had to click an icon. Neither of the two participants I used with this exercise had done an online lesson before. It would have been unfair to expect that they would know where to click to start, so I told them what to do. After that the tutorial was fairly easy to negotiate, and I hoped that they used their own experience to negotiate the lesson.

> R, the first respondent to do the tutorial, did not know what to expect, even after my explanation. I deliberately did not tell her much. I was interested to see whether she was able to interpret what her next action should be. She did not know which one of the many icons to click (we worked on my computer) She asked and I showed her. She did not know what to do with the icon. She moved the cursor over the icon, and after a while I instructed her to double click it 2:409 (2772:2775).
>
> She had problems with the double click action: I instructed her to double click again. She visibly found the double click action unfamiliar 2:413 (2785:2787) (Appendices 5.16-5.27).

When the tutorial opened, she started reading. It displayed the main objective of the tutorial, and if she understood the instructions, she would click the next button on the right to continue:

> … started reading the information on the next screen "The purpose of EBMS". This is the first information that refers to the content to be learnt. I could still not establish if she realized the difference between the navigation and information areas 2:420 (2815:2819) (Figure 5.15).

My impression was that she read the instructions but did not really understand where it led to. She admitted being anxious. Eventually she found the next button and clicked it: *She clicked "Next" to open the next screen. I decided to ask her if she understood the instructions, whether it was clear to her. She looked at me, and nodded "yes" 2:423 (2827:2829).* After a while she realized where the navigation instructions were placed.

---

[28] Hy sukkel om die instruksies te lees en toe te pas op die skerm. Ek wil amper vir jou sê die mense lees nie.

I could sense her confusion. I got the impression she did not really know the purpose of the lesson. She read the instructions intensively and for a long time: *It seemed as if she now realized that there was more to the lesson than mere clicking. As before, she leaned forward, and read the message aloud* 2:429 (2848:2851). Later I asked her whether she was able to discern between information regarding the lesson, and instructions to navigate the tutorial. She seemed confused and did not really know what I meant:

> *R's progress was slow and an indication to me that she was not ready to be left on her own and to start e-learning. We eventually covered quite a large section of the tutorial, but it was with a lot of guidance. An experienced e-learner would probably average about five to ten minutes to complete the tutorial. R was only halfway, and she had been working for almost thirty minutes. I was not able to determine whether her attitude was such that she would grasp the next opportunity to learn in a similar way. My honest opinion was that she was confused and did not really understand the purpose of the lesson, other than that it referred to the possibility of future computer training* (Appendices 5.16-5.27).

A, the second person to be introduced to the tutorial, was much more methodical and slowly read each screen before moving on. (Appendices 5.28-5.44) I deliberately briefed him more about the purpose of the tutorial and what the EBMS system was for. He started with a lot more background knowledge than R. When we started, I asked him if he knew what e-learning was: *He answered negatively, shaking his head, he did not know what it was* 2:525 (2370:2371). He also admitted that he did not know what hyperlinks were. When he started, he mastered the double mouse click much faster:

- *After a few moments he clicked the correct button to open the next screen. This screen simulated the opening of the IHD Intranet, using the Explorer. I commented to him that it took him a little while to open the Explorer* 2:529 (2419:2423)

- *He showed that he had the ability to understand the online instructions, by using the navigation keys after a short while. I queried him on this: .. He elaborately explained that he read it from the instructions, and saw the highlighted box* 2:530 (2429:2431).

He then encountered a text hyperlink that he had to click on. My interpretation was that he had to do this for the first time, and I explained to him the purpose of these hyperlinks.

It was during this time that my recorder battery went flat. I arranged with A that he would return later that afternoon to complete the tutorial. He agreed. At first I was irritated but it proved to be a very interesting break. When A returned about three hours later, he had to start the tutorial again from the icon on the desktop. This time I said a lot less, and wanted to see whether he had learnt anything on the previous short encounter:

> *…when A returned later during the day, he visibly had more confidence with the program. He started from the first screen again, and clearly showed that he had learnt from the previous experience. I did not prompt him at all, he moved on his own). He quickly scanned the instructions, and without hesitation, used the mouse to navigate through the screens. He read the contents again, but reacted much quicker* 2:534 (2469:2476).

When I queried A's ability to discern between content information and instructions to navigate the system, he replied: … *that the information does make sense "in the way that it tells me the purpose of EBMS"* [I noted that he used the terminology as described on the screen, and not describing it in his own words] 2:364 (2576:2580). Figure 5.19 illustrates the content information in a yellow box and the navigation instructions in a triangle (bottom right).
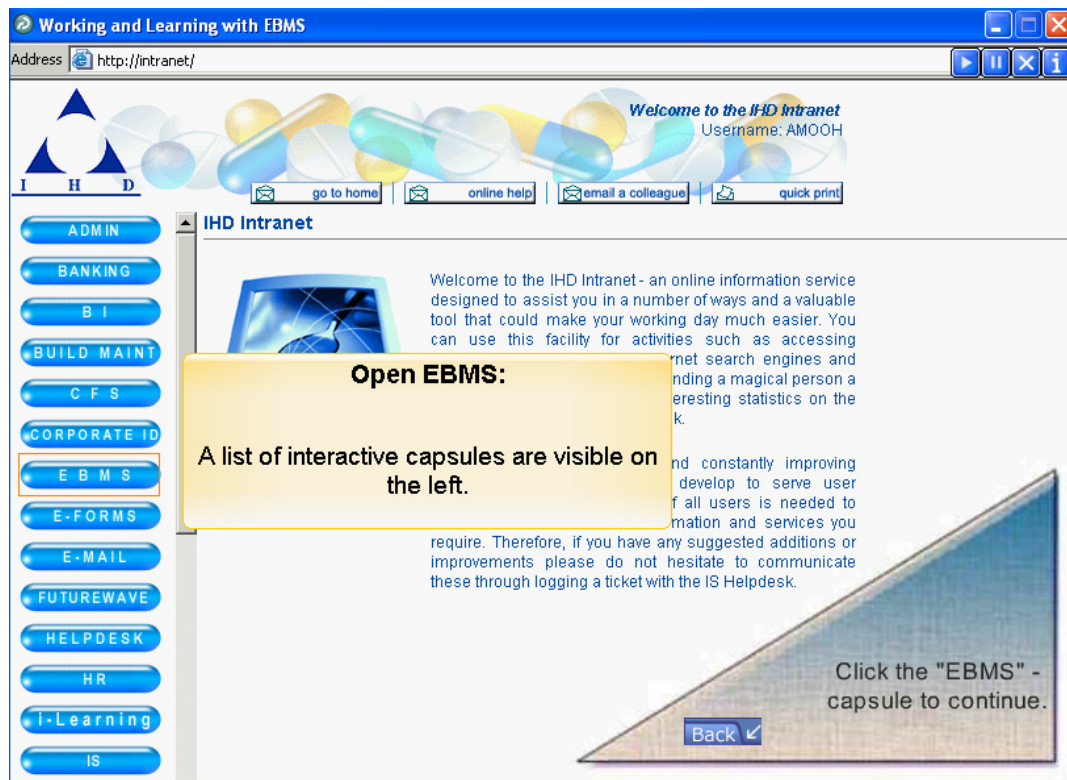
Figure 5.19   Tutorial with information box and instructions triangle displayed

His response was not very convincing, but his progress was much faster than the previous respondent's. I reflected on the differences of their ways and the skills they had. It seemed that A was more methodical, slow but may be able to learn by himself, while R seemingly depended on a lot of guidance.

The differences in their performances did not make them unlikely candidates for this type of training, in fact, instructional designers may use these indicators to plan the type of approach that should be taken to develop online lessons for similar target groups. It may be a mistake to leave them on their own initially to sort things out for themselves. I got the impression that their prior knowledge was just not sufficient to enable them to start learning on their own. They still needed a lot of guidance.

The difference in genders was purely accidental and does not mean anything in this study. They were available and willing, and no attempt has been made to identify or exploit any gender differences in their behaviour toward the tutorials.

The tutorial observation explained something about the comprehensiveness of the warehouse workers' capabilities, attitudes and skills. A's gratitude when we finished was sincere and made me very aware of the responsibility that training has to develop much needed skills. His attitude reflected that he enjoyed the experience, and was really looking forward to more such exercises. Both workers indicated that they did have the aptitude to learn with tutorials, but with different support and guidance. The one respondent indicated more dependency on assistance, while the next respondent seemed as if he just needed some time to get used to the way of teaching. The unfamiliarity of this training was

initially the most prominent sensation during these observations, but I could sense that the anxiety gradually faded. One particular thought crossed my mind when we concluded the observations, and this was all about relevancy. Both participants were not sure why I made them do the specific exercise other than doing some observations on the computer.   They could not relate to the EBMS procedures. I reflected that relevancy of training may provide users the necessary focus and clarity of objectives to get involved in e-learning.

Learning style and learner preferences may impact on the aptitude and attitude of the warehouse worker, whether they accept the strategy or would rather avoid it. Many warehouse workers know only one strategy which is the classroom instruction method.   Most participants indicated on the questionnaires that they prefer that somebody shows them what to do (Tables 5.6 and 5.7).

Table 5.7   Warehouse workers' responses to preferred training strategies

Which of the following training options do you prefer?

Learn myself with instructions	28
Let an instructor show me	38

Classroom training was the more familiar strategy and it may also be that the warehouse workers do not have confidence to get along on their own. One respondent answered the question regarding her learning preference: *I like somebody to show me and I like the computer* 2:232 (1566).   Organisations made use of classroom training most of the time, and this must have played a role in this indication.   Many supported classroom training because it provided a secluded training environment:

- *... nobody bothers him when he is being trained in a classroom, while no one respects his privacy when busy with computer training* 2:157 1006:1009)

- *Yes, I like the classroom training, away from stress and all other stuff*[29] 4:11 (116:117).

Most preferred classroom training, but there may be other reasons for the preference.
The warehouse workers very seldom work in other areas in the organisation, except when they go for training. They sit in soft chairs in air-conditioned rooms, in contrast to the industrial-like environment where they spend their working days. The atmosphere is drastically different to the buzz they experience in the warehouses. The situation does not demand input from their side, it is almost as if they are there to receive, regardless the outcome. Despite all these alluring comfort and extrinsic motivation to be passive learners, there are those who would like to be subjected to computer classes and training*: It will be a big opportunity for me and I will grab it because ...* [sic] *it is no use for me to sit in a class* [sic] 2:304 (2147:2149). This same respondent elaborated that classroom training sometimes stresses him and that the privacy of computer training would suit his personality better:

… it is no use for me to sit in a class. …you say in 30 minutes it must be finished, I can adjust myself but if you are in a group of people working on a project, maybe I see someone finishing on 15 minutes, I start to panic and I loose from that 15 minutes onwards. I won't be able to concentrate. Because you see the thing is, I am that kind of person. I grew up alone at home 2:304 (2148:2157).

---

[29] Ja, ek "like" die klaskamer opleiding, weg van die "stress" af, dis vir my lekkerder.

The comments above illustrate the basic perceptions of people going for training. Classroom training is used mostly but does not guarantee results. SMEs advised: *I believe that classroom training and e-learning should not be played against each other. You should go for a combination* 1:94 (502:504).

Figure 5.20 illustrates the relation of learning styles to aptitude and other identified theory codes as pointed out by the participants. Warehouse workers have indicated their preference to be guided and facilitated, which may be as a result of the way they were used to receive training.
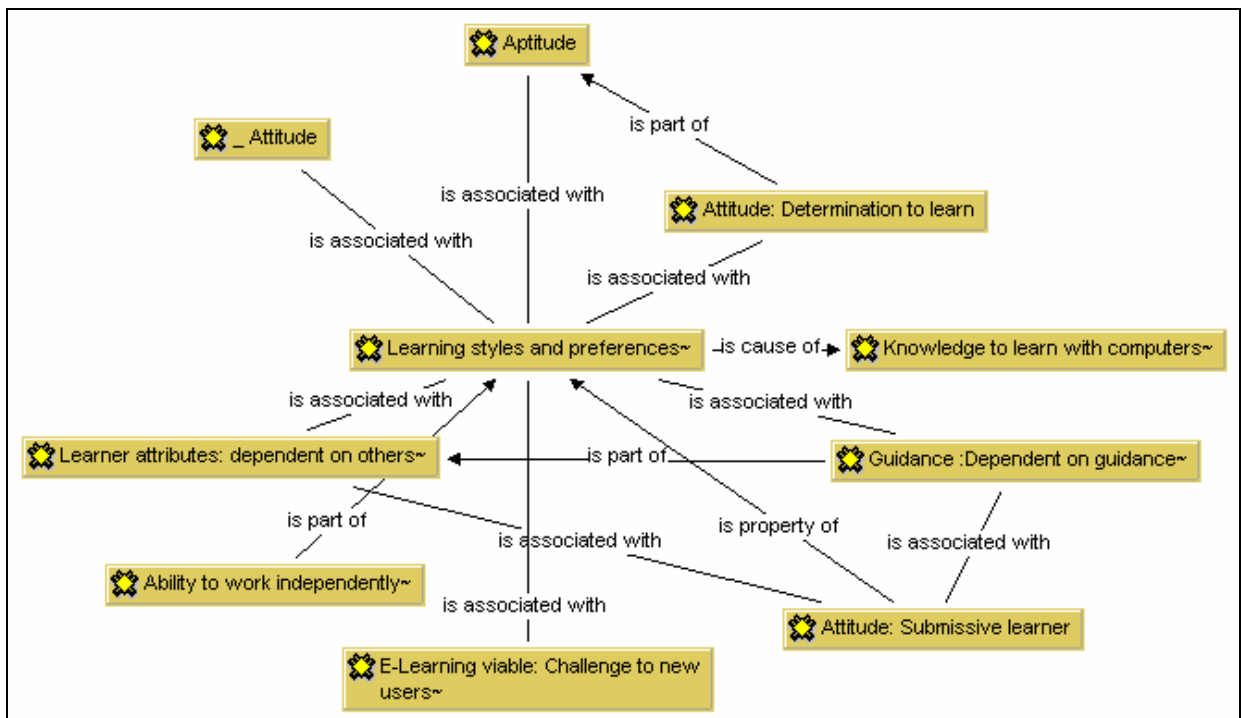
Figure 5.20   Warehouse workers' aptitudes regarding learning styles and preferences

Some warehouse workers indicated their preference for guidance, and confirmed by SME comments: *Structured guidance make them feel comfortable. They feel somebody cares and takes the responsibility* 1:71 (346:348). Another warehouse respondent explained the successes he experienced during a previous training initiative where the instructor guided the learners most of the way: *He explained it to us and helped us a lot. We all passed well* [30] 2:155 (992:994). This structured guidance is not regarded as a barrier to e-learning. Some SMEs argued:

- *the best way to start with e-learning is with a face to face intervention* 1:251 (1288:1289)

- *...guided with a coach and mentor until he can carry on on his own...*[31] 1:35 (2136:2139)

- *The problem with classroom training and structured guidance is that it leads to a culture of expecting to be helped*[32] 1:429 (2752:2753).

The last comment implied that guidance should be such that workers do learn how to develop the motivation to start self-driven training.

---

[30] Hy het dit verduidelik en ons gehelp, almal het goed gedoen.
[31] Tot hy op so punt kom dat hy dit self kan doen dan is sy "performance" oor "impact". Dis waar jy "return and investment" en al daai lekker goed kop en jy kry die dividende van jou opleiding en dis hoekom ek dit die GAP-model noem.
[32] Verwag om gehelp te word.

Learner preferences are closely related to their attitude, according to some of the SMEs: I *believe that if the learner wants to, you'll get him there...*[33] 1:239 (1231:1233). They pointed out that warehouse workers may have diverse objectives:

> *… find that there are two extremes, on the one hand there is the passive worker without any wish to progress further, he is unsure of himself, knows his education is limited, doesn't read very well and doesn't know what to do next* 1:501 (3123:3127*).*

Another SME observed that all workers are not intent on training and development:

> *We sometimes make the mistake of thinking that everyone wants to move on, develop themselves, but there are quite a number of individuals out there who are quite content with what they are doing. He feels secure, his salary is ok, he is satisfied. This doesn't make him a bad worker at all. We must be careful not to drive people because "we" believe he wants that* 1:552 (3387:3393).

SMEs advised that it will be useful first to determine whether the intrinsic motivation to learn does in fact exist, before a lot of money is invested in such a strategy. *Computer literacy may be important, but much more important is the drive to learn...*[34] 1:417 (2702:2704). Some of the warehouse participants added that the motivation can only be kindled and sustained by recognition:

> *The interest in most cases will be sustained by... is, what you do to be recognized by your employer. From the training side we can do a lot, but if you're not being recognized, I mean, the interest will disappear* 3:65 (361:364).

Motivation is a critical aspect of self-driven learning and is discussed later in this study. Figure 5.21 illustrates the ability to work independently when workers are supported by thorough career plans, guidance, time for training and the necessary knowledge to promote the drive to learn.

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[33] Ek glo as 'n ou wil, maak nie saak of hy vantevore aan 'n rekenaar gevat het nie, as hy wil leer en die rekenaar is die medium daarna toe, dan sal jy hom baie gou daar kry.
[34] Een ding is "computer literacy", maar wat dalk nog belangriker is, is die ou se vermoë om self te leer.
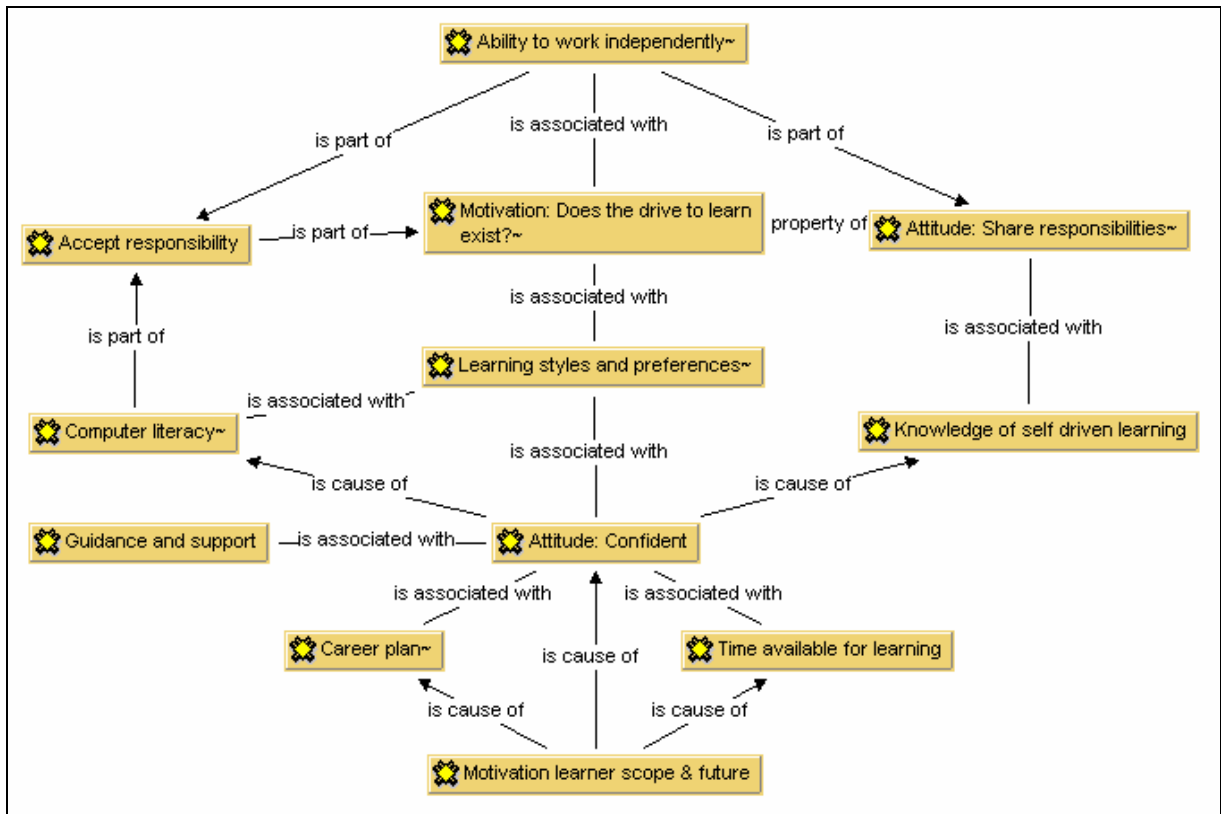
Figure 5.21   e-Readiness aptitude, attitude and ability to work independently.

From some remarks it emerged that the warehouse workers may not have the determination to learn on their own. It may also be unfair to judge them all to be the same type of learners.

The HR training manager emphasized the differences when people take action:

- *People do things differently. Some people they do things by doing, others by listening. The facilitation skills, when you facilitate, you've got to accommodate this* 3:97 (5187:5190)

- *You will get people that respond in that manner, you need to manage that diversity. It is an issue, we perceive things differently. In my background I may regard that to be aggressive, while you may perceive this as being assertive* 3:84 (438:442).

 People differ, and the warehouse workers are no exception. Where one may have problems to adapt to self-driven learning, a next may take to it spontaneously.

During the interviews the participants had differing views regarding the taking of responsibility and taking charge of their own learning. The different attitudes can be seen from the following comments made by warehouse interviewees:

- *They do not easily use their free time - lunch, tea - to do work-related activities* 1:479 (3033:3034)

- *Obviously I will do it in my spare time. When I knock off I will give myself time to do that. Because even when and if I knock off from work in time it's something that I can get myself busy with it* 2:109 (666:669)

- *I think it is a challenge, but if you are determined to achieve something out of it, it won't be too difficult* 2:286 (1961:1962*).*

These approaches are found with many workers. The difference is probably in the motivation and guidance the employees receive.

The SMEs referred to individual differences and the ability of some warehouse workers to adapt more easily to new ways and strategies of training: *it is difficult to transform to be a self-directed learner, but people differ and it often depends on learning styles and personalities…*[35] 1:258 (1370:1372). Another commented that it helps if the motivation is there, for instance an achievable career plan: *Provided the worker has the ability and the commitment*[36] 1427 (2744:2746).

I experienced the advantage of e-learning to allow individuals to work at their own tempo when I observed the ABET warehouse workers during their learning sessions. No orchestrated assistance or initiative was needed to get them started, they arrived, got their files, sat down and started. There was no confusion about who was where, etc: *They were at different stages of one of the English levels. Learner one worked on maths lessons. All seemed very basic but the students were interested and obviously enjoyed the experience* 2:52 (257:260). The ABET observations showed that they did not have to be guided to learn. The two individuals who were involved in the tutorial experiment also showed their different abilities and aptitudes to execute their learning objectives.

Habits and attitudes vary, in some situations a learner may find himself to be an independent leader, i.e. the mainframe system operations, but when working on the internet, the same individual may be reduced to be dependent on another person's knowledge and skill. Experience generates confidence, confidence builds attitude, and attitude may provide capabilities and opportunity. The confident way in which the warehouse workers completed their mainframe tasks can be compared to the way R completed the tutorial. The same individual was confident with the one activity, and had to be guided with the next. My interpretation is that when an objective is addressed where the knowledge is limited their learning styles revert to be dependent, while in a situation that they know well, they are self-directed learners.

The key to be transformed from a passive to an active learner may eventually come down to motivation, and that inner drive to succeed. The warehouse workers have different learning styles and capabilities, and adapt to new approaches of learning according to their prior learning experiences and learning preferences. Motivation can play a major role in the acceptance and e-readiness of the warehouse workers.

5.4.1 Conclusion about warehouse workers' aptitudes for e-learning

The third sub-question explored the aptitudes of warehouse workers and the impact it has on their e-readiness. The aptitudes displayed and discussed during the interviews and observations have indicated that warehouse workers have accumulated the proficiency to understand basic computer instructions and to conduct basic computer assignments that may contribute to their e-readiness. To

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[35] dit is moeilik en ek dink dit hang verskriklik baie van individue en persoonlikhede af. En sekere individue is net geneig om "self-directed" te werk
[36] Ja, dis moontlik mits die werker die "commitment" by homself het. Hy moet self die" commitment", die "go" hê om te verbeter.

conclude, the following additional and new theory codes with regard to the aptitude of warehouse workers have emerged after an inductive analysis of the research data.

The aptitude to use computer technology that may affect the warehouse workers' e-readiness have been accrued through:

- regular *encounters with computers* that established a confidence in *using technology*
- exposure to mainframe systems, ABET training, e-mail use to enable the warehouse workers to develop a *basic computer literacy*
- experience with computers that enhanced the workers' *knowledge of e-learning*
- regular use of computers may assist them to develop an *own learning preferences*, and
- *computer use* enhanced the warehouse workers' *skills and abilities.*

The accrued aptitude affects the warehouse workers':

- *anxiety* when working with computers
- *attitude* when needed to learn by means of computer technology
- *knowledge of e-learning*
- *guidance and support* required when learning through computer technology
- views of *classroom* training
- *skills and abilities* with computer technology, and
- ability to interpret and execute information received from the computer

Table 5.8 summarizes the conceptual codes that emerged to be the most prominent during the accrual of computer skills (aptitude) by warehouse workers. The theory code aptitude, impacts the warehouse workers in the following conceptual codes of e-readiness.

Table 5.8   Theory code "Aptitude" relating to conceptual codes of e-readiness

	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Encounters with IT	Facilitator	Financial aspects	Guidance & support	Knowledge of e-learning	Learner frustrations	Learning plan	Learning preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
Aptitude		x	x	x	x	x	x			x	x			x				x		

These listed conceptual codes supported the data that has emerged during the interviews with SMEs, warehouse workers and managers, and observations of warehouse workers. Warehouse workers demonstrated their aptitude with computers in that they:

- confronted challenges in their own unique ways
- learnt in different ways – individual preferences
- displayed an ability to read and understand information from the computers
- demonstrated basic typing skills
- displayed own learned methods of typing on the keyboard
- demonstrated basic mouse operations
- demonstrated the ability to negotiate menu selections on mainframe system
- worked at own tempo during ABET classes, and
- interpreted information displayed on the computer.

Specific concerns also emerged from the data:

- mouse skills were underdeveloped due to limited use
- workers claimed to be able to learn by means of computers, and were overly positive
- some did not know what e-learning was
- HR training manager did not know e-learning, and

- a tutorial observation indicated limitations and that guidance were needed.

The tutorial observation indicated that the warehouse workers had potential to learn from tutorials:

- They demonstrated during the tutorial that:
  - it was a strange and unfamiliar method of training
  - they knew what to do with icons
  - they could be instructed to use hyperlinks
  - they could generate knowledge from tutorials
  - they could be guided to learn by means of tutorials, and
  - clear objectives were needed to direct them with e-learning.

5.5 Origins of motivation determine e-readiness of warehouse workers (Sub-Question 4)

What origins of motivation may induce warehouse workers to become e-ready?

This theory code is the result of the exploration of the motivational aspects that the use of technology may have on the warehouse worker, and how these origins of motivation (Reeves, 1999) influence their e-readiness. Aspects such as extrinsic and intrinsic motivators are explored.

The concept origins of motivation refers to the type of motivation that affects the learner (Reeves, 1999). It refers to the extrinsic and intrinsic motivators that influence people to react to their environments. People react differently or have different levels of motivation:

> That is, they vary not only in level of motivation (i.e., how much motivation), but also in the orientation of that motivation (i.e., what type of motivation). Orientation of motivation concerns the underlying attitudes and goals that give rise to action—that is, it concerns the why of actions (Ryan & Deci, 2000 p. 54).

The warehouse workers have indicated that they have their own unique motivators that inspire them to be involved with computer technology, and have indicated specific intrinsic motivation to display their e-maturity.

5.5.1 The types of motivators that affects the warehouse workers

The two main motivation types, extrinsic and intrinsic motivation are critical when warehouse workers are required to take responsibility for their own learning (Figure 5.22).
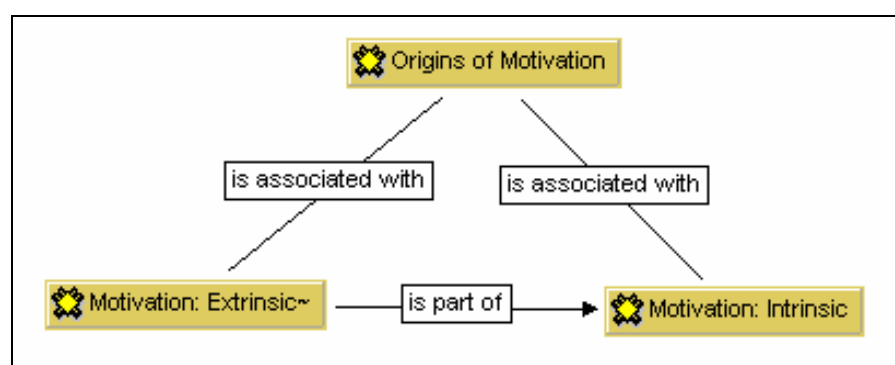
Figure 5.22   Two types of motivation

Although nine conceptual codes (Figure 5.23) have been identified during the interviews of warehouse workers, SMEs and managers, and observations of the warehouse workers, they will be discussed under the two main types of motivation, extrinsic and intrinsic motivation. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
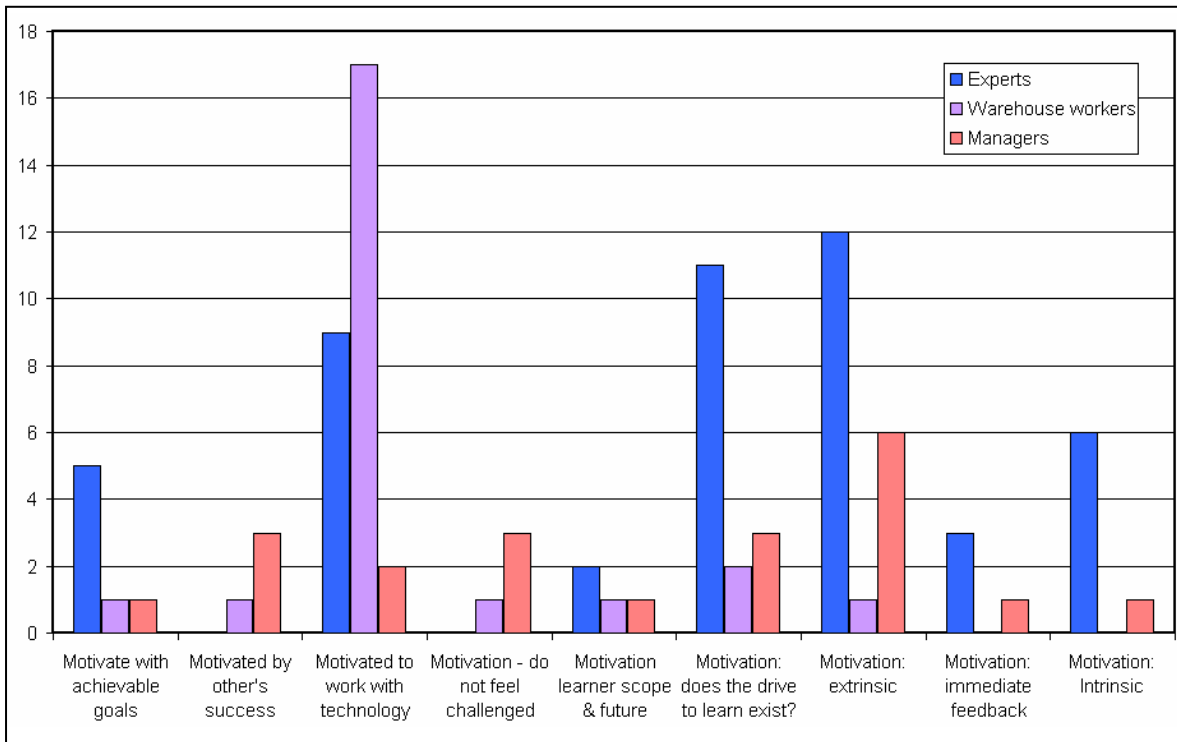
Figure 5.23   Frequencies of respondent responses relating to motivation

The warehouse workers experienced distinct extrinsic motivation to be involved with computers, and suggestions of intrinsic motivation have also emerged during the interviews with and observations of warehouse workers. Figure 5.23 provides one specific area where warehouse workers responded most frequently with regard to motivation - the motivation to work with technology. For the benefit of this discussion all motivators will be discussed under the headings extrinsic and intrinsic motivation. The following section will explore the extrinsic origins of motivation of the warehouse workers as contributors of their e-readiness.

5.5.2 Extrinsic motivation contributes to e-readiness of warehouse workers

Information from the data suggest that warehouse workers are extrinsically motivated by access and ability to use technology, learning paths, guidance and support, facilitation, relevancy of training, financial support, time available for training and recognition by the organisation (Figure 5.24).
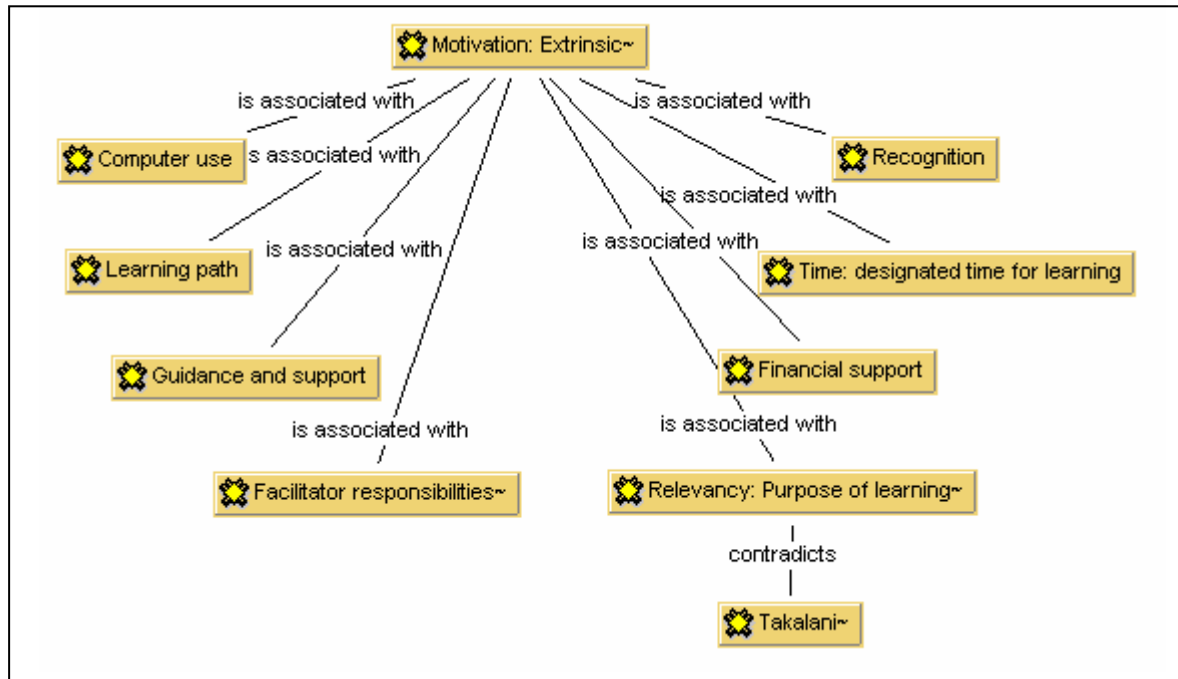
Figure 5.24   Extrinsic origins of motivation as experienced by warehouse workers

The aspects of extrinsic motivation that has emerged from the data are illustrated in Figure 5.24. Each of these aspects will be discussed as related and observed during the interactions with SMEs, warehouse workers and managers.

5.5.3   Computer use as extrinsic motivator

When IHD progressed in its functioning to keep abreast of developments in the commercial world it also extended its use of computers including therefore its stockholding. As a result the warehouse workers were also exposed to computerisation in performing their daily tasks. This implied being proficient in fulfilling their tasks with this medium. Referring to Figure 5.24 we have the consequence that the interests of the warehouse workers were aroused. They regarded the use of technology as an advancement of their careers and computer opportunities. SMEs' opinions confirmed this tendency:

- *When we started in early 2004, they only saw the computers on the other employees' desks. They were always curious and anxious to learn more* 1:182 (851:854)

- *I found that warehouse workers with very limited skills enjoyed the challenge and wanted to improve their PC skills.   Motivation wasn't really an issue* 1:301 (1836:1839)

- *Most warehouse workers are motivated since the computer is a medium they like to work with* 1:322 (1963:1964)

- *It is new, you need to get him curious. Once he is curious and feels the need to explore, you have gained some ground* 1:524 (3234:3236).

An SME commented that the opportunity to work with the computers can be instrumental in an effort to close the digital gap:

> *If an IT illiterate learner gets the opportunity to learn and work on the PC, they are often more motivated than others who have the necessary skills. They see it as a way to close the skill and knowledge gap* 1:302 (1838:1841).

In addition to the SME's opinions, the warehouse workers believed that the use of the computers assisted them to gain experience and eventually to expand their horizons:

- *… I see myself interested in A+ stuff and also programming - Visual Basic stuff* 2:310 (2194:2196)

- *Obviously I'll finish on what I am doing now, but if there is an opportunity, I'll go for something else. To have more options for my career* 2:283 (1932:1934)\

- *… it's my desire to grow in this company, for the benefit of the company, because already I have been through a lot of courses and I can see I'm going even further* 2:318 (2311:2315)

From the remarks by the SMEs and the responses of the workers it emerged that both respondent groups shared the same view of the potential opportunities of working with computers. The workers were of the opinion that the use of computers held the key to a better future, and were motivated to use it. SMEs regarded the involvement with computers as valuable experience to develop skills and knowledge.

Some warehouse workers also pointed to the possible dangers and disadvantages of not being able to use computers in one's work: *So if you don't know everything about the computer, it is tough luck* 2:247 (1653:1654). This respondent suggested that the lack of skills puts an immediate restriction to any further development and eventually restricts the skills growth and development. There was an almost desperation in some responses with regard to the use of computers: *Yes, I like working on computers - a lot!* 2:297 (2077:2079).   These responses indicated that the warehouse workers were aware of the necessity to get involved in computer technology.

It appeared as if the warehouse workers were challenged by the presence of the computers and regarded the computers as a possible way to a better future.   The motivation to get involved in constructive computer training meant that the warehouse worker had to be guided by a well-structured learning path.

Learning paths as extrinsic motivator

Learning paths are regarded to be a critical aspect to motivate warehouse workers to acknowledge their skill gaps and take the responsibility to learn (Figure 5.24). The SMEs specifically referred to career plans, recognition and financial gain to motivate the learners to become successful self-driven computer users. The worker needs to know what his opportunities are to develop, therefore the need for a well planned career plan:

> *If this learning is not included in his KPI [key performance indicator], then he is not going to develop. He needs to be managed well, and motivation needs to be built into his learning plan. You also need to support these with extrinsic motivation* 1:478 (3028:3032).

SMEs regarded well-planned induction programmes to be important to start a successful learning path:

> *You virtually inform him of all career opportunities within the organisation. That to me is a correct induction course. You will also find that this strategy will kindle intrinsic motivation* 1:492 (3082:3085).

Unfortunately warehouse workers indicated that some departments of the organisation do not have structured learning paths in place. Table 5.9 refers to the responses from seven warehouse workers interviewed in Johannesburg's about their career plans.

Table 5.9   Warehouse workers' views on own career plans

Do you have a formal career plan with your supervisor/manager?

Yes	1
No	6

Are you developing/growing according to your expectations?

Yes	1
No	6

SMEs were concerned that the lack of career plans for warehouse workers may have a negative effect on their motivation:

> *Unfortunately, for the picker and packers, where are they going to next? There are very few of them with the intrinsic motivation to develop them self to a next level. Reason for this is, firstly the educational level of the worker, is a huge constraint, and where does he really go?* 1:485 (3055:3060).

Recommendations by SMEs were that the workers should be constantly aware of their developmental status and possible opportunities:

> *... we look at what is needed to move or develop to the next level. This learner must be constantly aware of his competency level, so that his progress makes sense to him. He must know that if he is 70 % competent, he can move into one of three positions* 1:534 (3272:3277).

The rationale of learning plans is to provide focus and purpose so that the workers know what are expected of them. This is to enable the workers to motivate themselves and to understand the purpose of each training intervention they are subjected to. The lack of learning plans leaves them confused and frustrated:

> *Satisfied? No, I'm not satisfied! Because last time I remember I asked J. why can't they allow us to go and do something else like picking or maybe work at the fridge? I mean to be a manifester for a long time, I don't think it's OK. Sometimes you must go and work in bulk, so we can know all the workings...[sic]* 2:162 (1052:1057).

She added that she does not have a career plan in place.

> *When questioned, she conceded to have aspirations to higher levels of work: Yes, I'd like to become a pharmacist assistant, and would like to do courses, because I work with medicines and all that. To go and learn* 2:251 (684:686).

The aspirations were evident, but they needed focus, as confirmed by two other participants:

- *Maybe I'm not sure about my career. I want to speak to someone who will motivate me not only motivating verbally but giving me some document - you can choose this, do this, trying to collect some information, and it's like setting some goals man* 2:316 (2264:2269)

- *To me, if the company developed me, that would help me. Because if you're in the company for three years, five years one job. It's frustrating. If you are developed enough, educationally, I think it's better for you to get some options for other jobs* 2:278 (1902:1907).

SMEs suggested that learning plans should be in place to motivate the warehouse workers, and from the warehouse workers' point of view it is implied that they do not have learning plans in place. Only one of the interviewees admitted having a plan. It might however, be that they misunderstood the concept of a career plan.

The HR manager also added the importance of a career plan to be in place: *You know, you give them like a path, say once you have done this, you will be able to do that* [self-driven computer training] 3:15 (63:65). Managers responded differently with regard to learning paths:

- *...that's what they have been doing the last two years, and once that 's over by the end of this year, then we will look at further training opportunities* 3:117 (623:625)

- *..always did it, but I have to admit, its been a long time since I have done IDP* [individual development plan] *planning.*[37] 4:64 (139:144).

It appears that an important motivational concept such as career planning is not clearly defined for some workers and consequently does not contribute to the learning culture of these warehouse workers. Indeed, some have indicated that they have career plans in place, but my perception was that there existed an uncertainty with regard to this aspect of staff development. The workers seemed to be dependent on guidance from the organisation. A manager reflected: *In the past, the initiative came from the training department...*[38] 4:64 (139:144).

Guidance and support as extrinsic motivator

Many of the warehouse workers indicated their dependency on guidance and support during interviews and observations (Figure 5.24). They did not say it directly, but the way some workers often referred to "they" when discussing their future plans, implied a reliance on higher authorities to lead the way:

- *You know what, as I said... it would be so nice if they can bring this literacy of computers, if people can be literate* [sic]. *I think they must go out of their way but they must have classes to enlighten us in the computers in what's going on there* [sic] 2:255 (1720:1724)

- *We do. We do. Last time we spoke to J. We do have time to speak but they say we have too much work in manifesting. I've been asking that for a long time* 2:183 (1177:1179

- *Maybe I don't have that opportunity but there's no one to motivate me. Every time I speak about this someone will see it as a kind of attitude. Maybe they will say there is no hope and all that, but when I meet people like you, I can see there is something that is growing inside of me* 2:321 (2336:2341).

The way the warehouse workers expressed their needs and wishes for training, they implied that their superior or the training departments should guide and give them direction. The last quote above included a workers' almost desperate plea for recognition of his hunger to be trained. He seemed to be determined to better himself, but he needed guidance, like so many others.

Information gained from the questionnaires has already indicated that the warehouse workers prefer to be shown by a knowledgeable person (Appendix 3.4).

SMEs had the opinion that e-learning starts with strong and structured guidance: *The warehouse workers have to be coached, taken by the hand, and shown how to do it. Practice under supervision and then sent back to the workplace to apply his acquired knowledge*[39] 1:444 (2826:2830). Blended approaches are

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[37] Het altyd, maar ek moet bieg en sê ek het lanklaas "IDP planning" gedoen.

[38].Ek dink in die verlede het die dryf altyd van die" training" departement afgekom.

[39] Die leerders moet ge-"coach" word. Met die hand gelei word oor hoekom dit belangrik is, en fisies te wys hoe al die materiaal en programme hanteer moet word. Hy moet onder toesig kan oefen en dan teruggestuur word na die werkplek om toe te pas wat hy geleer het.

suggested to provide a bridge for transformation to a self-directed learning: *Some areas of the preparation are conducted in the classroom* 1:445 (2843:2845). One of the SMEs related that a "Growth Charter" can be instrumental to structure a development plan: … *reason why we have incorporated the growth charter* [in own organisation] - *to give employees the opportunity to learn at work* 1:105 (558:560).

Several responses from warehouse workers indicated that they were confused at times and hoped to get guidance:

- *It wasn't very clear, you don't know where to go to. You struggle, maybe half an hour, an hour… all the time. You don't know which way to go to*[40] 2:150 (963:967*)*

- *On my way to achieve those goals... maybe if I can get a chance, through the right channels, maybe I don't really know what is the right chance. What I know is that I must get the right training so that I can go forward* 2:207 (1389:1392)

- *Without the training obviously you can't do anything, you know* 2:208 (1393:1395)*.*

The result of such confusion may be withdrawal from training and a lack of trust in the concept of self-driven learning. Figure 5.25 illustrates the relation of dependency to other aspects of motivation in becoming e-ready.
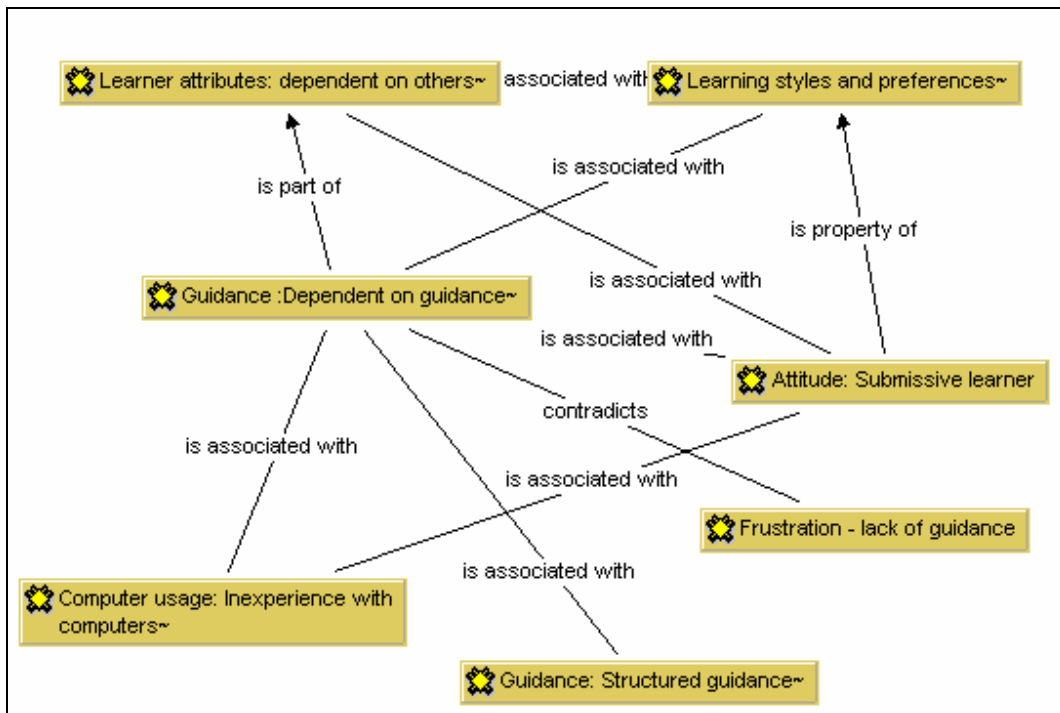
Figure 5.25   Dependency on guidance and support

Dependency is related to the attitude and the learning styles of the learner, while the fact that the knowledge is limited leads to anxiety. The only way they believe this anxiety can be allayed is to be directed and coached into a career that they believe in. The readiness levels of the workers differ, because different levels of guidance are needed.

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[40] Dis nie mooi duidelik nie, en dis frustrerend, kyk jy doen dit op jou eie tyd. Nou sukkel jy, jy het miskien net 'n halfuur of 'n uur, sukkel jy die heeltyd met daardie problem, jy weet nie watter kant toe om te gaan nie.

Commentary by the workers suggested that they are in need of such guidance and clarity of objectives: *But sometimes we do like some kind of direction, you know …* 2:204 (1373:1376). This guidance refers to support and direction in terms of a learning plan and knowledgeable advice. The SMEs and managers provided career information and possibilities during induction courses, to activate the employees' curiosity and attention:

- *You virtually inform him of all career opportunities within the organisation. That to me is a correct induction course* 1:491 (3082:3083)

- *We need to give them a buffet, see what is available. Not only within the company. Say you've got a guy in the warehouse not interested in pharmacist assistant, you should say what other warehouse workerships are available?* 3:62 (336:340)

- *We look at what is needed to move or develop into the next level. This learner must be constantly aware of his competency level, so that his progress makes sense to him* 1:533 (3272:3275).

Several concepts emerged from the interviews and observations of warehouse workers, SMEs and managers with regard to guidance and support. FIgure 5.26 illustrates the guidance and support concepts that emerged during the interviews and observations. This guidance includes knowledge from the responsible people to provide accurate direction, structured guidance and continuous support. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
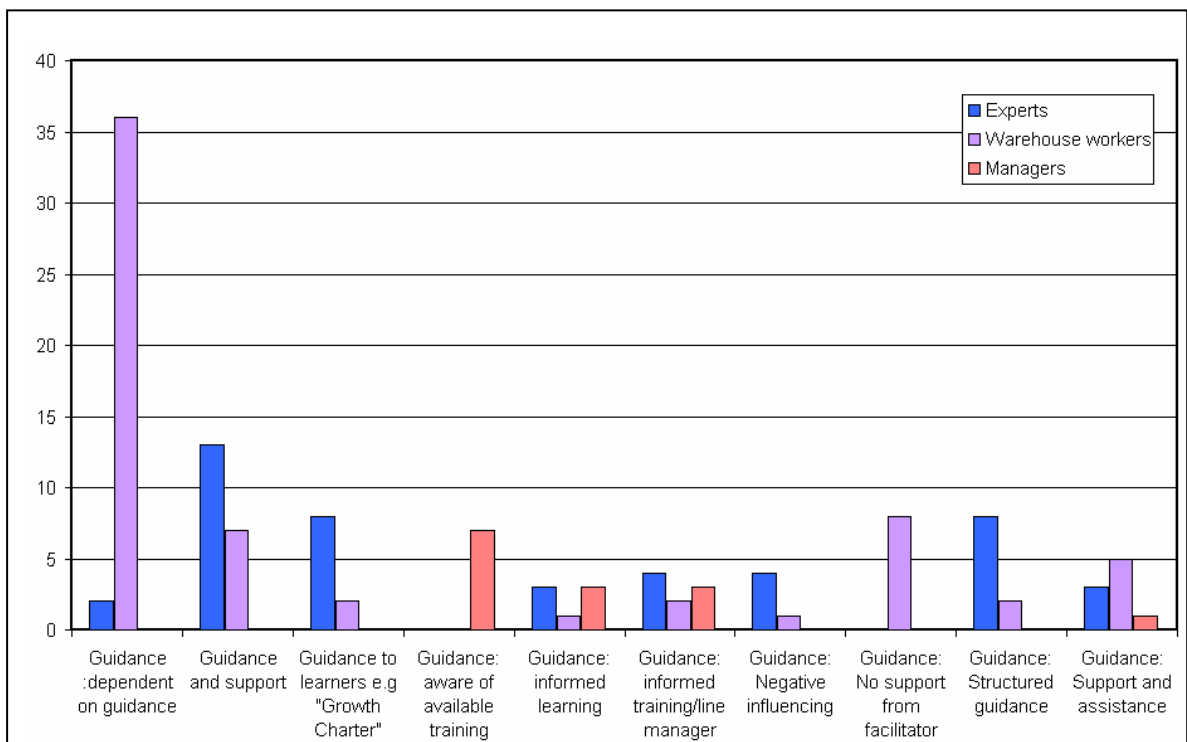
Figure 5.26   Concepts relating to guidance and support according to warehouse workers

The warehouse workers frequently responded to and expressed a need for guidance and support in their learning paths. A platform to work from is needed to provide extrinsic and intrinsic motivation for growth. In the words of the HR training manager:

> *So, sometimes you find that you're motivated, you got the interest, but the organisation is not supportive. There are things that we do not have control of. You can control the personal development, but the structures of the organisation must actually be supportive 3:68 (367:371).*

Manager and facilitators are seen to be the providers of guidance, support and career direction. This aspect can be critical in providing the needed motivation to be e-ready.

### 5.5.4 Facilitator contributions as extrinsic motivator

The ideal facilitator is described by an SME as: *a coach, a skills builder to mentor and coach towards competency*[41] 1:361 (2278:2282) (Figure 4.24). Facilitator responsibilities are seen to be as guide, administrator, social supporter, empathy supporter and as an instructor (Adendorff, 2005).

When I observed the warehouse workers during their ABET training sessions and mainframe tasks, no facilitator led them or guided them during their activities. Both training and job requirements were completed without supervisor support.

Regardless of the absence of a facilitator, the warehouse workers were able to work independently when I observed their progress during the ABET training classes:

- *no facilitator or supervisor from the HR department showed up. I realized that these warehouse workers were left entirely on their own 2:27 (135:137)*

- *… during this and the previous observation, nobody intervened or came in to assist the warehouse workers in any way. They had to carry on without assistance 2:29 (141:144).*

During the three observation sessions nobody came to check on them or to hear if they experienced any difficulties. It seemed as if they were not depending on a facilitator to guide them during these activities, they all knew what to do:

> *Both watched patiently as they waited for the sign on process to complete. Still no one spoke - It seemed as if they knew what to do to log in. Nothing in their behaviour suggested that they were scared or tentative when they started to work on the computers 2:15 (71:76).*

This observation contradicted the previous section where most workers suggested that they were dependent on guidance and preferred to be directed by superiors. The difference with ABET and the mainframe activities were that they were already confident and knew what was expected of them. It seemed then from this collected data that the warehouse workers do have the ability to work independently and without supervision. It may be that the concept of guidance does not literally refer to the presence of a facilitator, but that guidance can be presented in the form of relevant, clear learning objectives.

5.5.5 Relevancy of training as extrinsic motivator

The lack of motivation is described by Ryan and Deci (2000) as amotivation: When amotivated, a person's behaviour lacks intentionality and a sense of personal causation. Amotivation results from

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[41] hierdie ou kan byvoorbeeld 'n "coach" wees, jy kan sien mentorskap en "coaching" is vir my belangrik, jy moet dit hê anders werk dit nie. M.a.w. nou is jy 'n "skillsbuilder" en hy is 'n fisiese "coach" want hy kan ander fisies leer en help en hy bou sy "skills".

not valuing an activity, not feeling competent to do it, or not believing it will yield a desired outcome (Ryan & Deci, 2000 p. 61). (See figure 5.24)

During the interviews some managers commented that training is often presented to workers that do not add value:

> *It wasn't explained. A coordinator or supervisor just went to you and told you you need to be in the training room. I mean that is not the right way 3:12 (52:54).*

The same manager responded as follows when he was prompted about self-driven training that may be relevant to his employees: *Personally I wouldn't mind, because the people will be more motivated if they see the light at the end of the tunnel 3:194 (1165:1167).*

If training is not relevant to the learner, what motivation will the learner have to acquire the knowledge to be presented to him? SM's suggested that relevant training can be applied and would broaden the required skills, knowledge and competency of the warehouse worker, generate confidence and eventually lead to a higher level of performance. SMEs were adamant that learning has to simulate the working environment, to give meaning and perspective to the learner :

- *…learning has to simulate what happens on the job[42] 1:55 (261:263)*

- *…then we need to present training to him that is relevant, and prepares him for those activities 1:87 (462:464)*

- *Lastly, the training you do and plan, should be aligned with what the business needs. It has to add value, both to the business and individual 1:550 (3368:3370).*

The indications from SMEs and managers were that relevant training, where the workers could understand the reason for training and see the purpose of the plan, would lead to better participation and motivation. It could play an important role to establish the workers as self-driven learners.

Unfortunately, some workers suggested that they sometimes do not know the purposes of the training they received:

- *it's nothing to learn something new, but it doesn't really make life easier…[43] 2:137 (891:893)*

- *They are helping us, in general, but not specific 2:319 (2317).*

The purpose of training was not always clear to the workers and led to confusion. One respondent summarised it as follows:

> *I think the first thing is, when you offer somebody an opportunity to learn, I think it's better to make them pass a test. Just to see how ready is he, for what you are offering. Because at the end of the day he is not prepared to do it 2:288 (1973:1977).*

The confusion warehouse workers experience with regard to some of the training they receive, may result in amotivation. If e-learning is planned, it will require motivated workers, with clear, relevant learning paths to guide them. Experts advised: *These exercises need to be relevant and on his level, and acceptable for his cultural values. It is senseless to present him with games or exercises that do not add value*

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[42] Weereens - die leer moet simuleer wat in die werksverband plaasvind.
[43] maar wat ek eintlik wil sê, dis niks om iets nuuts te leer nie, maar dit maak nie eintlik jou lewe makliker nie

1:471 (2988:2991). It seemed that clear relevant training is not always discussed and proposed to warehouse workers to motivate them for training.

Takalani refers to a programme on national television in South Africa. The name "Takalani" means "be happy" in TshiVenda (one of South Africa's official languages) and conveys the spirit of happiness and innocence throughout the project (Science Education, 2001). One of the warehouse managers referred to Takalani to describe his staff's attitude with regard to some kinds of training. Apparently some regarded it to be treated as children.

- *They feel that they are taken backward, because here the in the warehouse* [sic].... *They always say we're going "takalani". That means where small children get* [sic] *taught* 3:172 (1055:1057)

- *So if they feel more all right if they don't feel belittled. But the classroom type where they just need to read and write, they really feel belittled* 3:175 (1067:1069).

He referred mostly to classroom type of training, and implied that the purpose of the training was not always clear. He did not refer to a specific objective that had to be trained during these sessions, his comment was more directed at the method. They were not able to see the relevance of some types of training.

SMEs commentary confirmed this opinion: *…Escom made them do their own ABET levels, levels three and four, it was like washing and ironing levels, while the workers wanted to do technical levels…*[44] 1:386 (2440:2445). Another manager confirmed that sometimes training does not serve the right purposes: *We present them with learning material and content that is not relevant to them in their lives. Relevancy is important* 1:1197 (929:930). A worker commented on the same programme: *Then I have to go and start with ABET. You know, it doesn't give me direction!* 2:209 (1395:1396).

Figure 5.27 illustrates the relation of the collected data with regard to motivation. Warehouse workers may be more motivated to be involved in e-learning when their learning paths are relevant to the tasks at hand and their career paths and if a training plan has been structured to suit their own and the business' needs.

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[44] Hierdie was dus 'n Eskom Abet level. Hulle wil ook nie vlak 3 en 4 doen nie want hulle doen was en stryk vlakke, terwyl hulle eerder tegniese vlakke wou aanvat.
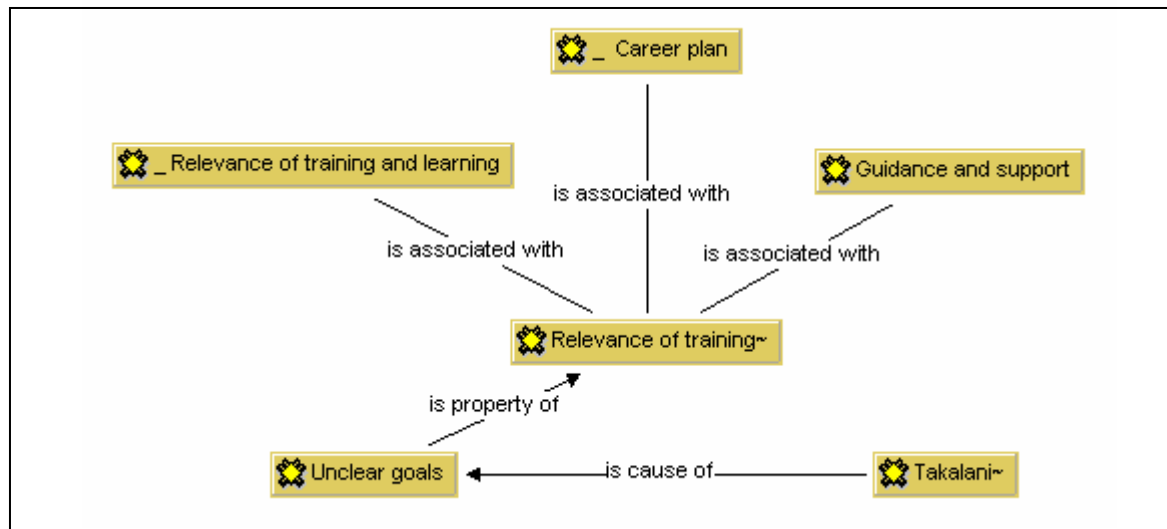
Figure 5.27   Motivation grows with clear career-related objectives

The data suggested that workers may be much more motivated when training was relevant and focused on a business goal which would make them feel like adult learners. The Takalani comment suggested that they were not always aware of the purposes of training. It appears as if their e-readiness may be negatively affected if they do not have relevant learning paths in place.

5.5.6 Financial support as extrinsic motivator

Workers indicated that most of them did not have the personal finances to study privately. One warehouse worker indicated that he was interested in networking and contemplated the possibility to study: So *if I do networking, will I be able to pay it, will I be able to afford it?* 2:118 (714:715). Another commented on his motivation to learn on his own: *I've no problem in pushing myself, like I said, I've done it, it's just that I did not have enough money to continue doing it* 2:270 (1853:1855). Management agreed: *If I say to those guys you can go out there and study whatever is available, they'll say to me they don't have money* 3:38 (198:200). Most workers just did not have the financial resources to study on their own.

From the data analysis emerged four codes that related to the financial support of warehouse workers for training. Figure 5.28 illustrates the frequency of SME, warehouse workers and manager responses with regard to the lack of financial assistance, financial constraints as experienced by workers, organisational support and the eventual cost to the company. Most responses were from SMEs and managers who were more qualified to speak on the organisation's financial views as it related to training.   The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
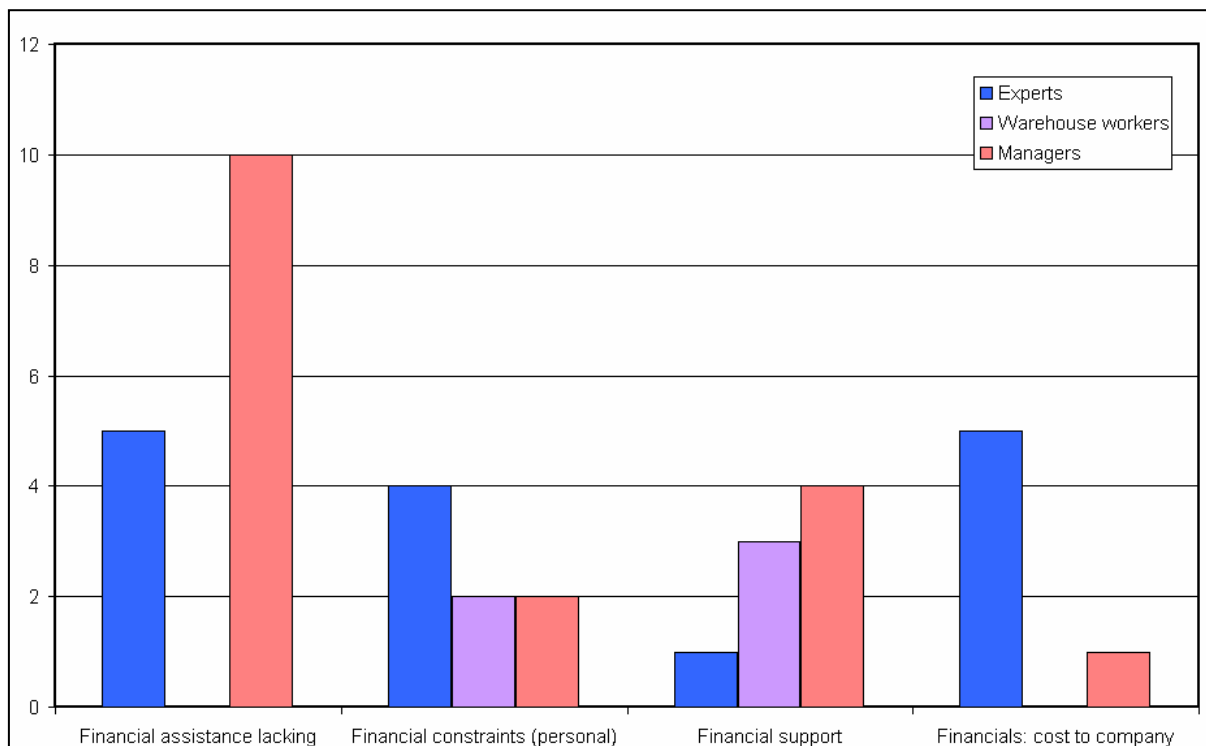
Figure 5.28   Financial support as motivator for e-readiness

The organisation has a policy to support career development: … *it is much easier because they provide a study loan* 2:114 (702:703). Aspiring students need to apply for the loans and only after the request has passed all the procedures can the loan be awarded. The HR training manager commented that the financial support is not ideal:

- *…financially conservative, which is good because that's how you make a profit, but you need to find a balance. If you want to have trained people or motivated people, you must be prepared to develop them* 3:44 (222:225)

- *When we budget, we actually budget for that study, but then we ask them to go and find a loan before we pay it. Our policies don't support the training* 3:42 (210:212).

He added that most of the workers also did not have the financial status to obtain loans:

Most of the guys that we talk about are blacklisted for that matter. They can't access loans. They don't have credit cards. So, our policies don't encourage what we're trying to preach. Do you understand what I'm saying? 3:41 (204:209).

In a bid to overcome their financial constraints, the workers have become more dependent on the organisation to provide in their needs for training. The financial constraints of the warehouse workers may be a critical constraint to prevent warehouse workers to become involved in e-learning.

The organisations may also benefit with e-learning, according to SMEs. They added that e-learning can be a cost saver for many organisations: *From a business point of view, I regard the value of e-learning as a cost saving strategy. Not from a trainer's point of view but from business* 1:553 (3395:3397). It is argued that the management of organisations did not always understand the impact of e-learning and the

potential cost to company. *To make the learner use available time at his workstation can be very effective learning[45] 1:451 (2884:2888).*

5.5.7 Allocated time for training as extrinsic motivator

Seven aspects relating to time have emerged during the interviews with and observations of the participants (Figure 5.29). These include the available time for training, use of the available time at work and from a personal point of view. The advantages of e-learning with regard to time constraints have also been discussed. All three respondent groups participated frequently during the discussions of time and the limitations of time. The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.
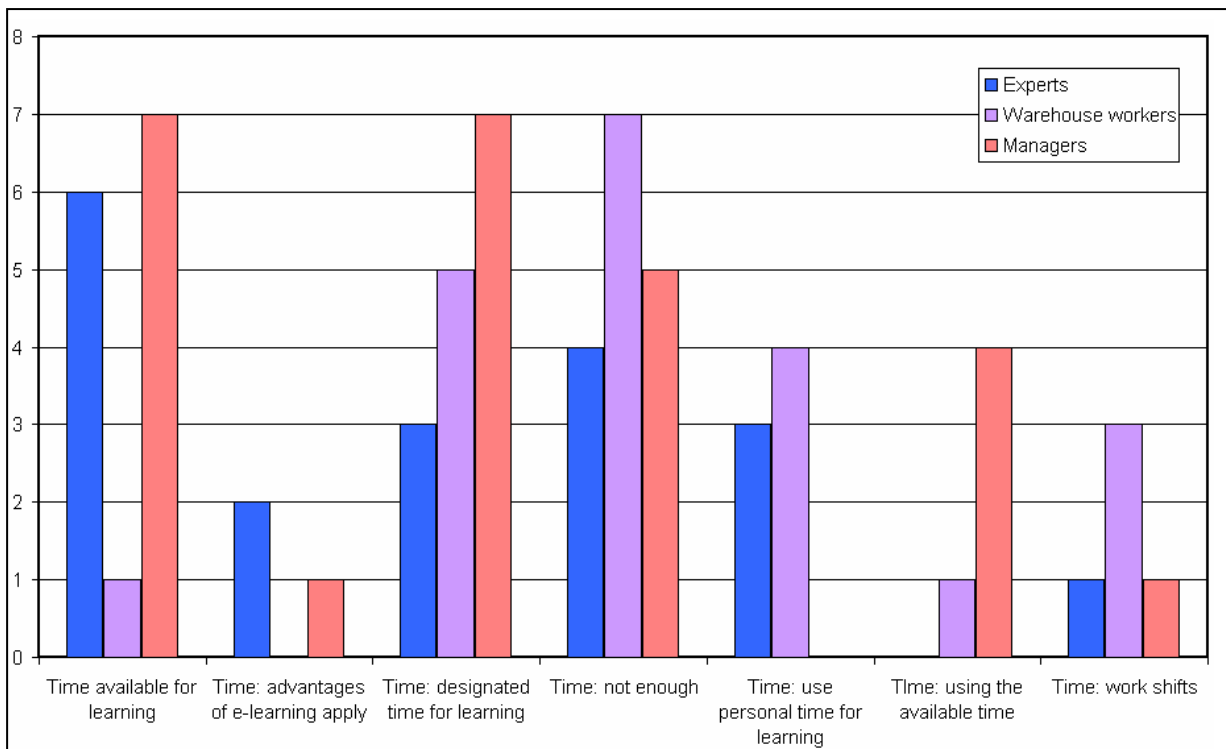

Figure 5.29   Time available for learning as motivator for e-readiness

Warehouse workers mostly complained about the availability of time for training during the interviews:

- *It is not difficult, everything is available at work, but there is not enough time[46] 2:144 (927:928)*

- *There is just not enough time, I'm not going to do it in free time, or after hours, then there's not time for one's children[47] 2:145 (928:933)*

- *When we have the time here, and we do get the chance, but time is very limited 2:298 (2079:2082). …for our workers this is always a problem, because they work shifts. Now we've got a problem, they need extra studying time in working hours 1:233 (1123:1126).*

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[45] Bestuur verstaan ook nie altyd die koste-besparings element nie. Hulle besef nie altyd dis meer koste-effektief om die ou in sy werksplek te laat leer nie. Om tien, twintig minute te gebruik om gou die werk daar waar hy sit te doen nie

[46] Is nie moeilik nie maar alles word by die werk opgestel ... maar jy het nie tyd nie.

[47] Daar is net nie tyd nie, ek weet nie wanneer wil hulle hê moet ons dit doen nie. Ek gaan dit nie in *lunchtime* doen nie. Ek gaan ook nie na ure werk nie, want ons het al klaar nie tyd vir ons kinders nie.

SMEs believed that an assigned time per week contributes significantly to develop a learning culture at work.

- *In a previous experience in a state organisation, we had a designated time frame, e.g. Friday mornings, for an hour, to do learning on a computer program* 1:480 (3038:3040)

- *A fixed time yielded much more success, but he still needs to be managed well* 1:481 (3044:3045)

- *Or the training room should be accessible for this purpose. They should be granted an hour's time for learning per day, but unfortunately very few companies invest in this strategy* 1:522 (3225:3228).

An assigned time for training may provide the motivation, and I queried the available time. The managers believed that time for training is more than sufficient at IHD. The HR training manager said that there is not a policy that states what the minimum train hours should be, but at IHD there is enough time set out for training: *The way it works in the entire warehouse is that two hours are set aside every morning from Tuesday, Wednesday and Thursdays for training* 3:138 (769:771). A total of six hours was available. I queried the use of the time: *We are suppose to get that. We use it for ABET now* 3:155 (911:916).

It appears that a fair amount of time is available per week for training for warehouse workers. Although e-learning is believed to be an anywhere- anytime learning strategy, it still needs guidance and knowledgeable support from a facilitator (Adendorff, 2005). When the organisation provides time and funding, it needs to ensure that the available time is used optimally. Available learning time may serve as a motivation for warehouse workers who do not know yet how to effectively manage their time for work and learning during business hours. Knowledge and skill inputs from the facilitators are needed. Additional motivation can be provided by the organisation by means of recognition.

Recognition and rewarding as extrinsic motivator

Rewarding is seen as a popular motivator by organisations. Employees receive recognition in the form of incentives, promotion, certificates when they have performed exceptionally well. Workers on financial rewards: *At the end of the day everybody is concerned about their salaries. This is a very good motivator* 1:504 (3144:3146). The need for financial gain was reiterated by the warehouse workers: *If they give you more money it always works* [48] 2:133 (871).

SMEs valued the awarding of certificates on completion of an objective*: I found that when students complete courses and get their certificates, it motivates some others to enroll* 1:211 (1004:1006). Other ways of recognition has also been mentioned:

By posting his picture onto a wall, or reward him with something visible to all. This extrinsic motivation may put several other warehouse workers into action. Important, this achievement needs to be visible for all. Praise the person in front of his peers, so that others can be motivated. The warehouse workers compare themselves with one another 1:538 (3286:3292).

Rewards are important for any goal:

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[48] Kyk as hulle vir jou meer geld gee dan werk dit altyd.

- *…they need to know what is waiting for them once a skill has been learnt, and a lesson completed* 1:325 (1974:1976)

- *Promotion will ALWAYS be in the warehouse workers' mind when he/she acquires new skills and knowledge* 1:327 (1983:1985).

Warehouse managers agreed that IHD do have recognition structures available. Workers receive incentives twice a year and some get promoted to the office areas:

> *… there are more than ten people* [in the administration offices] *who have worked under me. I am so proud. It actually makes me feel that here are the people* [the promoted employees] *who actually respect the people in the warehouse* 3:198 (1238:1241).

The organisation uses recognition to reward its employees regularly. It is possible that this same culture can be used for training purposes and to motivate warehouse workers to be involved in e-learning. The organisation needs to provide the launching-pad for e-learning.

5.5.8 Intrinsic motivation

To be motivated means to be moved to do something. Intrinsic motivation refers to the urge to do something because it is inherently enjoyable or interesting (Ryan & Deci, 2000). Some of the SMEs regarded intrinsic motivation to be the most critical aspect to realize e-learning:

- *Intrinsic motivation, for me is the most important, far more than basic computer literacy…*[49] 1:430 (2759:2761)

- *You definitely need one or other form of intrinsic motivation and support mechanisms to achieve this* 1:477 (3027:3028).

Unfortunately, from the comments by most SMEs it seems that the intrinsic motivation to be self driven learners is scarce: *What I saw with these warehouse workers, is that a self drive- learning culture does not exist*[50] 1:419 (2706:2708). One of the SMEs added an example where the worker quit after a while:

> *He really wants to learn badly, and enrolled for the A+ certification too. I got the approval from his line manager, and he was granted access. He initially had the commitment, but somehow this slowed down. Now that he is enrolled, he always finds excuses that he doesn't have time to do it 1:231 (1107:1112).*

SMEs were doubtful that the workers may not be intrinsically motivated for e-learning. Neither the observations nor the interviews supplied direct information in this regard, therefore I used Ryan and Deci's (2000) definition and explanation of intrinsic motivation to explore the data for intrinsic motivation of the warehouse workers.

Ryan and Deci's approach focused mainly on psychological needs. These were "needs for competence, autonomy and relatedness" (2000, p. 57). They explain intrinsic motivation by means of the "free choice measure". If users were left alone and kept on returning to do tasks on their own, they were regarded to be intrinsically motivated. The more time they voluntarily spent with the task, the more the motivation.

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[49] innerlike of intrinsieke motivering, dit is vir my die belangrikste aspek van "readiness", nog belangriker as basiese rekenaargeletterdheid.
[50] En wat ek veral by die ouens gesien wat ons probeer leer, is dat die selfleer kultuur nie bestaan nie.

Secondly, Ryan and Deci (2000) drew on their Cognitive Evaluation Theory that specified that interpersonal events and structures that led to feelings of competence during action can enhance intrinsic motivation. This follows when participants experience satisfaction during the interaction and is further enhanced by the freedom to take part or as described by Ryan and Deci: "Thus, people must not only experience perceived competence (or self-efficacy), they must also experience their behavior to be self-determined if intrinsic motivation is to be maintained or enhanced" (2000 p. 58). The authors maintain that autonomy and the opportunity to be self-determined can develop intrinsic motivation even more.

The data from the interviews and observations indicated that the warehouse workers have an interest to work on the computers and they have expressed their needs for competence several times:

- *With me, when it comes to learning on my own, I don't think it can be a problem. This is almost the same question I had sometime before… people are concentrating when you are with people* 2:94 (538:541)

- *No, that would not scare me. I've got some ... of how computers work. ... that won't be a problem. I would enjoy it* 2:281 (1924:1926)

- *Yes, I like working on computers - a lot!* 2:297 (2077).

From the comments above it appears as if the interest was alive and enough to create an awareness of the computers with the warehouse workers. Their work on the mainframe system was not really voluntary, and can not be regarded to be a "free choice", but the interest in the ABET training was an indication that they chose to keep on working independently:

- *no facilitator or supervisor from the HR department showed up. I realized that these learners were left entirely on their own* 2:27 (135:137*)*

- *I was sure of one thing: during this and the previous observation, nobody interfered or came in to assist the learners in any way. They had to carry on on their own* 2:29 (141:144*).*

The ABET training classes indicated that the warehouse workers' interest was such that they autonomously attended classes and worked without supervision. It also gave them the opportunity to generate confidence in themselves. The warehouse workers also reported their satisfaction and enjoyment to be involved in computer technology:

- *No, that would not scare me. I've got some* [knowledge]*... of how computers work. ... that won't be a problem. I would enjoy it* 2:281 (1924:1926*)*

- *When we have the time here, and we do get the chance, but time is very limited. But if I can be in an environment where we can use the computers more, then I'll like it a lot* 2:298 (2079:2081).

The warehouse workers did not display conscious behaviour to be intrinsically motivated, but by comparing observed actions to Ryan and Deci's approach of intrinsic motivation, it seems as if some indications exist that warehouse workers are intrinsically motivated with the activities that were supposed to challenge them.

5.5.9 Conclusion about the origins of motivation that influence warehouse workers' e-readiness

This section has explored the sub-question into the origins of motivation that may induce warehouse workers to become e-ready. The data from the three primary documents has indicated that warehouse workers are subjected to both extrinsic and intrinsic motivation. Extrinsic origins of motivation that has emerged from a grounded theory approach were access to technology and the ability to use computers, the presence or lack of learning paths, guidance and support where needed, facilitation as provided by the organisation, relevance of training objectives, financial support for training, time available for training and lastly the way the organisation recognises achievements.

By means of the grounded theory approach, and by means of inductive analysis of the research data, I have identified the following new and additional theory codes relating to experience origins of motivation that may assist in exploring the e-readiness of warehouse workers. Origins of motivation that may affect the e-readiness of warehouse workers have been identified as:

- *Encounters with IT* may influence the warehouse workers to become e-ready
- *Computer use* promote computer literacy and motivate warehouse workers to develop their *skills and knowledge* with regard to computers
- Motivation to work with computers promotes the *viability of e-learning*
- Computer use affects the warehouse workers' *learning styles and preferences* and serve as motivator to learn with computers
- The *organisation culture* plays an important role to motivate the warehouse workers to be e-ready
- The motivation to work and learn with computers affects the *computer literacy* of the warehouse workers
- *Guidance and support* available to warehouse workers play an important role to affect their e-readiness
- *Relevance of learning and related computer* activities affects the motivation of the warehouse workers
- *Management guidance and direction* motivate warehouse workers to become e-ready
- *Facilitator* knowledge and guidance can contribute to motivate the warehouse workers
- The motivation to work on computers affects the *attitude* of warehouse workers to become e-ready
- *Time allocated for training* motivates the warehouse workers to get involved with computer training
- Relevant *learning plans* contribute to motivate the warehouse workers to become e-ready
- Knowledge of e-learning may contribute to the e-readiness of the warehouse workers, and
- Financial support motivates warehouse workers to become e-ready.

Table 5.10 summarizes all the conceptual codes that relate to origins of motivation. This theory code has received the highest frequency of responses from all the participants. The theory code "origins of motivation" relate to all the identified conceptual codes of e-readiness.

Table 5.10   Theory code "origins of motivation" relating to conceptual codes

	Conceptual codes of e-readiness																			
	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Experience with IT	Facilitator	Financial aspects	Guidance & support	Knowledge of e-learning	Learner frustrations	Learning plan	Learning preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
Motivation	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

The conceptual codes of e-readiness listed in Table 5.10 were supported by an analysis of the obtained data in this section. The data has indicated that warehouse workers are moved to become e-ready when:

- computers are available to work on
- access and connectivity to the internet and e-mail facilities is available
- they believe they have closed the digital gap with technology
- they believe they prepare for a better future
- learning paths are made available and regularly communicated
- focus and purpose is provided with guidance and support
- structured guidance is provided for inexperienced users
- knowledgeable advice and support is made available
- facilitators empower them to develop self-learning skills
- they are challenged by relevant learning objectives
- irrelevant learning interventions can be eliminated
- financial support is provided by the organisation
- time is made available during work hours to aid inexperienced self-driven learners, and
- achievements are recognised by the organisation.

It has emerged from the data analysis that the warehouse workers are concerned and experience a lack of motivation due to

- learning paths that are not very clear
- guidance and direction is not always relevant
- limited knowledge by facilitators to introduce them to computer training
- learning objectives not always clear
- financial support not always available, and
- restricted computer use that may increase the digital divide.

The data analyses has indicated that the warehouse workers may be intrinsically motivated by their experience with computer technology due to their:

- freedom and autonomy to return to ABET classes
- wish to be involved in computer technology
- awareness that computers may affect their career development and future opportunities, and
- awareness of the potential dangers if they abstain from getting involved in computer technology.

5.6 Access and infrastructure as contributors to e-readiness (Sub-question 5)

The fifth question relates to the warehouse workers' access to computer technology and available infrastructure, and the effect it has on their e-readiness.

The previous section explored the motivators that may inspire the warehouse workers to participate or avoid learning with computers. It was found that warehouse workers have several extrinsic origins of motivation that are instrumental to move the warehouse workers to be motivated to be involved in computer technology. Added to these extrinsic motivators are definite signs that warehouse workers often choose freely to work with computers and often do it without supervision. Regardless of aspects such as financial constraints or the lack of relevant learning plans, the warehouse workers have indicated that they are motivated to learn by means of computer technology. This sub-question deals with the infrastructure that is available for the warehouse workers. The data are used to explore the

access warehouse workers have to the technology and whether e-learning may be a viable learning option for the workers.

5.6.1 Access to computer technology

Access to computer technology has been identified in the literature to be one of the critical aspects of e-readiness. The questionnaires, interviews and observations with participants dealt with warehouse workers' access and connectivity to computer technology and how it influences the warehouse workers to be e-ready. The SMEs reiterated the importance of access and warned that connectivity is often underestimated:

- *…make the mistake by assuming everyone has access to computers. There are many, probably more than 40 percent of people who do not have access to computers at all* [51] 1:441 (2803:2807)

- *Access will always be a problem. Warehouse workers do not get enough practice on PC's. Some work areas have very limited access to PC's while others are under used … and with regard to the basic requirements:* [these requirements are]: *Access to the intranet at the least. PC access - either by a shared or own workstation. Password and user ID to grant access. It is important that instructors and instructional designers are aware of the basic infrastructure of the company* 1:310 (1883:1889).

SMEs indicated these requirements to be available to warehouse workers to ensure effective e-learning. The data indicated that several types of connectivity exist for warehouse workers.
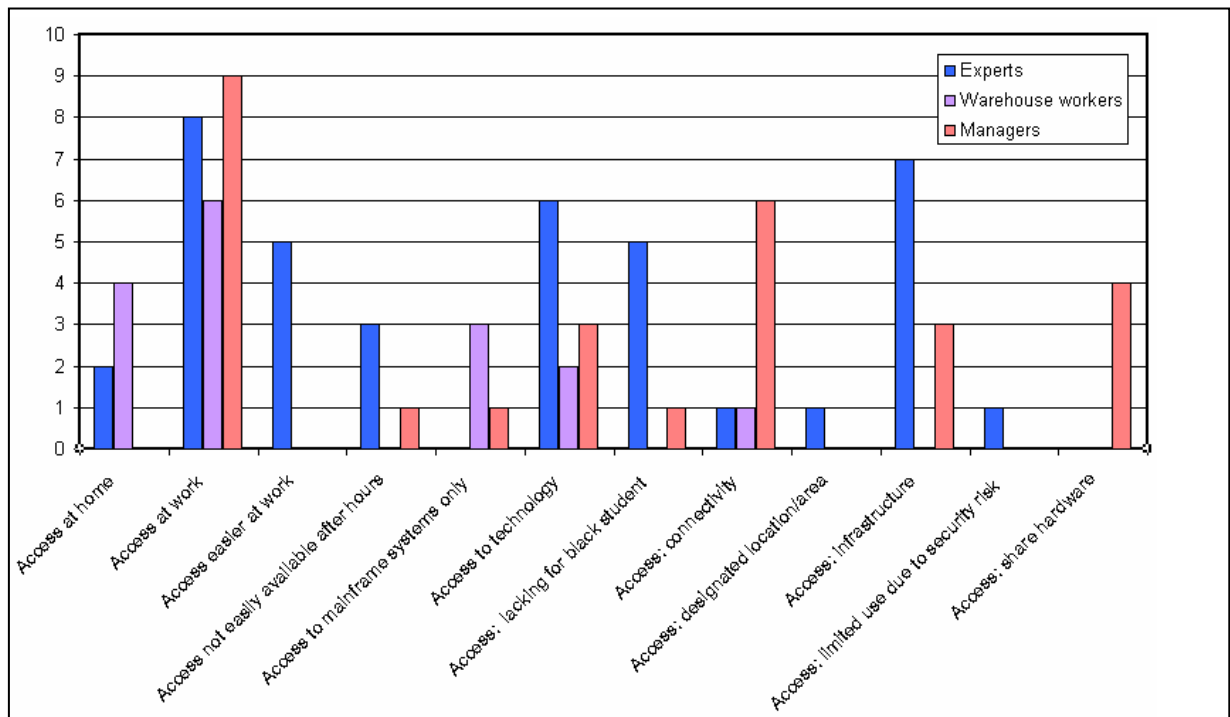

Figure 5.30   Computer technology access for warehouse workers

Figure 5.30 illustrates the types of access as it emerged from the data analysis. Among these are access and connectivity from home, at work, after hours, type of connectivity, shared access and

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[51] Mens maak die fout in 'n groot mate deur aan te neem dat almal toegang tot rekenaars het. Daar's baie - persentasie gewys seker 40 % mense wat nie toegang het tot rekenaars het nie.

limitations due to security risks.   The y-axis represents the frequency the dimension was identified from the data, while the x-axis represents the theoretical dimension of e-readiness.

The data analysis indicated that the warehouse workers were dependent on their workplace to get access to computer technology. The graph relating to access at work indicates the frequency of comments and participation from the participants. This access included access to networks, e-mail and the internet. Managers agreed that the connectivity and availability at work was the only access the warehouse workers could rely on. The warehouse workers have indicated that access from their homes were not always viable due to financial considerations.

5.6.2 Computer access at home

Information from the questionnaires revealed that very few workers had access to computers at home (Appendix 3.4). Most of the warehouse workers indicated in the questionnaires that they got access to computers at work. Few warehouse workers may have had the confidence and financial security to install and use computer technology at home, but most were dependent on the workplace to provide the exposure to technology.   The anxiety and lack of confidence was believed to emanate from the lack of access: *Now here, not everyone has a computer. That is why there is this fear of a computer* 3:79 (414:416).

The data analysis from the interviews suggested that few were connected to the internet. *I work on it. I do have it at home, but I never learned or worked on it at school. I know it practically* 2:98 (582:583). Only one of the participants I interviewed admitted to being connected to the internet from home: *Interesting, how do you use it? SM: Normally for e-mails and just for games. HM: Connected to the internet? SM: Ja, connected to the internet* 2:274 (1866:1869).

5.6.3 Computer access at work

Many SMEs regarded the workplace to be the only real opportunity where warehouse workers could get access to computers:

- *… workplace is for many warehouse workers the only viable option* 1:106 (564)

- *The workplace is the only solution. You also bring a message across that the workplace cares and gives an opportunity to develop your skills* 1:108 (568:570).

The workplace offers a lot more to the warehouse worker than he can financially afford on his own. As stated by the network manager:

- *Most companies have a network, and PC's. That's where you start. That's what you need, a network so that you can communicate with the server. You know our network here currently and the infrastructure is quite advanced* 3:227 (1453:1457)

- *Just about every machine in the company has internet access* 3:220 (1408:1409).

Information from the questionnaires, observations and interviews confirmed the access warehouse workers had at work. Appendix 3.4 includes the information regarding the warehouse workers' access to computers, e-mail and the internet.

The warehouse workers conceded that they have access to e-mail and some knew that internet access was available: I have but it is not working, but I have e-mail 2:234 (1579). With this response another problem emerged. The organisation may provide access, but the lack of knowledge and skills of the worker literally cancels out the privilege. This corresponds with the argument in 5.5.1.4 where the internet connection is there, but it's functionality never properly communicated to the users:

- *The connectivity in this case was to "dumb terminals" due to security risks foreseen by the organisation. As with most of the warehouse workers, she has access to a computer known as a "dumb terminal". This terminal gives them access to e-mail and the specified business procedures she works on* 2:404 (2738:2742)

- *They don't know, because the internet in the warehouse is actually their e-mail. It is web based. So when they open their e-mail, they're actually opening the internet browser, which to them - they think it is just e-mail* 2:223 (1421:1424).

I later queried these terminals during the interview with the network manager. He explained that these terminals were in fact capable of internet browsing and could be web enabled. They were known as dumb terminals because it did not have a normal operating system loaded, e.g. Windows®. To save costs, the terminals were loaded with the necessary applications like e-mail and the mainframe system. The network manager explained: *There's only two things that they got on those machines. It is e-mail, access to e-mail and access to the internet. And most of the latest stuff is web based* 3:221 (1411:1414). I prompted on internet connection for these terminals: *Absolutely, they can access it on the warehouse machines if they want to. It's just a matter of restrictions. But those PC's can access it. No, there's not much detail to be changed* 3:224 (1429:1431).

The organisation accepted the responsibility to use the company infrastructure to provide in the training needs of the warehouse workers. According to a manager: *As far as I know they only train here at work* 3:120 (640). She also confirmed that her staff does have the opportunity to use shared computers for their own purposes: *There are some computers in the department, where they can go to* 3:120 (693:694). She added that people have to share where computers are limited: *But then of course problems do arise with these extra courses that come along where people don't have access, you know. People need to share* 3:135 (755:757).

The shared computers however, do not solve this entirely: *It's a problem. Even now, when you manage the stock controllers, they're about four people in customer returns that work on a normal PC, but then there are about eight of them doing the scores, you know that still causes a problem* 3:136 (760:764). It was for this reason that internet café's were promoted in the organisation: *The warehouse groups do not always have easy access to computers, but we think in terms of "internet café's" for these workers* 1:148 (725:727). From the above I concluded that there are workers who do want to work and use the computers for their own training, but are limited due to the meagre availability of dedicated computers for learning purposes. Again it points to the need of a facilitated effort to make learning a viable option in the warehouse.

Workers have access to computers at the workplace. They either share computers or work on terminals with limited access. Internet connectivity is not promoted, but it seems that it is available. One gets the impression that the basic infrastructure is in place. This made me curious on the viability of e-learning within the current infrastructure of the organisation. I posed the question to the network manager in charge of IHD's networks. *Absolutely, they can access it on the warehouse machines if they want to. It's just a matter of restrictions. But those PC's can access it. No, its not much detail to be changed* 3:224 (1430:1432).

Warehouse workers were not in a financial position to procure the necessary access and infrastructure themselves and therefore relied on the workplace to grant them the opportunity to get access, get connected, gain experience and grow as both a learner and a worker. The workplace becomes a critical environment for the development of the warehouse worker, and to assist them to bridge the digital gap. The access available to the warehouse workers contributes to their e-readiness in a meaningful way. Logistics and technical aspects like sharing computers, and limited access points seem to constrain the connectivity somewhat.

5.6.4 Access to technology as a motivator

Access to the infrastructure and the availability of computers, internet, e-mail can be one of the most powerful extrinsic motivators:

- *I found that warehouse workers with very limited skilsl enjoyed the challenge and wanted to improve their PC skills. Motivation wasn't really an issue* 1:301 (1836:1838)

- *If an IT illiterate learner gets the opportunity to learn and work on the PC, they are often more motivated than others who have the necessary skills. They see it as a way to close the skills and knowledge gap* 1:302 (1839:1841)

- *Most warehouse workers are motivated since the computer is a medium they like to work on.*1:322 (1963:1964)

- *Yes, I like working on computers - a lot!* 2:297 (2077:2079).

SMEs and warehouse workers agreed that the access and use of computers are strong motivators to inspire learning with technology. Figure 5.31 illustrates the relations that the access warehouse workers have to technology and how this access relates to their motivation, regular use of computers, frustrations and the viability to be involved in e-learning.
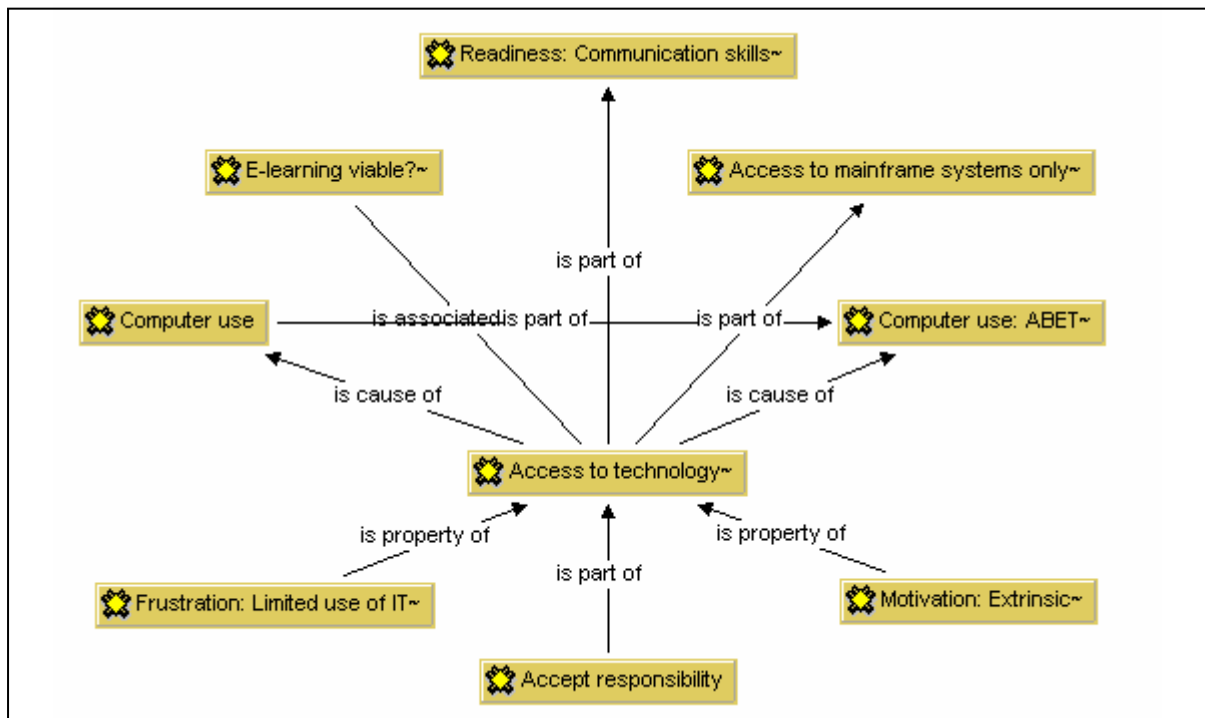
Figure 5.31   **Access to technology contributes to e-readiness of warehouse workers**

Access to computers is also regarded to be critically important for motivation: *This already is a powerful motivation for the learner. The real barrier is accessibility* 1:520 (3218:3219). From the above it can be concluded that access to computer technology opens a wide range of opportunities for warehouse workers. Where it started with mainframe access and then expanding to basic education programmes, it has the potential to lay a foundation to launch planned careers by means of regular computer use, and by generating necessary e-learning skills.

5.6.5 Conclusion about theory code access contributing to the e-readiness of warehouse workers

To conclude the e-readiness with regard to access I found that the infrastructure and connectivity for the warehouse workers were well established, and may serve as a valid platform to implement e-learning. It appeared that a concerted effort to guide and direct warehouse workers to use the available access was lacking and the communication to the workers influenced the potential uses of the computer technology. It appeared that the organisation played an important role to make the workers ready for e-learning.

The following additional and new conceptual codes of e-readiness relating to access and connectivity to technology have emerged after following a grounded theory approach. The warehouse workers' access to computer technology has:

- increased warehouse workers' *encounters with IT*
- improved the warehouse workers *skills and abilities* to take responsibility
- motivated warehouse workers' freedom to *use computer* technology
- improved warehouse workers' *computer literacy*
- opened *relevant* learning opportunities for the warehouse workers

- enhanced the *viability of e-learning*
- influenced their *preferences and styles of learning*
- supported the *organisation culture* to develop its staffs interaction with technology.

Table 5.11 indicates the conceptual codes that emerged to be the prominent elements in the interviews and from observations of the access and connectivity warehouse workers have with computers. The theory code access to computer technology, impacts the warehouse workers in the following conceptual codes of e-readiness.

Table 5.11   Theory code "access to technology" relating to conceptual codes

	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Encounters with IT	Facilitator	Financial aspects	Guidance & Support	Knowledge of e-learning	Learner Frustrations	Learning plan	Learning Preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
	Conceptual codes of e-readiness																			
Access	x				x	x	x							x		x	x	x		x

As far as the e-readiness of warehouse workers was concerned with regard to connectivity and access to computer technology, the following outcomes support the conceptual codes in Table 5.11 above.

The workers have access to:

- computer technology during the entire working day
- network connection all the time at work
- e-mail communication
- internet connection.
- intranet network to obtain information about and from the organisation
- a hi-tech environment where technology supports all business procedures
- mainframe systems to perform business tasks.

Few warehouse workers indicated that they:

- have computers at home
- have internet access at home
- do not know how the internet is browsed
- do not know what type of connectivity they have available
- are motivated to work with the computers
- do not get enough opportunity to browse the net, and
- do not have the financial strength to provide their own connectivity.

The data indicated that warehouse workers are moved to become e-ready when:

- computers are available to work on
- access and connectivity to the internet and e-mail facilities is available
- they believe they close the digital gap with the technology
- they believe they prepare for a better future
- learning paths are made available and regularly communicated
- focus and purpose is provided with guidance and support
- structured guidance is provided for inexperienced users
- knowledgeable advice and support is made available
- facilitators empower them to develop self learning skills
- they are challenged by relevant learning objectives, and
- irrelevant learning interventions can be eliminated.

5.7 Contributions and constraints of the organisation's culture (Sub-question 6)

What business cultural habits influence the e-readiness of warehouse workers?

The contributions of the organisation are critical for the e-readiness of warehouse workers. This question explores the habits of mind of the business culture of the warehouse workers (Reeves, 1999) and how this affects their e-readiness.

The previous section suggested that the organisation can play a major role to develop and establish the e-readiness of its employees by providing the needed access to computer technology. Access to the infrastructure and awareness of and using the technology are two contributors that have the potential to transform the warehouse workers to self-driven e-learners. Contributions from the organisation can be provided in the form of financial support, managerial guidance to ensure that training and development is driven by achievable learning plans. These aspects may motivate the warehouse workers to get involved and take control of their careers.

The warehouse workers are dependent on the organisation to provide in their needs to learn and to expand their horizons. Most organisations will only accept such an approach if the company will benefit financially. *From a business point of view, I regard the value of e-learning as a cost-saving strategy. Not from a trainer's point of view but from business* 1:553 (3395:3397). This will require informed leadership and a good understanding of the people within such an organisation. *Management often does not understand the cost saving element of e-learning. They do not know that it can benefit them financially to make the workers learn in the workplace*[52] 1:451 (2884:2888).   The culture of the organisation often determines the way it deals with the training and development of their employees (Jones, 1996).

Organisations today are global participants with a fair element of different cultures to deal with. The leaders in such an organisation need to deal with the diversity among the staff, while the employees have to conform to the rhythm of the organisation. This last question interprets the culture of the organisation to explore whether the warehouse workers find themselves in an environment that is conducive to e-learning or not.

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[52] Bestuur verstaan ook nie altyd die koste-besparings element nie. Hulle besef nie altyd dis meer koste-effektief om die ou in sy werksplek te laat leer nie
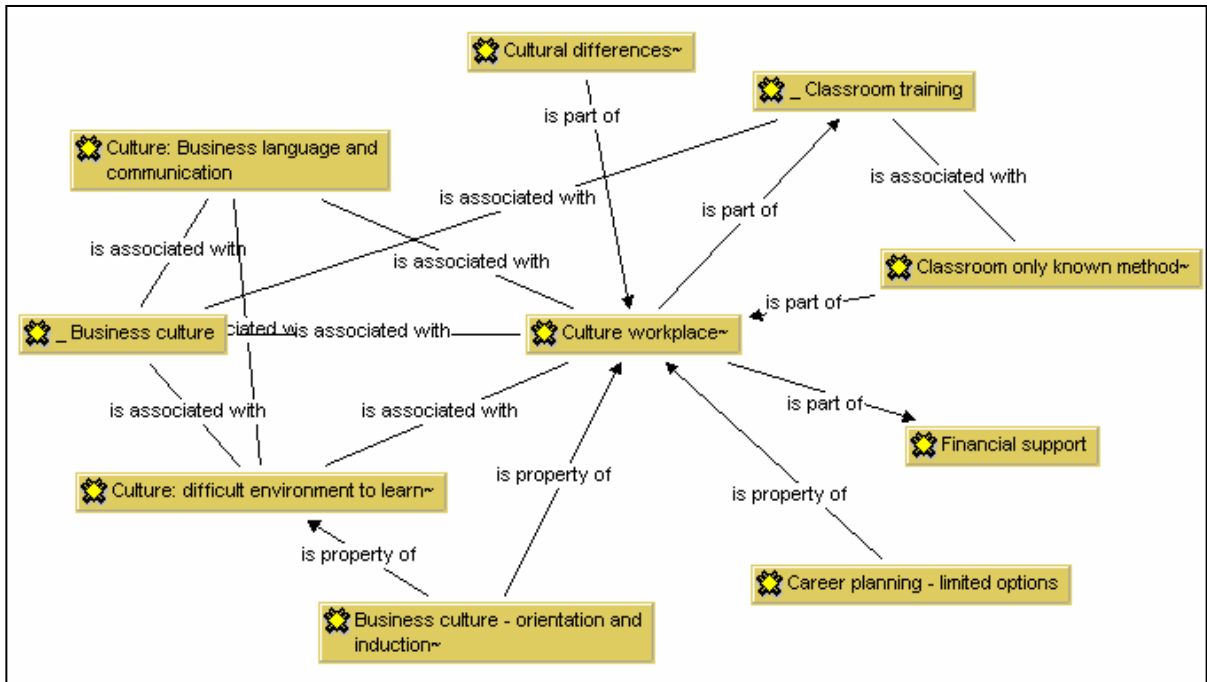
Figure 5.32   Organisation culture effecting the e-readiness of warehouse workers

Figure 5.32 indicates aspects of the business culture that relates to the e-readiness of the warehouse workers. The illustration focuses on the workplace culture in support of the business culture. From the data analysis it has emerged that the e-maturity of the warehouse worker's workplace culture is founded on:

- cultural difference and diversity
- the business language and communication
- support and guidance available to warehouse workers
- learning plans being defined
- financial support and time available for training
- environment might create difficulties for learning
- classroom training being preferred, and
- options available for expanding careers.

The above aspects relating to business culture emerged from the interviews with and observations of SMEs, warehouse workers and managers. Some aspects directly influence the e-readiness of the warehouse workers while others, e.g financial assistance and budgeting, affect the warehouse workers indirectly. These aspects are discussed in the following sections in the manner they may contribute or constrain the e-readiness of the warehouse workers.

5.7.1   Cultural differences and diversity

Thomas and Inkson (2004) described the culturally intelligent manager to have knowledge of the diversity, practice mindfulness and develop behavioral skills to deal with a cultural diverse group. The biographical information in Appendix 3.4 confirms that the warehouse workers represent all the racial groups in South Africa - black, coloured, Asian and white workers from all the regions in SA. Ethnicity adds to the diversity: black workers are Xhosa, Zulu, Ndebele, Venda, Sotho etc, while white people are from English and Afrikaans communities. These are one of the reasons SA prides itself as

the Rainbow Nation. It can then be understood that "mindfulness" is needed to accommodate all the different cultures within the Republic of South Africa (Thomas & Inkson, 2004).

SMEs viewed the sensitivity to cultural diversity to be importance to achieve success:

- *They are of all races, and it's highly sophisticated work. And they cope. You obviously need to be sensitive to religious days and make sure that you recognize these for all groups* 1:131 (660:663)

- *Sometimes warehouse workers use English as even their fifth language, and have difficulty in understanding the commands. It certainly helps then to get one of their own to come and explain to them what needs to be done* 1:171 (805:809)

- *Within businesses, that specific culture can have a huge influence to make e-learning work or not* 1:330 (1998:1999).

The above comments confirm the view held by Thomas and Inkson (2004) that particular care should be taken to accommodate the habits and beliefs of the various workers in the working environment.

The managers were of the same opinion: *I can't say much with regard to e-learning, but in any learning, it works better if you understand the culture, or if you can manage the cultural diversity* 3:81 (429:430). They issued a warning that facilitators should be aware of diversity. *…people do things different. Some people they do things by doing, others by listening. The facilitation skills, when you facilitate, you've got to accommodate this* 3:97 (507:509).   A warehouse manager suggested that one should take a submissive approach when dealing with cultural diversity: *I've got my own culture. When I deal with people, I try to put my own culture backward. Personally I speak several languages of South Africa, but I'm not fluent with all of them* 3:210 (1309:1313).

Quotes from the warehouse workers confirm their diversity, not only from their cultural backgrounds but also in their preferences as learners:

- *… you see I am a kind of person who likes religion and church and I do it on my own.* [sic] *I discover that I am more successful when I do it on my own* 2:302 (2126:2130)

- *It won't be a problem. It will be a big opportunity for me and I will grab it because in a class it is no use for me to sit in a class* 2:304 (2147:2149).

The warehouse workers are a diverse community and have indicated that special care should be taken to accommodate their cultural needs as well as their training and learning preferences. The responsibility of the organisation to provide in these needs is complex and has to be considered when e-learning is planned. The culture of the working environment should be recognized by all who participate in it so that the different values and needs are taken into account at all times.

Sensitivity is required to ensure that differences between people and their learning preferences are considered. One of the SMEs made interesting comments:

- *The experience I had was very positive. One very good aspect I experienced with e-learning, is that with e-learning, the trainer/facilitator is not white or black* 1:541 (3326:3329)

- *e-Learning effectively removes any racial issues that may arise from personal prejudices* 1:542 (3329:3330)

- *If the instructional designers succeeds in presenting the content in a "political correct" manner, it can be a very positive learning experience. Unfortunately, in the perspective of South Africa's historical background, white facilitators are not always readily accepted by black learners, and vice versa. E-learning removes this important aspect totally. This already makes e-learning for me a must* 1:543 (3331:3338).

From these comments, the importance to be aware of cultural diversity is emphasized, as illustrated in Figure 5.33..
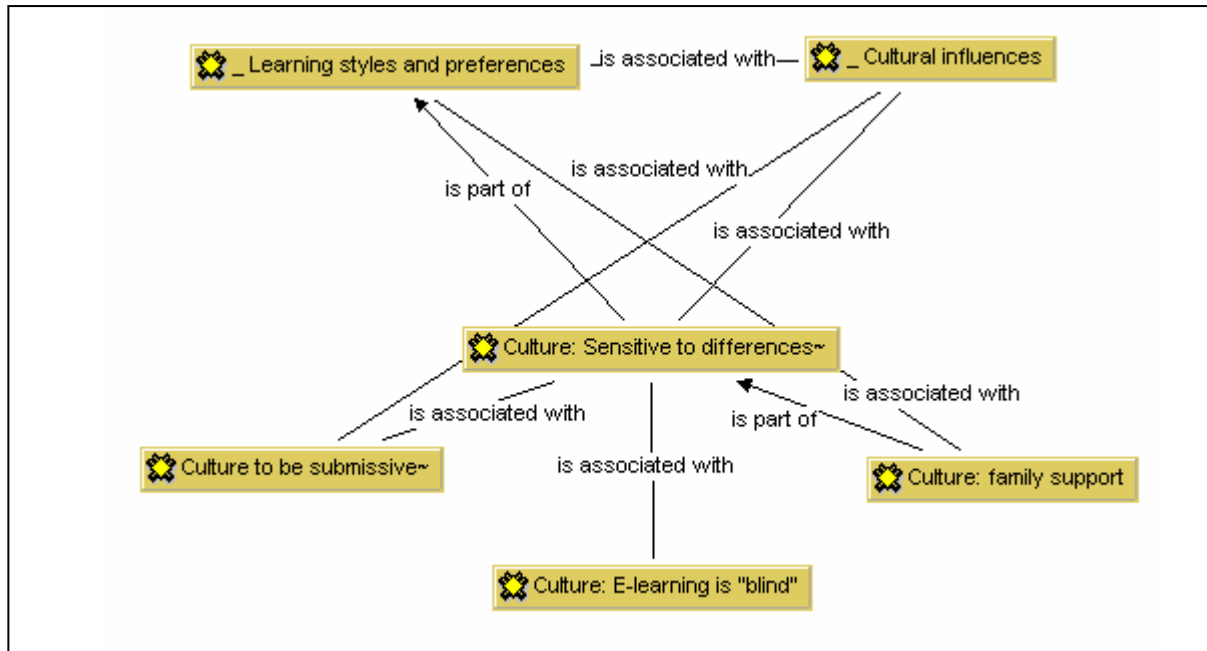
Figure 5.33   Dealing with cultural diversity at the workplace

Managers have indicated an awareness of the cultural diversity: *There are times where you don't have to be concerned about culture and diversity. But there are cases where it's either white or either black* 3:85 (445:448). Others reported that they have not experienced any culture related problems so far: *No problems that I can say that are due to cultural conflict, and also all of my staff comes from the same cultural background, so that minimizes the problem* 3:133 (741:744). A comment emphasised the importance of cultural recognition: *Companies need to make their profits, but not at the expense of its employees or at the expense of development* 3:104 (546:548). A last view from a manager:

> *Culture can dictate something from my work, I need to play by the rules. I need to respect your culture* 3:91 (486:488).

To conclude this section, the warehouse workers have indicated that they are from different cultural backgrounds and that the business culture is directly influenced by the way it has to take care of the needs of its employees. IHD as a workplace seems to be aware and intent on keeping on track with cultural diversity and making sure that workers are aware of different cultures. The participants were representative of all the race groups indicated in Appendix 3.4. This sensitivity was understandable in the wake of South Africa's history of racial prejudice. Employees, especially managers are well aware of the demand racial harmony has in modern SA businesses. When e-readiness is evaluated, it seems that cultural awareness may be one of the strong points of the warehouse workers.

5.7.2 Business language and communication

SMEs warned against language assumptions when planning e-learning. Not all warehouse workers are proficient in the English vernacular when they are required to communicate with one another. But organisations have come a long way to establish English as the communication language. Meetings are held in English, e-mail messages are typed in English, and even casual communication occurs in English when several employees converse with one another. This regulation has been accepted in general to be mindful of the cultural diversity. But it is still the second or even third language of many workers. All are not fluent in this language. SMEs related incidents of learning interventions where the communication language caused problems: *They sorted it out and decided on their own to communicate only in English*[53] 1:68 (313:314).

Most of the communication and online instructions used in the questionnaires, interviews and observations were conducted in the preferred language of the respondent. Most were done in English. The only intervention where I experienced communication anxiety were during the online instructions to the two inexperienced participants in the tutorial experiment. (Refer § 3.1). Instructions on the mainframe systems and ABET classes were all written in English, and e-mails relating to the business are all communicated in English: The responses during some of the observations and interviews confirmed that they had no problems with the instructions:

- *He told me that the information does make sense "in the way that it tells me the purpose of EBMS"* 2:364 (2576:2577)

- *He completed his brief and simple version of the basic diagram displayed on the screen* 2:378 (2635:2637)

- *… briefly reads the screen, turns around to another shelf. He understood from the displayed information on the screen that there are more articles to be picked* 2:458 (3053:3056).

One of the warehouse managers viewed that freedom of expression should be allowed to enable workers to speak in their preferred way: *Though it may not be good, but they feel more free when they express themselves in the language of their choice* 3:211 (1314:1316).

The warehouse workers were able to do their mainframe system requirements, get involved and complete their assignments on ABET, conversed in English during the interviews, and read and sent e-mails as best as they could within their own knowledge limitations. These experiences gave evidence of their e-readiness to communicate in English as is required from the business.

5.7.3 Support and guidance available to warehouse workers

The organisation is the provider of the finances for all training, career development, expenses, time for training, guidance and support and access to technology. Figure 5.34 illustrates the guidance that organisations may provide to promote e-readiness within the workplace.

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[53] Toe later het hulle self uitgewerk met mekaar, dat as hulle akademies met mekaar kommunikeer, is dit in Engels
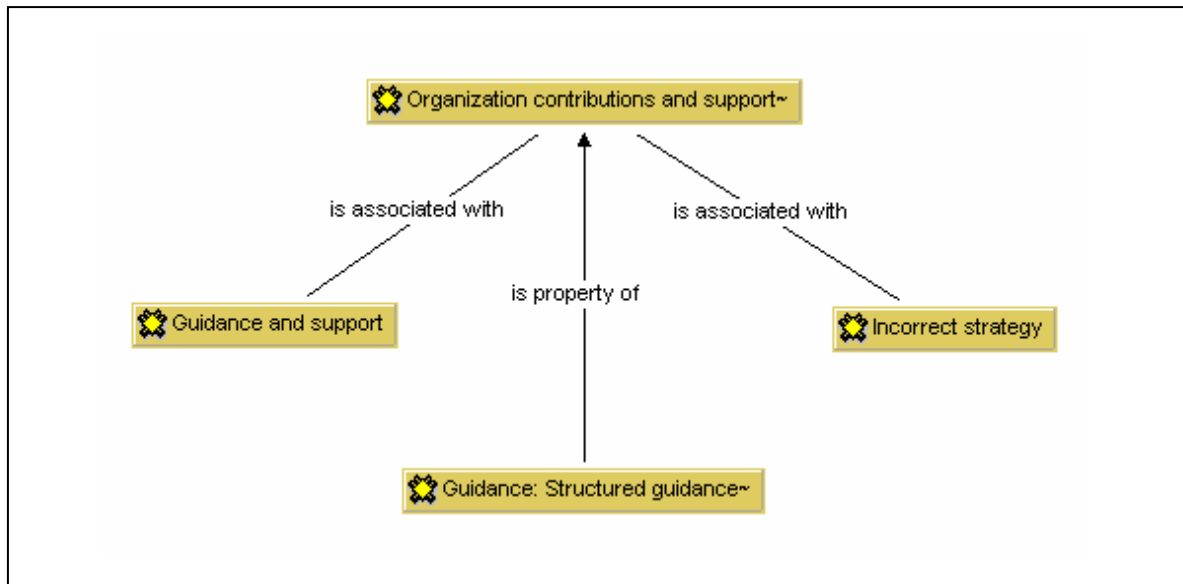
Figure 5.34   Organisation guidance and support to establish e-readiness

SMEs frequently expressed their views on the support and guidance that the organisation should provide to ensure that the workers establish a learning culture:

- *Not only within the company, but also regarding SAQA's requirements. They start looking at an individual's development as a whole, over a specified period* 1:167 (796:799)

- *The workplace is for many learners the only viable option. If they go home they return to a shack without electricity. That is the reality. It doesn't even help to tell them that they can go to internet café's. It's not that readily available* 1:107 (564:568)

- *That's why line management should be directly involved in this initiative. The worker should get guidance and leadership from his manager how to address a specific issue.* 1:129 (648:651).

The SMEs agreed that organisations do provide in many of the technological requirements of the warehouse workers: *Today they can work on the computer, send and receive e-mail, schedule meetings and refreshment programs* 1:177 (838:840).

The organisation often orientates new employees with an induction programme as a basic guideline to fit into the new company. SMEs believe such a support programme should be in place for the training of warehouse workers: *The learner has to be coached, and guided how to use all the programs and learning material. They need to practice under supervision…*[54] 1:444 (2826:2830). Some of the SMEs advocate structured guidance: *Therefore we need to present them with a bridging programme, to learn the needed skills* 1:96 (510:511).

The question is then whether such guidance exists within this business culture: From the responses by the warehouse workers I concluded that assistance and guidance do exist, but maybe not in the format the SMEs suggested: *He explained and everybody did well. One guy was off sick, did the assessment*

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[54] Die leerders moet ge-"coach" word. Met die hand gelei word oor hoekom dit belangrik is, en fisies te wys hoe al die materiaal en programme hanteer moet word. Hy moet onder toesig kan oefen.

and still passed . He started one day after us[55] 2:155 (992:995) From these comments I found that guidance and assistance happens within the organisation, warehouse workers are being assisted, but that the assistance may need to be adapted to conform to e-learning requirements.

The type of guidance and assistance warehouse workers receive, may be directly related to the knowledge of managers and facilitators with regard to e-learning. Figure 5.35 indicates the importance of facilitator or manager knowledge in order to present relevant guidance. Facilitator knowledge of e-learning may indirectly influence the readiness of the warehouse worker to be e-ready.
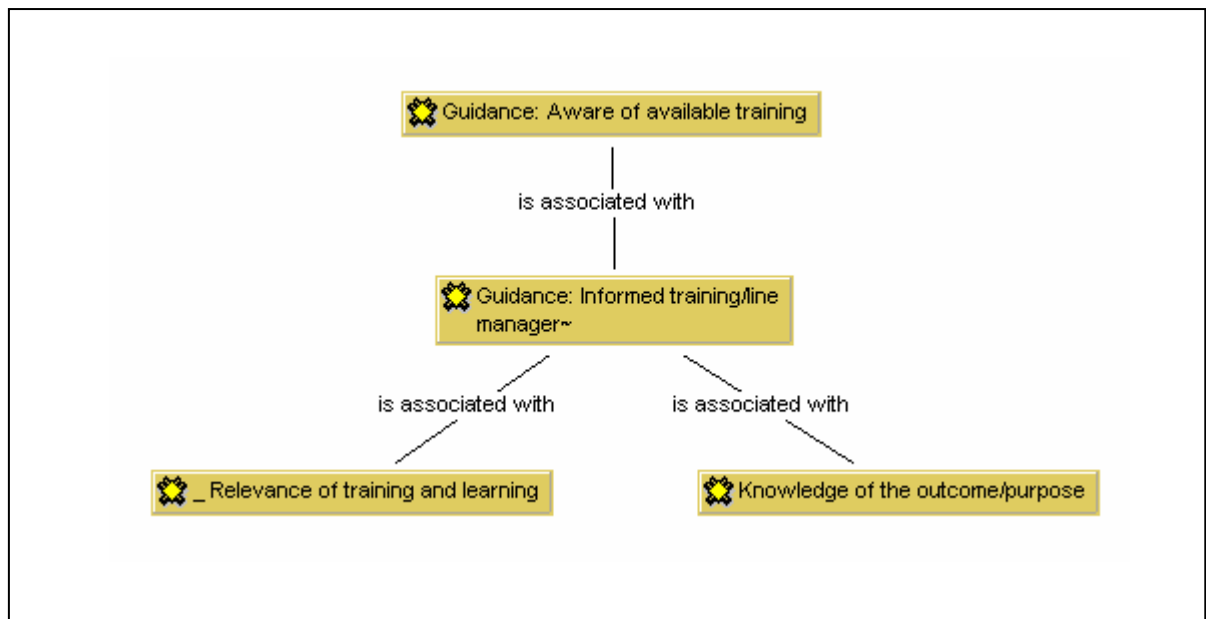

Figure 5.35   Importance of knowledge by facilitator or training manager

In response to this knowledge, it has emerged that the HR training manager does not know much about e-learning:

> *But, I don't know really. I don't know how you drive it, I don't know much about e-earning, I must be honest. I don't know how you actually encourage the people to go in that direction. I don't know much about it* 3:75 (397:400).

SME's regard it to be critical that facilitators have a good grasp of e-learning to ensure successful implementation and to influence the e-readiness of the warehouse workers positively: *Critical. It's critical. It should not be forced, but the management should support the e-learning initiative, and only then would it be received by the workers*[56] 1:425 (2734:2736)

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[55] Hy het dit verduidelik en ons gehelp, almal het goed gedoen. Daar is een persoon wat een dag siek was en steeds die eksamen gedoen het, en goed gedoen. Hy't 'n dag na ons begin.
[56] Krities. Dis krities. Mens moet dit nie afdwing nie,maar die bestuur moet die e-learning inisiatief ondersteun,en so moet dit afwentel na die werkers toe

5.7.4 Importance of a relevant learning plan

The organisation is also responsible for the development of its staff. SMEs regarded individual development plans (IDP) to be very important to motivate workers for e-learning:

- *the personal development plan, initiated by the line manager is crucial. They need to know what is the next rung in the ladder - where are they going to?* 1:209 (989:991)

- *I also see that this progress must be reflected back to the development plan. So that the strong and weaker elements of the learner can be identified.   Their managers need to ensure that they are competent, and stay that way* 1:126 (637:641).

The organisation finds itself to be in the position to give direction and focus in the form aof a learning plan. This is expected from the SMEs, managers and the workers themselves: Warehouse workers were not sure on their learning plans when queried:

> *Satisfied? No, I'm not satisfied! Because last time I remember I asked J* [supervisor] *that why can't they allow us to go and do something else like picking or maybe work at the fridge. I mean to be a manifester for a long time, I don't think it's OK. Sometimes you must go and work in bulk, so we can know all the workings* 2:162 (1052:1057).

Others again had a better idea where they wanted to go: *That's why I told myself I'm going to stay here. I want to invest first of all my life in this company because I want to work in an environment like this* 2:314 (2241:2243). Some workers knew what was expected of them to develop, while there were a number that did not have any clear indications of a career plan or IDP in the organisation. They believe that the organisation should provide them this opportunity to develop.

Ironically, one of the managers commented: *training was planned for them, not with them. And here, so even here, why it has been on and off, because people are still dragging their feet* 3:11 (49:52). I could not establish who the "they" were, but assumed he referred to the training department. From the quotes received during interviews and observations it appeared as if the business culture was negligent with regard to the determination of employees' learning plans. This reflects negatively on the guidance and direction given to the warehouse workers from their management and training departments' point of view. The reasons for this apparent lack of focus are not clear, and were not the focus of this study. What may be more relevant, is the fact that the warehouse workers are dependent on the organisation to give direction by means of learning plans.
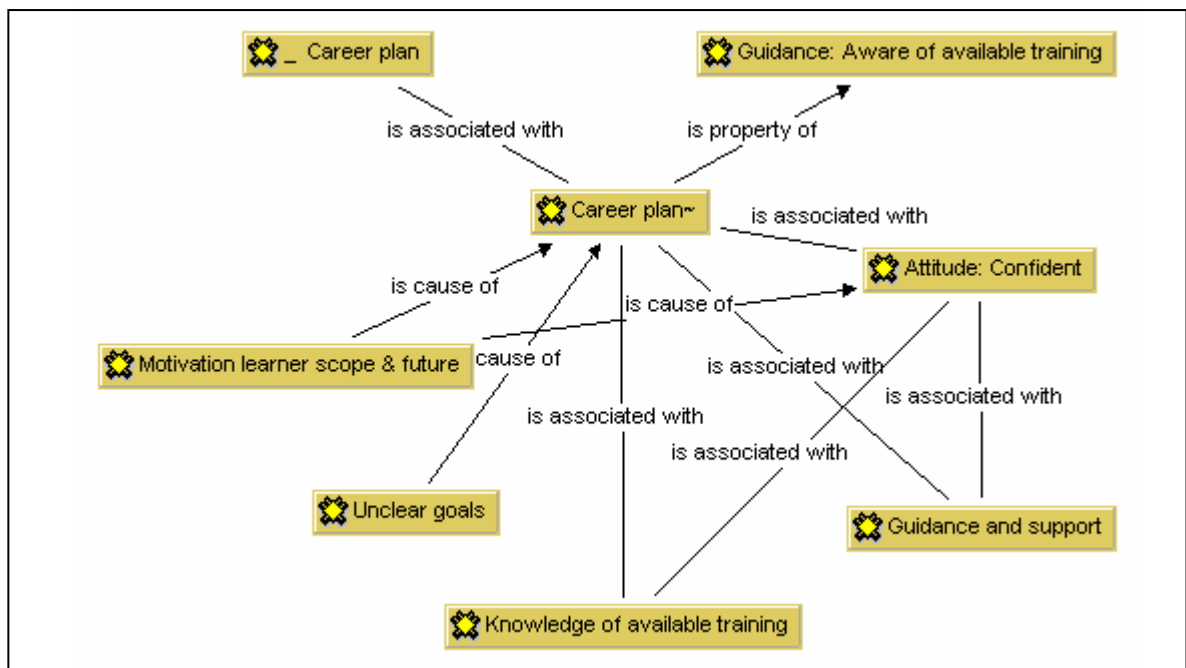
Figure 5.36   Knowledge of training leads to relevant training and career plans

Figure 5.36 indicates the value of knowledge of available training.   The data analysis has indicated that workers are motivated with knowledgeable guidance and support because it contributes to an achievable learning plan.

The previous section has indicated that the warehouse workers have access to computer technology, but find themselves in a culture where one department waits upon the next to take the initiative with regard to workers' learning plans.   I found it rather sad that a manager commented: *training was planned for them, not with them* 3:11 (49:50). These comments, together with the HR manager's acknowledgement that he did not know what e-learning was, suggested that no clear direction was presented to ensure focused learning plans. The workers are the ones that may suffer as a result of this lack of guidance.

5.7.5 Financial support and time for training

Organisations in South Africa are implored by the government to conduct learnership programmes to develop their employees' skills and to create a continuous culture of learning. SMEs emphasized the value of learnerships and that organisations may benefit financially in a big way: *The SETAs give them money for development. The organisation benefits a lot from this strategy …*[57] 1:374 (2374:2384). Organisations are motivated to train their employees by submitting annual proof (See Skills Levy Act § 2.4.1) of the number of employees that has been trained. One can therefore accept that a learning culture does exist in most South African organisations.

Money is available to employees for training, but strict conditions apply:

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[57]   Dit is waar die SETA vir jou geld gee om te ontwikkel. …Die maatskappy wen baie hierdeur.

- *… this time it is… much easier because they provide a study* loan 2:114 (702:703)

- *If you want to learn you must get a loan and when you pass they pay back a portion of the cost.* So this policy again, does not encourage people to learn 3:39 (202:204).

The organisation supports the culture of learning but strict policies regarding loans make it inaccessible to the warehouse workers. Most will not have a credit record to get loans or have the funding to repay the company: *Most of the guys that we talk about are blacklisted for that matter. They can't access loans. They don't have credit cards. So, our policies don't encourage what we're trying to preach. Do you understand what I'm saying?* 3:41 (204:209).

It seems then that the funding to train the workers through company funding is also not clear:

> *If you notice, when I put together what I get from departments when I do budget, finance, business, I don't get any training requirements for the warehouse people. I know you do a lot when it comes to on the job training. But, in terms of budget, nothing is budgeted for. Other than ABET, I don't have anything!* 3:101 (526:531).

From the above, it seems as if the warehouse workers are subjected to the way managers organise and plan for training. The financial support that is needed to ensure the e-readiness of warehouse workers seem to be lacking. This lack of budgeting and planning may be a direct implication of the HR training manager's and line manager's lack of knowledge with regard to e-learning.

The general impression one gets when the financial support is explored, is that a learning culture is not promoted. On the contrary, the allocated time the organisation sets aside for training seems to be a strong indicator that the organisation is serious in creating a learning culture:

- *But for the warehouse people you're right I would say six hours, but again that is flexible, because I spoke to David and he gave me an extra two hours* 3:5 (28:31)

- *The way it works in the entire warehouse is that two hours are set aside every morning from Tuesday, Wednesday and Thursdays for training* 3:138 (769:771).

From these comments it appears that time for training should not be a problem for the warehouse workers. Six hours per week is more than what most companies allow for training. SMEs mentioned that at some places only one hour per week is provided: *seek and participate in learning activities at least one hour per week thus taking responsibility for your own growth* 1:21 (80:82).

Regardless of the time that is available, the fact that the workers work shifts also affects their available time and the way they should be allowed to manage the time for training: *… for our workers this is always a problem, because they work shifts. Now we've got a problem, they need extra studying time in working hours* 1:233 (1123:1126). Figure 5.37 summarizes the effects of time that may play a role tin the e-readiness of the warehouse workers.
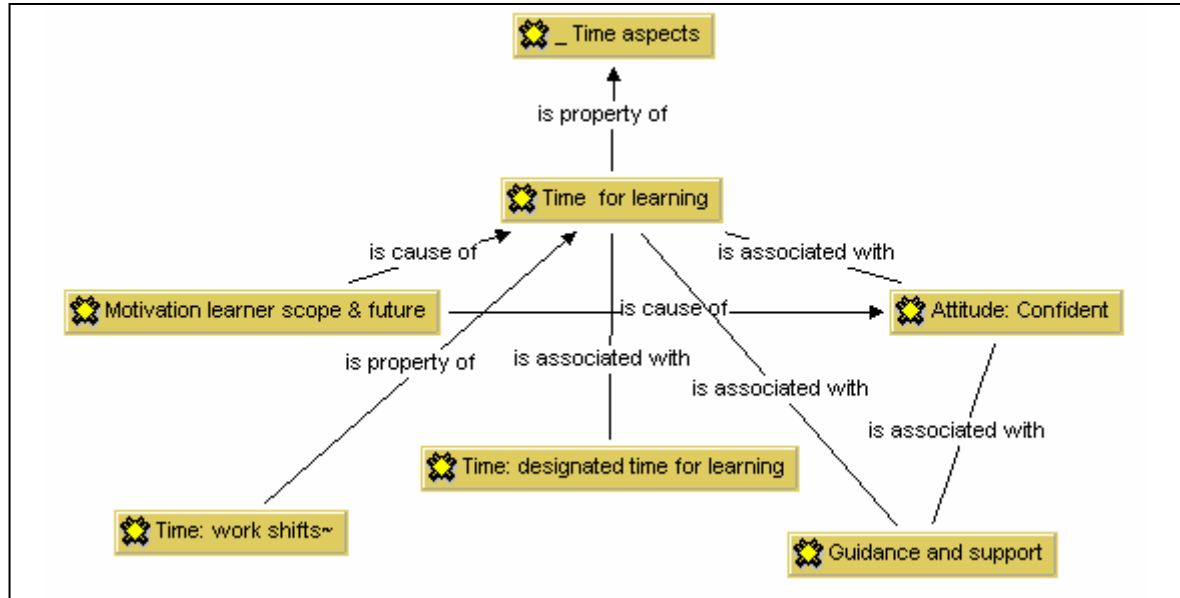
Figure 5.37   **Allocated time for training related to the e-readiness of warehouse workers**

The following comment from a worker is an indicator of the confusion shift workers sometimes have with classroom facilitated training:

> *My time is not enough, I can only use maybe two hours* [or] *only one hour and sometimes the guy starts training at ten, sometimes he starts at eleven. Sometimes it starts at seven, and sometimes I'm doing night shift, you know. You know our shifts are not cross bonding - sometimes I can stay a week without the training! It makes me go back,* [lose work] *because after about two or three weeks then I'm gonna start* [all over] *again* 2:194 (1282:1291*).*

IHD as an organisation does provide financial support and time for staff development. More than six hours are made available for training, which suggests that if a knowledgeable plan can be generated for e-learning, the warehouse workers may find themselves to be in an e-mature environment.

5.7.6 Conclusion about organisation culture contributing to the e-readiness of warehouse workers

This section has explored the e-maturity of the organisation and the way it contributes to or constrains the e-readiness of the warehouse workers. The following conceptual theories have emerged from an inductive analysis of the data with regard to the contributions and organisation makes to the e-readiness of warehouse workers. From the data I concluded that the warehouse workers' e-readiness was:

- positively affected by the *encounters with computer technology* provided by the organisation
- influenced by the regular *use of computer* technology
- encouraged by the *organisation culture* to grant computer access
- affected by the *viability of e-learning* due to network connectivity
- influenced by the *guidance and support* provided by the facilitator
- positively influenced by the accrued *computer literacy*
- affected by the *financial support* available for learning and training, and
- promoted by the organisation's *allocated time* for training.

Table 5.12 indicates the conceptual codes of e-readiness that emerged to be the most prominent in support of the organisation culture. The theory code organisation culture, influenced the warehouse workers in the following conceptual codes of e-readiness.

Table 5.12   Theory code "organisation culture" relating to conceptual codes

	Conceptual codes of e-readiness																			
	Access	Anxiety	Attitude	Classroom training	Computer literacy	Computer use	Encounters with IT	Facilitator	Financial aspects	Guidance & support	Knowledge of e-learning	Learner frustrations	Learning plan	Learning preferences	Managerial contributions	Organisation culture	Relevance	Skills and abilities	Time constraints	Viability of e-learning
Organisation					x	x	x		x	x	x					x			x	x

These listed conceptual codes are supported by the data that has emerged during the interviews with SMEs, warehouse workers and managers, and observations of warehouse workers. The data analysis found that warehouse workers:

- hail from diverse cultures in South Africa
- are aware of the cultural diversity of the warehouse workforce
- sometimes subject own cultural habits to accommodate the business cultures
- accept English as the business language and use it for communication within the organisation
- receive limited guidance and assistance with regard to learning plans
- need clarity on the learning plans from their management
- receive financial support but with strict conditions
- have available time for training during work hours, and
- are subjected to the lack of e-learning knowledge from managers

The warehouse workers e-readiness are negatively influenced by the organisations'

- lack of guidance regarding e-learning
- lack of senior staff's knowledge regarding e-learning
- limited or unclear objectives for training
- limited budget for training.

5.8 Conclusion Chapter 5

Chapter five presented an analysis of the data collected from the interviews with SMEs, warehouse workers and several managers and the observations of the warehouse workers. Data was discussed in terms of the six sub-questions defined in chapter four. The main aspects that was addressed in the analysis were technical and affective experience with technology, the aptitudes warehouse workers may have accrued due to this experience and how it affected their e-readiness. It also explored the origins of motivation as it is affected by the presence and use of technology, whether the access to technology was significant to affect their e-readiness and lastly how the warehouse workers' e-readiness was affected by the contributions of the organisation.

Chapter six presents a synopsis of the findings and conclude with a final summary of findings with regard to the e-readiness of the warehouse workers.