Chapter 4: Making sense of the research evidence

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4.1. Introduction

> *Data analysis in qualitative research is an ongoing, emerging and iterative or non-linear process*
> (Henning, 2004:127).

The purpose of this study is to **identify the leverage point** that will support the **improvement of business performance** through **eLearning**. This chapter reports on the implementation of the research design described in Chapter 3.

The focus groups generated the data and the researcher integrated the data with comments from verifiers. Throughout the sense-making and reporting process, the influence of the focus group participants on the process is reflected on. At the conclusion of the research process, the opinions of the focus group participants regarding the process are reported on.

The golden thread guiding the data collection process was the research question and subsidiary questions.

4.2. The research question and the research process

To achieve the purpose of the study, the main research question posed is:

What are the leverage point/s that will improve business performance through eLearning?

Four **research objectives** were identified to answer the research question:

1. To identify the **driver problem** that prevents eLearning from improving business performance.
2. To design the **systems dynamic model** that represents the driver problem.
3. To identify the **leverage point** within the systems dynamic model.
4. To reflect on the **effect** that the **behaviour** of the individuals, participating in the research process, has on the research inquiry.

The **four research objectives** were answered leading from the identification of the driver problem to the identification of the leverage point. The influence of the individuals on the process, and visa versa, was also noted through **observation**. **Interviews, focus groups** and a **survey** were also used as data collection methods. The focus group participants and their colleagues generated the data. Verifiers and post focus group discussions with the observers and the moderator created an audit trial. The **subsidiary research questions** and associated data collection instruments are summarised in Table 4.1.

Table 4.1: Subsidiary questions, data collection methods, instruments and data sources

Data collection method	Interview			Focus Group Interview		Survey	
Data collection instrument / Subsidiary questions	Interview sheet	Post focus group discussion	Verification with experts	Systemic inquiry process	Observation report	Biographical questionnaire (1)	Post focus group questionnaire (2)
1. [1]What are the problems related to improving business performance?	Colleagues of focus group participants		Verifiers	Focus group participants	Observation of focus group participants		
2. How can the problems be grouped together as themes?			Verifiers	Focus group participants	Observation of focus group participants		
3. How does each of the themes influence one another?			Verifiers	Focus group participants	Observation of focus group participants		
4. What is the driver problem?			Verifiers	Focus group participants	Observation of focus group participants		
1. What is the system in focus?			Verifiers	Focus group participants	Observation of focus group participants		
2. Who are the main stakeholders of the system in focus?			Verifiers	Focus group participants	Observation of focus group participants		
3. What are the measures of performance?			Verifiers	Focus group participants	Observation of focus group participants		
4. What are the co-producers for each of the measures of performance?			Verifiers	Focus group participants	Observation of focus group participants		
5. How can the elements of the system in focus be represented systemically?			Verifiers	Focus group participants	Observation of focus group participants		
1. Which of the co-producers influence the systems dynamic model the most?			Verifiers	Focus group participants	Observation of focus group participants		
1. How did the behaviour of the individuals participating in the research process influence the research inquiry?		Observers Moderator	Verifiers		Observers		
2. What effect did the process have on the individuals participating in the research inquiry?		Observers Moderator				Focus group participants	Focus group participants

[1] The research objectives are listed on the previous page with similar colour coding

Henning states that **qualitative analysis** requires "**craftsmanship** and the ability to **capture understanding of the data in writing"** (Henning, 2004:101). The qualitative researcher is faced with many different options to **make sense** of the data collected. In this research design, the study was described as both deductive and abductive, implying new knowledge emerging through an iterative analysis and sense-making process.

In this study, the **systemic inquiry process** was applied to generate and interrogate data in a specific context. The inquiry process allowed for **iterative phases** of data collection and analysis. On Day 1 the process consisted of the **generation of problems** related to eLearning improving business performance. The first **analysis** process then started with the focus group participants sorting through the problems generated and creating **different clusters of problems**. Each of the clusters was then described by a **theme**. At a next level of the analysis, the **relationships** between the themes were studied and described. The relationships were analysed to determine a **driver** problem. The relationships were analysed according to the variable that most influenced each one of the other variables.

Based on the driver problem identified, a **system in focus** was created. On Day 2 and 3 the focus groups went into a next phase of data generation by **identifying and prioritising the stakeholders** of the system in focus, determining their **measures of performance**, and the **co-producers** of the performance. At this point, a second phase of data **analysis** began, through debating the relationships between the measure of performance and relevant co-produces to produce **systems dynamic loops**. Once the loops were designed, they were combined in order to create a **systems dynamic model**. The **leverage point** was identified from the models.

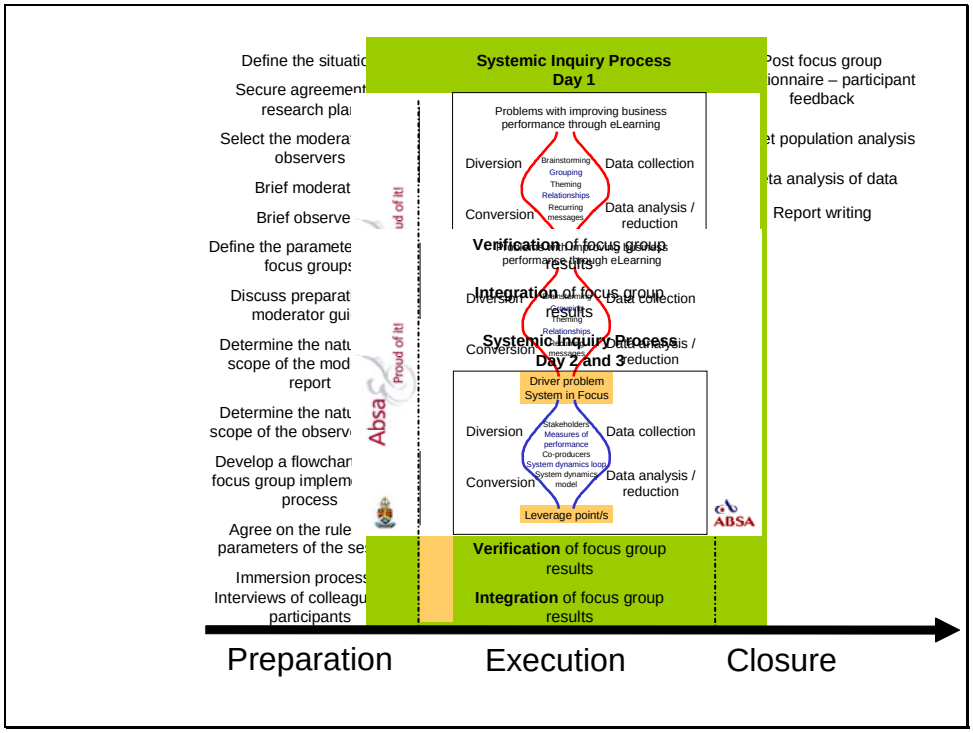
The activities within the focus groups were **observed** throughout. **Verifiers** also checked the data generated and analysed by the focus group participants in order to establish credibility.

A **second level of analysis** was done throughout, noting the similarities and differences between the outputs produced by the focus groups. The final

picture integrates the outputs produced by the focus groups into one systems dynamic model with an emerging story.

The process implemented during the execution phase of this study is presented in Figure 4.1 and is circled in lime green.

Figure 4.1: Execution process of the study



The information gathered with the various data collection instruments is discussed according to the subsidiary questions for each research objective. Due to **Research Objective 4** – the behaviour of the focus groups and the relevant participants – being relevant throughout the data generation, collection and analysis processes, its results will be reported at the end of each of the subsidiary questions. The content for Research Objective 4 is indicated in green.

Each research objective is now discussed in terms of the relevant data that emerged during the research process. The resulting recurring messages and differences between the focus groups are also reflected on.

4.3. Research Objective 1: To identify the driver problem that prevents eLearning from improving business performance

The following subsidiary questions were asked in order to realise the research objective:

1. What are the problems related to improving business performance through eLearning?
2. How can the problems be grouped together as themes?
3. How does each of the themes influence one another?
4. What is the driver problem?

4.3.1. What are the problems related to improving business performance through eLearning?

The **objective** of this question was to generate problems related to eLearning improving business performance. Two activities were performed to generate data. During the **first activity** the focus group participants interviewed their colleagues using the interview sheets that were provided to them. The **second activity** was included as part of the focus group interview process.

During the first activity, an **interview sheet**[2] with specific questions was provided to the focus group participants. The participants were requested to interview **five colleagues** regarding eLearning and business performance and to hand in the questionnaires on Day 1 of the focus group sessions.

One hundred and twelve questionnaires were returned to the researcher. On average each participant interviewed **four** colleagues. The content of the questionnaires was included in Day 1 of the systemic inquiry process and would therefore not be analysed separately.

On Day 1 of the focus group sessions, the **systemic problem** related to the research problem was stated to the focus group participants.

[2] The interview sheet is attached as Appendix A

Despite our best efforts there are still **issues** related to **improving business performance through eLearning**. Why is this so?

The focus group participants were requested to list the problems that they sew in relation to the stated systemic problem. The participants **had to incorporate the content of their interviews** with their colleagues in this session.

The listing of the problems happened in silence as to give all the individuals an equal opportunity to 'voice their viewpoints on paper'. The individuals listed **188** problems.

Examples of problems that were listed by the focus group participants are listed below:

- *Motivation lacks when training is not compulsory and not in a classroom environment.*
- *Management does not understand the process of applying eLearning within their environment.*
- *Learners find it difficult to do eLearning at their workstations as operational management see work as more important.*
- *Learners are responsible for their own training and when doing eLearning, learners are sometimes disturbed due to business importance matters being given priority above the set eLearning time.*
- *Management does not see the benefit in time gained with learners doing eLearning versus a workshop. (This includes travelling time, workshop time, etc.).*
- *Design of learning is generally learner-centred (outcomes based) and not necessarily business focussed.*
- *The desired business results are not established right up-front, when the need for the training is discussed/explored.*

During the session the behaviour of the focus group participants was observed in order to collect evidence for **Research Objective 4**[3].

Observation feedback as provided by the observers

The individuals responded to the request to list problems with improving business performance through eLearning in different ways. Some immediately recorded their inputs while others pondered the question. One individual made use of an eLearning book as a reference for the exercise. The observers heard discussions that indicated that the pre-work done by the individuals was brought into the group discussions. High energy levels in the group were apparent and individuals were highly responsive to the instructions.

The next task set to the focus group participants was to group the problems that they had identified together in similar themes.

4.3.2. How can the problems be grouped together as themes?

The **objective** of the question was to allow for generic themes to emerge from the problem statements. The focus group participants were requested to organise themselves into four focus groups. Care was taken to ensure that there were no people with direct reporting lines in the focus groups (i.e. a manager and sub-ordinate). The moderator also ensured that each focus group had a mix of Business[4] people and learning experts. This was to ensure that one-sided views did not emerge.

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[3] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

[4] In this study the word **'Business'** refers to the eChannels: Contact Centre Division. It implies that the following stakeholders are part of the grouping – operational management responsible for business results, team leaders, and the employees (also referred to as learners). A detailed description of this sample is available in Chapter 3.

The four focus groups **combined the problem statements** of the individuals. The sense-making process started. The individuals were requested to organise the different problem statements according to themes emerging from the problems. Each group then had to write a sentence that represented the theme of the collection of problem statements.

Focus group 1 had **thirty-eight**[5] problems that were grouped into **eight** themes. The emergent themes were focused around the lack of motivation of learners, lack of understanding of eLearning, issues with technology and management ownership. The overall lack of communication between the stakeholders was another theme that emerged. The eight themes are listed in Table 4.2.

Focus group 2 had **thirty-three**[6] problems that were grouped into **nine** themes. Themes emerged focusing on the lack of technology infrastructure, the lack of ability and ownership of line management and learners, communication regarding eLearning, and issues with linking specific business results to the outcome of the learning. The nine themes are listed in Table 4.2.

Focus group 3 had **sixty**[7] problems that were grouped into **ten** themes. Themes emerged about learning time, the definition of learning needs, the understanding of eLearning as a concept, the enablement of learners, management mindsets and the lack of eLearning significance to business. The ten themes are listed in Table 4.2.

Focus group 4 had **fifty-eight**[8] problems that were grouped into **eight** themes. The emergent themes included technology issues, management's lack of support of eLearning, logistical support and stakeholder management. The eight themes are listed in Table 4.2.

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[5] The detailed problems for Focus group 1 are attached as Appendix O

[6] The detailed problems for Focus group 2 are attached as Appendix P

[7] The detailed problems for Focus group 3 are attached as Appendix Q

[8] The detailed problems for Focus group 4 are attached as Appendix R

Table 4.2 presents a summary of the results of subsidiary questions 1 and 2. The number of problems and themes, and detailed theme descriptions are listed per focus group.

Table 4.2: Summary of results from subsidiary questions 1 and 2

Focus group	Number of problems	Number of themes	Themes
1	38	8	1. Lack of motivation due to learners being dependent on instruction to learn. 2. There is no consensus regarding the term eLearning and implementation of eLearning. 3. Technical support is not sufficient. 4. Management does not take ownership of eLearning. 5. Learners do not have time to do eLearning. 6. Management does not understand the ROI of "eLearning". 7. eLearning platform is not user-friendly. 8. Overall communication between all stakeholders is insufficient.
2	33	9	1. Technology infrastructure/system is not always in place to support eLearning. 2. We have not marketed/communicated the value of eLearning. 3. Learners and line management are not ready to use eLearning. 4. Designed learning material must be addressed - How do we support the learner? How do we make links back to business results? 5. The desired business results are not established right up-front. 6. Line managers do not support and help learners learn via eLearning. 7. Line managers do not see eLearning as their responsibility. 8. Learners do not have the time to do an eLearning self-paced intervention. 9. We have not created the necessary enablement to support the use of eLearning.
3	60	10	1. Learning needs are not defined and therefore not measured in terms of business results/performance. 2. Scheduling of learning time did not accommodate for business impact. 3. The concept of eLearning being just another way of learning is not understood – mind- shift. 4. Take up personal authority for learning. 5. Work environment in terms of peers/management is not conducive to learning. 6. Orientation aids to the access/navigation of eLearning platform – eReady/enabled. 7. Management mind-shift from traditional training to eLearning. 8. Past negative experience resulted in a leadership resistance. 9. Design limitations disabled learners and learning. 10. Lack of explaining eLearning and its significance to business.
4	58	8	1. Technical limitation/constraints when designing for e-platform. 2. Workshop interventions are more valued than eLearning. 3. Management does not support learning in this medium. 4. Difficulty in scheduling time to learn. 5. Technology problems inhibit participation. 6. eLearning is not sufficiently marketed. 7. Logistical support not in place timeously. 8. All stakeholders want to know 'What is in it for me?'.

Recurring themes found between the focus groups are learner motivation, eLearning competence, learning time, technology efficiency, communication, support, management mindset, and the value of eLearning to business.

Differences were found between the focus groups. Focus group 3 listed past experience and work environment as additional themes. Focus group 2 did not list **motivation** as a theme. Focus group 3 had no themes about **technology**. Focus group 4 did not list any **eLearning competence themes** or issues regarding the **value of eLearning** to business performance.

Table 4.3 lists the identified recurring messages and differences between the themes identified by the focus groups and provide more details on the discussion.

Table 4.3: List of recurring themes and differences

Recurring themes	Details
Motivation	Focus groups 1 and 4 had similar themes referring to learner motivation and the need that learners have to understand how they might gain through participating in a specific eLearning program. Focus group 3 indicated that learners did not take up personal authority.
eLearning competence	Focus groups 1, 2 and 3 had similar themes indicating that the learners and their respective management did not understand eLearning and that they did not have the necessary competence to apply it.
Time	All four focus groups indicated that there is a lack of learning time in the eChannels Contact Centre environment to participate in eLearning.
Technology efficiency	Focus groups 1, 2 and 4 implicated technology in various ways. The themes indicated that the technical environment was not user-friendly and that sufficient infrastructure was not in place. They also stated that there were technical constraints and limitations when designing eLearning.
Communication	All four groups listed communication as a theme. Focus group 1 focused on general communication regarding eLearning. Focus groups 2 and 3 stated that the value of eLearning to business performance was not sufficiently communicated. Focus group 4 felt that eLearning was not sufficiently marketed.
Support	All four groups listed support as a theme. Technical support, learner support, access support and logistical support were described as problem areas.
Management mindset	The mindset of management as a theme was mentioned in various ways in all four groups. Focus groups 1 and 2 mentioned ownership of eLearning as the issue. Focus group 3 listed the mindset of management regarding classroom training as an issue while Focus group 4 focused on the fact that management does not support electronic learning.
Value of eLearning to business	Focus groups 1, 2 and 3 listed themes regarding eLearning not being linked to business performance or return on investment for an eLearning course.
Differences	**Details**
Past experience	Focus group 3 listed past negative experience of eLearning as a theme.
Work environment	Focus group 3 listed the lack of an environment conducive to eLearning as a theme.

During the session the behaviour of the focus group participants was recorded on the observation sheet in order to collect evidence for **Research Objective 4**[9].

[9] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

Observation feedback as provided by the observers

There was a high level of sharing amongst group members of all the focus groups. The outcome of the groupings is reflective of collective input and not skewed to the contribution of a few dominant individuals.

Natural leaders emerged and took up their roles. The Groups authorized the leadership role and accepted the allocation of tasks during the process. The authorized leader took up the facilitation role in order to provide direction to the group.

At times during the sorting process, there were individuals who participated more than others. In some cases, the skill of the groups' authorized facilitators was inadequate. The diversity of Focus group 2 in terms of language, culture, levels of authority and personality could not be exploited. The Group then moved slower than in other groups where allowance was made to incorporate diversity.

The next task set to the focus group participants was to determine how each of the themes that they identified influenced the other.

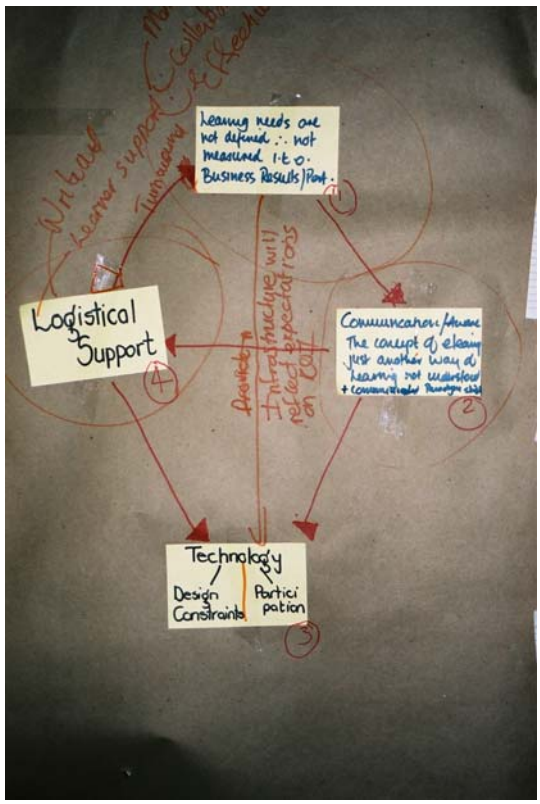
4.3.3. How does each of the themes influence each other?

This question was asked to determine what the cause and effect relations between the identified themes are. Each focus group was requested to draw a **digraph** using the themes that were identified. The digraph was designed by placing the themes in a circle on a piece of brown paper. The influence each variable had on the other was then debated and an arrow was drawn in the direction of the **greatest influence**. If the group felt that the influence between any two themes was equal, no arrow was drawn, i.e. bi-directional arrows were ruled out.

During this debate the beliefs and assumptions about why an arrow was going in a specific direction was also documented. These beliefs and assumptions were recorded as '**reasoning statements**'. The researcher used limited editing to the 'reasoning statements' to ensure a correct reflection of the intention and meaning of the focus group participants.

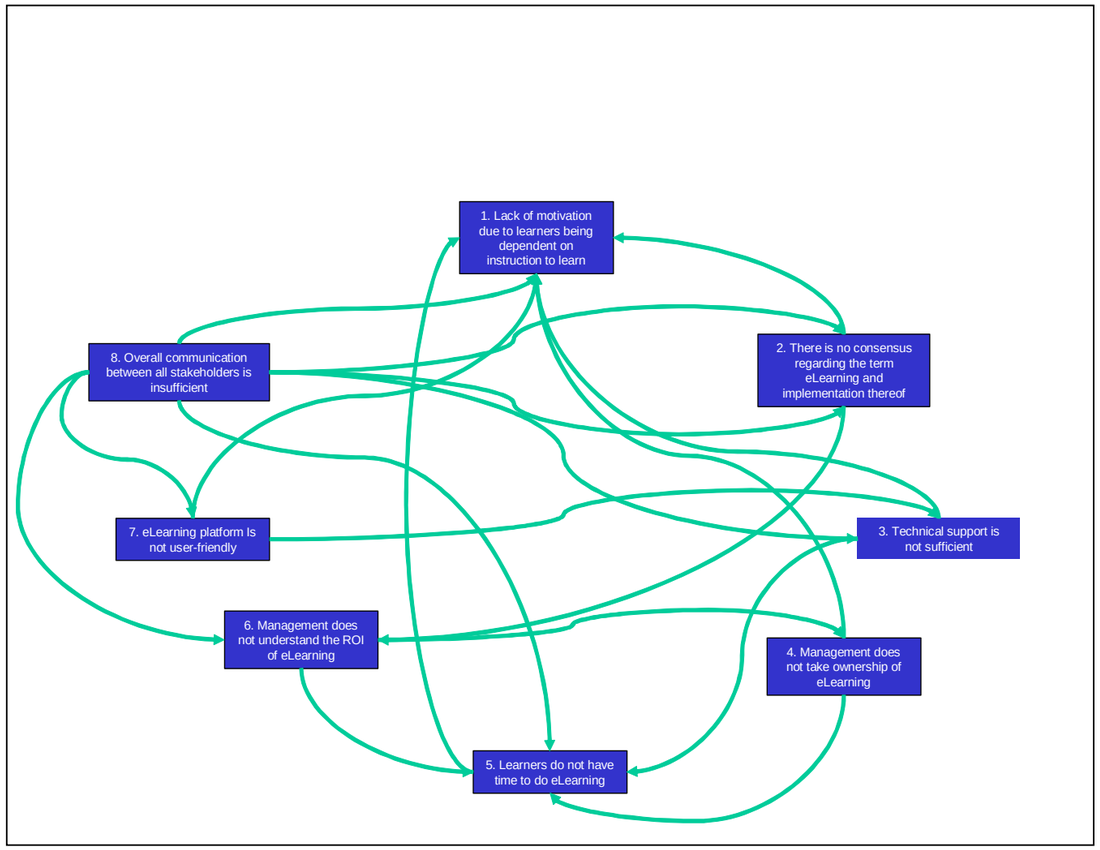
Figure 4.2 represents an example of the original work of Day 1. The digraphs of each of the focus groups are discussed here-after.

Figure 4.2: Photograph of a digraph produced by a focus group



The **digraph designed by Focus group 1** is graphically represented in Figure 4.3, followed by the reasoning statements for the interrelationships on the digraph. The numbers quoted next to the statements represent the numbers of the theme blocks on the digraph.

Figure 4.3: Digraph designed by Focus group 1



Digraph Group 1: Reasoning statements

The lack of **motivation** of the learners (1) did not influence any of the other themes. The lack of **consensus of the meaning of eLearning** and its implementation (2) leads to a lack of motivation for participating in eLearning as conflicting messages are sent to learners (1) and to management not understanding the value (return on investment) of eLearning as the benefits for the implementation of eLearning in Absa are not made clear to them (6).

The insufficient **technical support** (3) negatively influences the motivation of the learners (1), as the learners do not know where or how to access the system. The technical support also impacts on the learning time (5) as the eLearning environment is not available 24 hours, seven days a week.

The lack **of eLearning ownership** by management (4) leads to demotivation of learners (1), as management does not influence learners to participate or set a participative example. The lack of ownership also leads to the learners not having time (5) allocated for eLearning, as management perceives eLearning to be of lesser importance than business transactions.

The lack of **learning time** (5) impacts on the motivation of the learners (1). The demotivation is a result of management cutting the learning time due to work pressure. There is no scheduling of learning time and even if they do schedule time, management does not adhere to the schedule. This creates learner frustration.

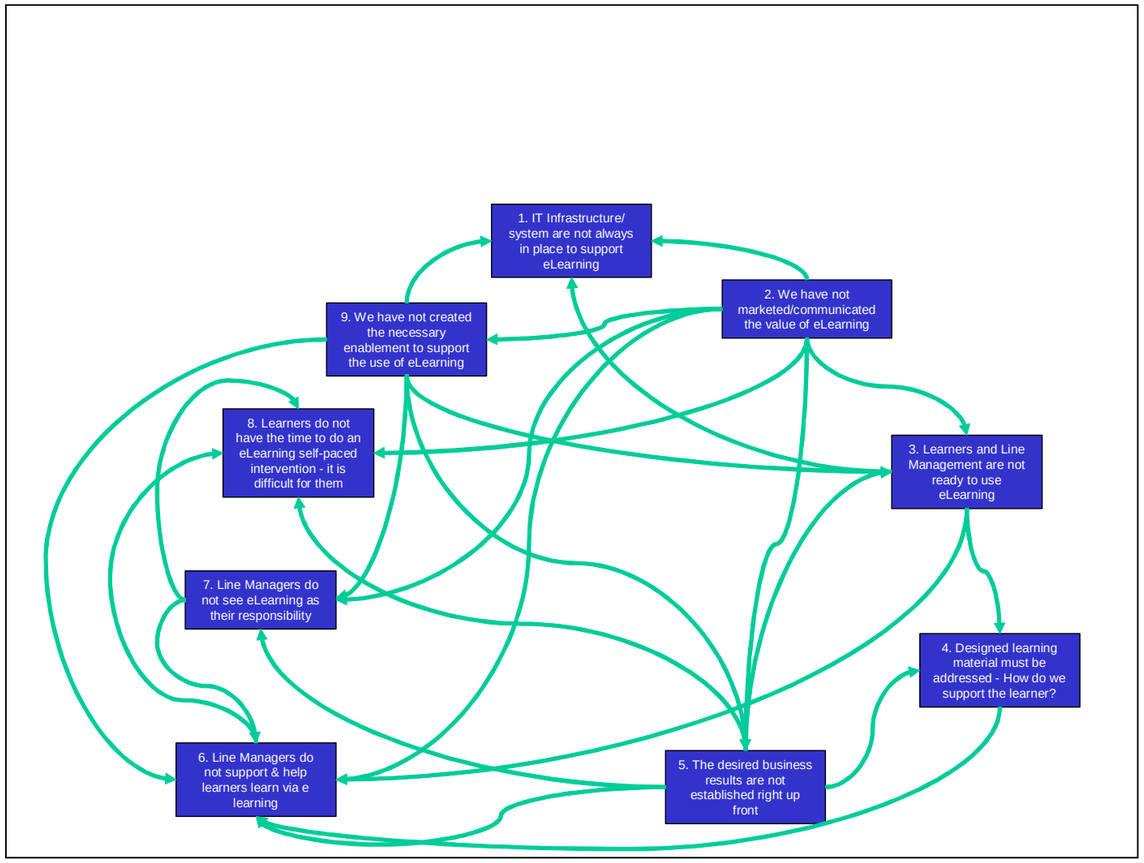
The effect of management not understanding the **return on investment of eLearning** (6) is a lack of ownership of eLearning (4) in line management. The lack of understanding of the return on investment also has an influence on the scheduling of time (5) as management does not want to allocate time to eLearning due to not understanding the value thereof.

The lack of **user-friendliness** of the eLearning platform (7) leads to a demotivation of learners (1) as learners do not know how to use the system and do not understand the layout and functionalities of the Absa eLearning environment. The inability to optimally utilise the eLearning environment once again leads to learner frustration. The user-friendliness also influences the technical support (3). It was stated that the technical support is insufficient as the technical department is not informed about the system specification and Group IT cannot provide the relevant support.

The insufficient **overall communication** (8) influences the motivation of the learners (1) as different people are communicating different messages regarding eLearning. The insufficient communication stating the value and benefits of eLearning contributes to management's lack of understanding of the return on investment of eLearning (6). The insufficient communication also influences the user-friendliness of the platform as the processes and procedures regarding communication of the eLearning platform are not in place.

The **digraph designed by Focus group 2** is graphically represented in Figure 4.4, followed by the reasoning statements for the interrelationships on the digraph.

Figure 4.4: Digraph designed by Focus group 2



Digraph Group 2: Reasoning statements

The lack of sufficient overall technology **infrastructure** (1) in the organisation does not influence any of the themes on Digraph 2. Due to the **value of eLearning** not communicated (2) to the top management of the financial institution (decision makers), the necessary support/resources for eLearning technology are not provided. This contributes to the lack of technology infrastructure (1) in the company because, if management does not understand the need for eLearning, then the technology budget will be incorrectly allocated.

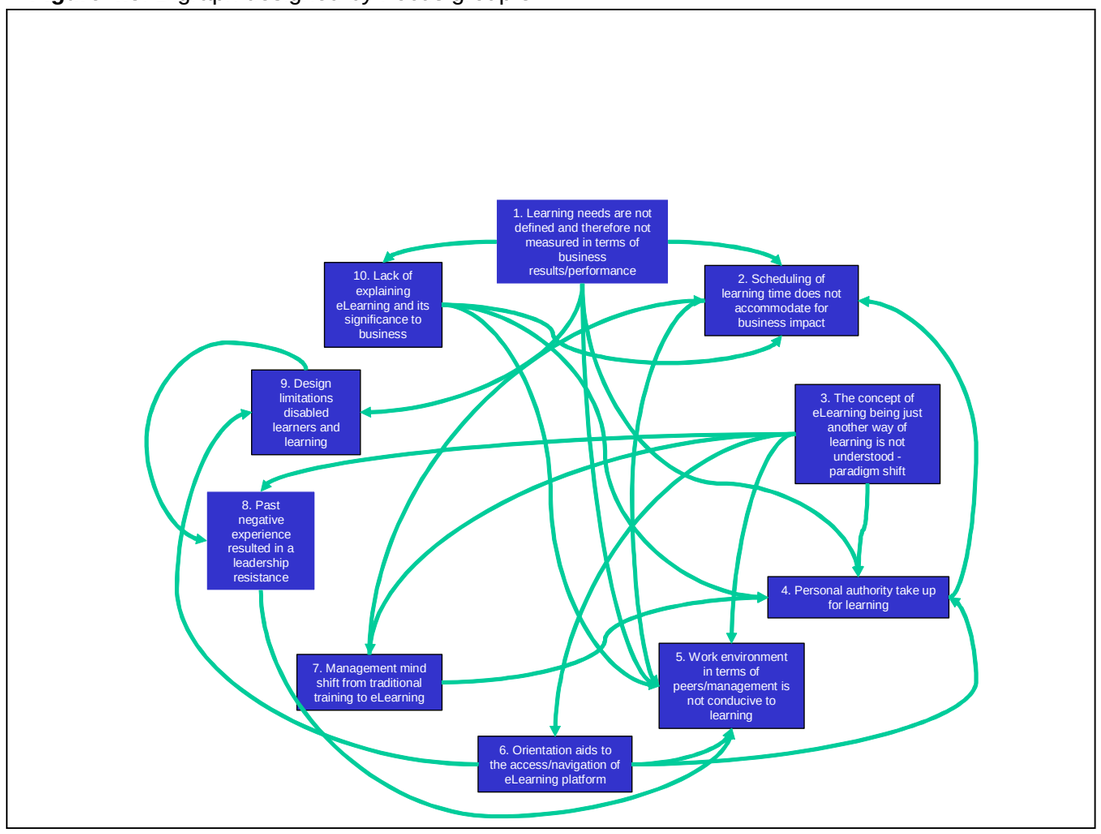
The lack of **communication** regarding the value of eLearning further leads to the learners and line management not being ready for eLearning utilisation (3) as there is a lack of awareness and understanding about eLearning. The lack of communication also leads to management not seeing the link between eLearning and business results (5) and not taking up ownership for supporting eLearning (6). Due to the lack of communication about the value of eLearning, line managers do not see eLearning as their responsibility (7) as they don't understand their role and the importance of driving eLearning. This influence (2) is also true for the learners (8) as they don't make time for eLearning due to not understanding the value thereof. The communication also influences the change management process (9) as the lack of understanding of the value of eLearning by learners and line managers leads to an absence of context for change.

The learners and line managers not being **ready to use eLearning** (3) influences the lack of technology infrastructure (1) as learners do not have access to the eLearning platform. The learner support (4) by management is influenced by the lack of eLearning readiness (3). The lack of eLearning readiness also leads to line not providing the required support for learners (6). The lack of design of the learner support as part of the learning material (4) contributes to line managers not supporting learners (6).

The lack of definition of the **desired business results** (5) influences the readiness of managers to utilise eLearning (3) as, if the line managers understand the link between business performance and eLearning, they will be more willing to use it. As the desired business results are not established up-front, the design of the support mechanisms (4) are negatively influenced, and the design is then aligned to no or incorrect requirements. The lack of definition of the business results also leads to the lack of support from management for eLearners (6) because they see no link between the eLearning solution and the desired business performance. The absence of the link between the business results and the eLearning solution leads to managers not taking up their responsibility for supporting learners (7) and further leads to learners and managers not dedicating time to do eLearning (8). The lack of **support by line managers** (6) leads to learners not scheduling time (8) for completing their eLearning. The lack of ownership from managers regarding eLearning (7) leads to line managers not taking up their support role (6) for learners. The **ownership** issue also influences the time scheduled for eLearning (8) because if "I (line manager) don't see it as my responsibility, I will not create the time for my people to learn."

The lack of **change enablement** to support eLearning (9) leads to IT infrastructure not being in place (1). The lack of change enablement also influences the readiness and acceptance levels of learners and management (3) as well as the establishment of business results upfront (5). The lack of change enablement also has an impact on the support of learners by line managers (6) and them seeing eLearning as their responsibility (7), because change will create the space for managers to take up their roles in the eLearning environment. The **digraph designed by focus group 3** is graphically represented in Figure 4.5, followed by the reasoning statements supporting the interrelationships on the digraph.

Figure 4.5: Digraph designed by Focus group 3



Digraph Group 3: Reasoning statements

The lack of **definition of learning needs in context of business performance** (1) leads to learning time (2) not being scheduled because, if the learning needs are not linked to business results, the necessity of learning time will not be justified. If learning needs are not defined, learners cannot schedule time correctly. If learning needs are defined in terms of business results, it can lead to learners seeing the need of the learning and taking up personal authority to learn (4) as well as motivating the adaptation of the work environment to be conducive to learning (5). Management won't make a mind-shift from training in classrooms to eLearning (7) if the learning is not linked to business performance and measured in terms of business results. The definition of learning in terms of business performance also leads to the creation of significance of the learning (10) in business context.

If **learning time** is carefully scheduled to have the minimum business impact (2) the work environment will become more conducive to learning (5). Inappropriate scheduling of learning time could lead to negative experiences and leadership resistance (8).

A **mind-shift** regarding the eLearning being an alternative way of learning (3) could enable learners to take up personal authority (4). The mind-shift could also lead to the work environment becoming more conducive to learning (5), ensuring sufficient orientation and ability to navigate eLearning (6), a management mind-shift from traditional training to eLearning (7) and there should be no negative experience resulting in leadership resistance (8).

If a learner takes **personal authority** for learning (4), he/she will make an effort to schedule time for learning in such a way that it does not impact business performance (2).

A **proper orientation of eLearning** access and navigation (6) (when e-readiness is in place), could lead to learners having increased confidence to take up personal authority to participate in eLearning (4). The orientation could further influence the work environment to be more conducive to learning (5) and enable learners to work within the design constraints (9).

If management goes through the **required mind-shift** from workshop to workplace eLearning (7), they will understand the value that eLearning has in the work place and the scheduling of time to do the eLearning won't be an issue (2). The **mind-shift** will also allow for the learners to take up personal authority for their learning (4).

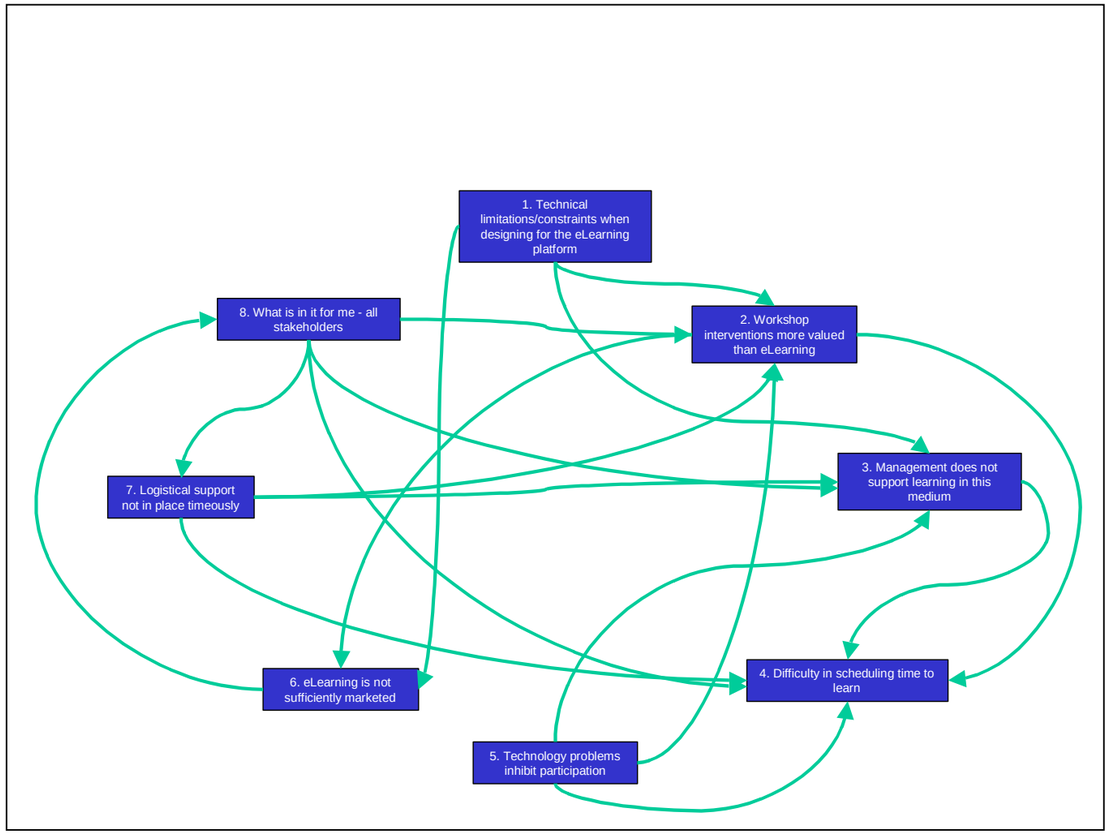
Past negative experience (8) might result in the work environment not being conducive to learning (5) as leaders are more resistant to the eLearning concept after a negative experience.

Design limitations (9) might contribute in a negative learner experience (8) as the constrained environment does not allow for expression of eloquent eLearning.

Properly explaining the **significance of eLearning** to business (10), could lead to time being made available for scheduling of learning (2) and learners taking up personal authority for learning (4) due to the acknowledgement by leaders and an effort to make the working environment more conducive to learning (5).

The **digraph designed by Focus group 4** is graphically represented in Figure 4.6, followed by the reasoning statements for the interrelationships on the digraph.

Figure 4.6: Digraph designed by Focus group 4



Digraph Group 4: Reasoning statements

Technology design constraints (1) lead to workshops being more valued than eLearning interventions (2) as they present an easy way out. The design constraints also confirm to management that they should not support the eLearning medium (3). The design constraints lead to eLearning not being marketed widely (6) as the designers are not confident to do so. They are also faced with significant management challenges because they cannot deliver what the client wants.

Due to **workshops being more valued than eLearning** (2), eLearning is not sufficiently marketed (6) and scheduling time for eLearning in the work environment becomes difficult (4).

The **lack of management support for eLearning** (3) leads to difficulty in scheduling time (4) for eLearning in the workplace as they do not know what is expected from them.

Technology limitations (5), due to computer hardware and training costs, inhibit participation in eLearning and contribute to workshops being the preferred medium for learning (2). The technology limitations make the scheduling of learning time (4) difficult – it is not available 24 hours, seven days a week, and further contributes to managers' lack of support of the medium (3).

Due to eLearning not being **sufficiently marketed** (6), the stakeholders are not aware of what's in it for them (8).

A lack of sufficient **logistical support** for eLearning (7) leads to workshops being preferred (2), as people are familiar with processes and procedures for workshop logistics. The absence of the logistical support is also not conducive for management supporting eLearning (3) and makes the scheduling of learning time difficult (4). Workshops present the easy, known way out.

If the learners **understand the value of eLearning** (8) for them as individuals, they will start to support eLearning and to move away from workshops (2). The common understanding regarding 'What's in it for me' from eLearning, influencing management support for learning in this medium (3), and will also contribute to the availability of time to schedule learning in the workplace (4) and the provision of logistical support for eLearning (7).

During the session where the focus group participants designed the digraphs, the behaviour of the focus group participants was recorded in order to collect evidence for **research objective 4**[10].

Observation feedback as provided by the observers

Focus group 1 *displayed functional group behaviour with all members contributing at least to a limited extent. In* ***Focus group 2****, a very dominant individual facilitated the group. Although the process allowed for space creation, two of the members only contributed to a limited extent. The group dynamics were, however, natural and the role-players supported the leader in her role.* ***Focus group 3*** *was perceived as dysfunctional at this point due to poor self-organisation and clear emergence of two power players that dominated the group.* ***Focus group 4*** *had a healthy and lively debate between experts from Business and Learning and Development.*

After noting the presence of the observer, the group-appointed facilitator in ***Focus group 3*** *made attempts to draw in members of the group. The results documented by this facilitator were still owned by the group. Although the results of* ***Focus group 3*** *may be skewed toward the opinions of the two power-players, the impact would not influence the outcome due to the nature of the process at this point.*

Where individual participation levels were already low, the duration of this exercise resulted in energy levels dropping even lower in these individuals.

[10] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

4.3.4. What is the driver problem?

The driver problem/s is represented by the highest number of arrows emerging from a specific theme and therefore influencing the other themes. In some cases, it might be true that there is more than one driver problem. If there is a relationship between the two themes, the one influencing the other will be regarded as the driver problem. If there is no relationship between the themes, then they are stated as separate driver problems.

In order to identify the driver problem each focus group was requested to count the number of arrows emerging from a specific theme.

In Focus group 1, the driver problem was identified as **Theme 8**: "Overall communication between stakeholders is insufficient". In Focus group 2, the driver problem was identified as **Theme 2**: "We have not marketed / communicated the value of eLearning". In Focus group 3, the driver problem was identified as **Theme 3**: "The concept of eLearning being just another way of learning is not understood – mind-shift". In Focus group 4, the driver problem was identified as **Theme 2**: "What's in it for me? – all stakeholders".

Focus groups 1 and 2 **both touched on communication**, with the first being more generic and the second focusing on the specific topic of the value of eLearning. Focus group 3 looked at the **eLearning mental model** while focus group 4 brought the individuals' need to **understand the value of eLearning** to the fore.

During the session, the behaviour of the focus group participants were recorded in order to collect evidence for **Research Objective 4**[11].

[11] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

Observation feedback as provided by the observers

The groups functioned optimally in this exercise due to broader group participation. The emergent leaders from the previous exercise retained their role in this larger group, but seemed to make a bigger effort to include all the role-players.

This exercise created the opportunity for the groups to refocus and participation levels increased, especially amongst individual participants who only contributed to a certain extent in the previous exercise. Overall, energy levels increased with the new exercise.

The **post focus group discussion** with the moderator and observers on Day 1 provided further insight into the behaviour of the focus groups. The post focus group session was held subsequent to the focus group participants leaving. The following questions were discussed:

- What worked well?
- What could be improved?
- General open discussion.

The following **feedback** was received:

- **What worked well?**
  - The mix of the focus groups and how they organised themselves into focus groups adhering to the criteria of the research project.
  - The participation and amount of interaction between the focus groups was intensive and an extensive amount of information was exchanged.
  - The moderator commented that the Systems Thinking process was well received and the tasks set to the participants were executed with ease.

- **What could be improved?**
  - The observers felt that there were some participants that were more responsive than others. A list would be provided to the researcher in order to ensure the more responsive participants would be included in Day 2.
- **General open discussion**
  - All the role-players felt that the sessions were progressing well and that no significant process changes were required. The session was closed.

On 10 July 2003 the content, as produced by the focus group participants, was **presented to a group of verifiers**. The main objective was to **validate and audit** the data produced and analysed by the focus group participants.

Each part of the systemic inquiry process was explained to the verifiers, the data and outputs produced were presented, and then the essence of the verifier comments was captured.

Verifier comments on the results produced by each focus group

Focus group 1
- *Did not bring through the theme of business value that was evident in the problem generation phase of their focus group discussion..*
- *It is important to also include the technology department in the shared-meaning process.*

Focus group 2
- *Mentoring with an expert is not available.*
- *Management is not visibly involved in eLearning.*

Focus group 3
- *"Learning is not business centric" was a theme that came out of the problem statements but this was not eloquently captured in the themes on their digraph.*
- *A common definition of eLearning seems to be a major problem.*
- *Marketing is not integrated in the approach to change management.*
- *The way in which the employees from the Learning and Development Department approach the target population might not take into account the diverse needs of the relevant target population.*
- *Learning is seen as just another product and does not include change of behaviour.*
- *No collaboration with other learners was included.*

Focus group 4
- *This focus group did not include the business side at all.*
- *The group was more focused on a technological point of view.*
- *The group seems to have been dominated by instructional designers and learners experiencing difficulty with eLearning.*

The results of the four focus groups and the feedback from the other role-players were used to create an integrated digraph.

4.4. Integrated digraph

Based on the data produced by the focus group participants and the feedback of the observers, moderator and verifiers, the **digraphs were integrated** and a single driver problem was established. This was done in order to establish a **common platform** for the second phase of the process.

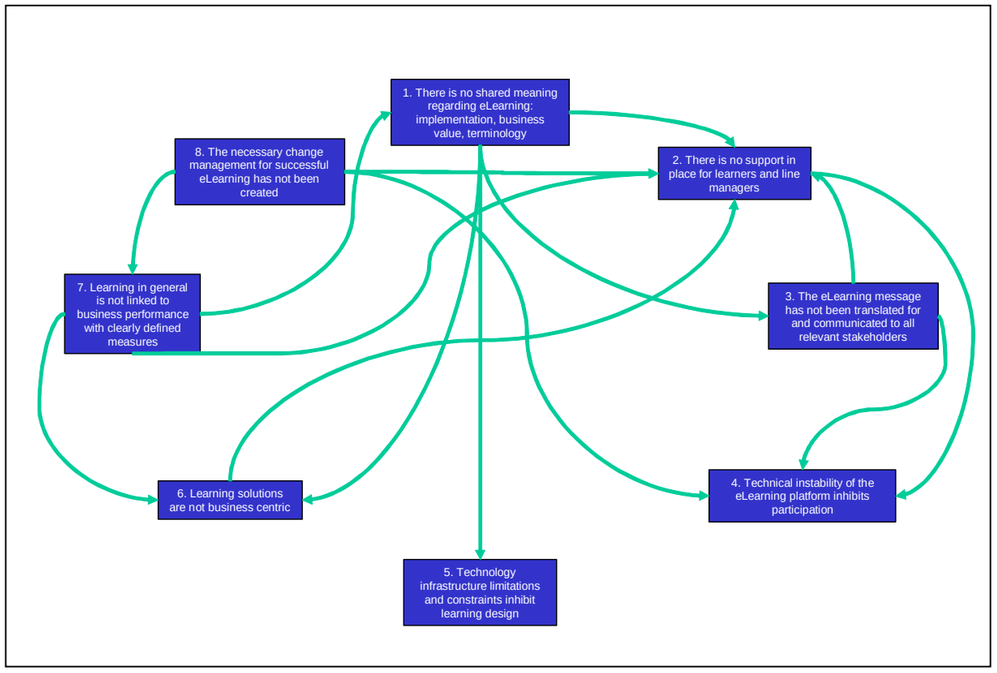
The **recurring themes** that were identified between the four digraphs designed by the focus groups are listed below.

1. There is no shared meaning regarding eLearning implementation, business value and terminology.
2. There is no support in place for the learners and managers.
3. The eLearning message has not been translated and communicated to all relevant stakeholders.
4. Technical instability of the eLearning platform inhibits participation.
5. Technology infrastructure limitations and constraints inhibit learning design.
6. Learning solutions are not business centric.
7. Learning in general is not linked to business performance with clearly defined measures.
8. The necessary change management for successful eLearning has not been created.

The relationships between the themes were built utilising the reasoning statements produced by the focus group participants and the feedback of the verifiers.

The **integrated digraph** is graphically represented in Figure 4.7.

Figure 4.7: Integrated Digraph



Integrated Digraph: Reasoning statements

Shared meaning and common understanding of the eLearning concept (1) between all stakeholders will create impetus in business to put in place the right support **infrastructure** (2) in terms of people and technology. The common understanding between the stakeholders regarding the holistic eLearning concept will facilitate what message to **communicate** (3) to which target population, using the right medium at the right time.

The quality of the **technology infrastructure** (5) will reflect the expectations of business that eLearning can deliver on the agreed promises (1). eLearning in the mindset of line management is measured in terms of alignment to strategy, return on investment and net present value, and the degree to which it can be successfully implemented. Therefore, if there is shared understanding about the value of the infrastructure to business, improvement of the infrastructure will result. Alternatively, a negative view will result in the status quo being maintained or a degeneration of the infrastructure.

A common understanding of the business problem (1) and the related eLearning interpretations will lead to more focused learning solutions that are business centric and therefore will add increased value to **business performance** (6). The relationship between shared meaning (1) and **change management** (8) is of equal strength as there has to be some level of common understanding to create the change process, but, the change process also creates shared meaning. Therefore no link is indicated on the digraph.

If there is no **support in place for learners and managers** with regards to eLearning (2), their **participation** in the eLearning solution will be inhibited (4) as they will become demotivated due to unnecessary technical challenges.

If the message regarding eLearning has been correctly **translated** (3), resulting in the stakeholders understanding why they are participating and 'what is in it for them' (3), they will strive to create the necessary **support infrastructure** (2).

Communication (3) to the learners regarding why the eLearning infrastructure is not stable, will help to mitigate or reduce the risk of **non-participation** (4). The relationship between communication and **change** (8) is of equal strength due to communication forming part of the bigger change management process. Therefore no link is indicated. If learning solutions are **business centric** (6), business will have the impetus to create the necessary **support infrastructure** (2). If the **business problem** was understood correctly (7), Business and the Learning and Development Department would be able to articulate what eLearning should be in their context (1). A clearly linked value contribution of eLearning to business (7) will result in line management providing the right support infrastructure for eLearning (2). If the business measures are clearly defined and understood (7), the learning solutions will focus on solving the business problem (6).

Change management (8) creates significance for the stakeholders in the eLearning context. If there is no **business significance** to the management of the learners, there will be no organisational impetus to create **support infrastructure** (2) or an appreciation for the **technical instability** of the eLearning platform (4). The involvement and commitment created by the change management process will also facilitate action to put in place the right competence to be able to cope with the instability of the eLearning platform. Change management could also facilitate the creation of a framework and mechanism within which Business and the Learning and Development Department can define a **common value for eLearning** (7).

Based on the relationships defined in the integrated digraph, the **driver problem** was identified as:

Theme 1: There is no shared meaning regarding eLearning: implementation, business value and terminology.

This driver problem was used as the basis from which to work in order to define the system in focus.

4.5. Research Objective 2: To design the systems dynamic model that represents the driver problem

The following subsidiary questions were asked in order to realise the research objective:

1. What is the system in focus?
2. Who are the main stakeholders of the system in focus?
3. What are the measures of performance?
4. What are the co-producers for each of the measures of performance?
5. How can the elements of the system in focus be represented systemically?

Day 2 and 3 were held consecutively. The focus group participants started with Research Objective 2 and completed the process with Research Objective 3. Three focus groups participated in this part.

4.5.1. What is the System in Focus (SIF)?

This question was asked to determine a system that represents the driver problem. The successful implementation of the system will influence the driver problem. Correcting the driver problem will change the environment within which eLearning is implemented. In order to capture the shared meaning and mutual understanding between the Focus groups on Day 1, Focus group 1 and 2 and Focus groups 3 and 4 were requested to co-develop two SIF statements. Each of the two focus groups produced an SIF.

Focus groups 1 and 2

An SIF is a system that has a shared mental model of eLearning and appreciates its contribution to business performance results.

Focus group 3 and 4

An SIF is a system that will have established ownership, driving learning as a business priority, including all role-players, allowing effective communication, which requires change management and thereby enabling the integration of eLearning into Absa's learning strategy.

The integrated digraph formed the basis from which the SIF was designed.

After presenting the integrated digraph to the three focus groups participating in Day 2, they were requested to create an integrated SIF. The integrated SIF formed the basis for the next step in the process, which is designing the measures of performance. The integrated SIF was stated as:

A system in focus is a system that will **entrench** a shared mental model of eLearning and its **contribution** to **enhance** business performance.

During the session the behaviour of the focus group participants was recorded in order to collect evidence for **Research Objective 4**[12].

[12] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

Observation feedback as provided by the observers

Three new focus groups were formed. The participants in the new groups were selected from the people who participated in Day 1 to ensure that they would have the necessary common understanding from which to progress in Day 2. The participants organised themselves into groups, taking care to not include people with direct reporting lines in the same groups. A balance between Business and the Learning and Development representatives was also required.

Focus group 1 authorised the same natural leaders from the first session to take up their roles. The group was functional, with only two group members contributing to a limited extent. Although the group was interrupted by two late arrivals, they accommodated them and allowed them the space to reach an understanding of the here and now. In **Focus group 2** the natural leader from Day 1 was authorised by the group to take up the leadership role despite her late arrival. The results of this exercise may well be skewed as a result of the strong influence of the leader, lack of participation amongst the group and lack of encouragement to contribute.

Observation feedback as provided by the observers, continued

Focus group 3 functioned optimally during this session, with no single member adopting the leadership role. The variety of interaction that unfolded in this group resulted in true dialogue and therefore a collective view was captured. The participants appeared to be more comfortable and responsive to instructions in comparison to the session on Day 1. Their levels of responsiveness appeared to be higher, perhaps as a result of their exposure to the process in session one. The change in the group structure resulted in renewed levels of energy and participation. Certain members from the first session, who did not actively participate, took up their roles and actively participated in Day 2.

In order to create a deeper understanding of the SIF, the stakeholders of the SIF were analysed.

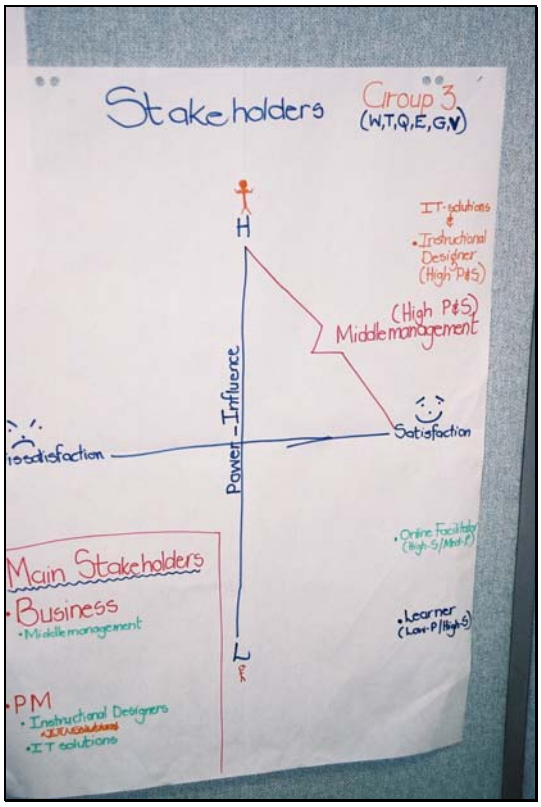
4.5.2. Who are the main stakeholders of the System in Focus (SIF)?

The main stakeholders are the people in power who can successfully create and implement the environment in which the SIF will be implemented. Each of the three focus groups was required to determine the two main stakeholders of the SIF. The criteria for determining the main stakeholders were their level of power and satisfaction.

Each group firstly made a list of possible stakeholders. They then mapped the stakeholders in terms of power and satisfaction on a matrix. This mapping provided insight into their decisions as to which stakeholders was more important than others.

Figure 4.8 represents an example of a stakeholder mapping.

Figure 4.8: Stakeholder mapping



The two stakeholders identified by **Focus group 1** were:

- Business – eChannels Head
- eLearning Sponsor – Head of Learning and Development.

Focus group 2 went through two cycles of stakeholder identification. The first stakeholders that were identified were:

- Instructional Designers; and
- learners.

After starting with the identification of the co-producers (during the next phase), they realised that the stakeholders that they had identified did not have enough power over the measures to effect change. They went back to the identification of the stakeholders and subsequently identified the following two stakeholders:

- People Management (Learning and Development and PM Account Executives); and
- Strategic Business Unit or Group Specialist Function management.

The two stakeholders identified by **Focus group 3** were:

- Middle Management; and
- Instructional Designers.

During the session, the behaviour of the focus group participants was recorded in order to collect evidence for **Research Objective 4**[13].

Observation feedback as provided by the observers

In **Focus group 1**, two late arrivals influenced the group by seeking the ideas and opinions of the other group members, and hence challenged the natural leader's role. Therefore participation in the group was high. In **Focus group 2** the leadership role shifted from one dominant leader to a shared role between two members. This resulted in a higher level of participation within the group, as the group authorised the new leadership role-player. The outcome of this exercise was more reflective of the collective view. **Focus group 3** strengthened their team relationships and maintained their high energy and synergy. Despite the consensus in the group during the introduction session that accountability resides with both Business and the Learning and Development Department, the allocation of accountability that was required in this exercise was incongruent. The participants tended towards identifying parties other than line-management (themselves) to take accountability for eLearning. The variety of the interaction was observed to be well balanced and natural, although four to five participants chose to only passively participate.

The stakeholder mapping process informed the design of the measurements of performance.

[13] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

4.5.3. What are the Measures of Performance (MOPs)?

Each of the focus groups had to identify one **MOP per stakeholder**. The criterion for the measure was that by improving on a specific measure, it would lead to increased satisfaction of the relevant stakeholder.

The following MOPs were identified for the stakeholders of **Focus group 1**:

- Business – **level of profitability through sales and services**.
- eLearning Sponsor – **successful completion of eLearning courses (level of participation)**.

The following MOPs were identified for the stakeholders of **Focus group 2**:

- People Management (Learning and Development and Account Executives) – **level of utilisation of the eLearning platform**.
- Strategic Business Unit or Group Specialist Function management – **level of productivity**.

The following MOPs were identified for the stakeholders of **focus group 3**:

- Middle management – **level of achievement of business performance**.
- Instructional designers – **level of learner satisfaction achieved**.

During the session, the behaviour of the focus group participants was recorded in order to collect evidence for **Research Objective 4**[14].

Observation feedback as provided by the observers

In Focus group 1, the leadership role shifted and the natural leader took up a more passive role. The levels of participation in the group were observed to increase as a result of this new leadership role-player. The level of encouragement and involvement of all members was increased, resulting in increased dialogue and a higher functioning group. In Focus group 2, the shared leadership role shifted to a new leader, which resulted in new members participating in the process. In Focus group 3, the synergy was maintained and they displayed a passion for the subject matter at hand.

The participants appeared to have different levels of understanding of human behaviour. Certain assumptions made by the participants reflected a lack of understanding of the systemic impact of the human response to change and the reality of working with resistance to change. For example, in one group, the single motivator of human behaviour was identified to be financial incentives. This observation is believed to demonstrate the diversity of the participants in the group in terms of levels of work and emotional maturity. Overall, the levels of energy and participation increased through changes in the leadership role-players and their associated leadership styles.

Various elements impact on a measure of performance. These elements are co-producers.

[14] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

4.5.4. What are the co-producers for each of the Measures of Performance (MOPs)?

In order to understand the elements that contribute to the success or failure of the MOP, co-producers are identified. These co-producers are specific variables that contribute to the performance of a measure. The focus groups identified the co-producers for each of the two MOPs that were identified in the previous step.

Focus group 1

The co-producers for **MOP1**: Level of profitability through sales and services touched on topics such as training, recruitment, resourcing, motivation and productivity. The detailed co-producers are listed in Table 4.4.

The co-producers for **MOP 2**: eLearning Sponsor – successful completion of eLearning courses (level of participation) included topics on resourcing, competence, course content, technology infrastructure, significance of eLearning and business requests for eLearning. The detailed co-producers are listed in Table 4.4.

Focus group 2

The co-producers for **MOP 1**: Level of utilisation of the eLearning platform was formulated around topics on learner interest and awareness, eLearning education, support content relevance and access to eLearning. The detailed co-producers are listed in Table 4.4.

The co-producers for **MOP 2**: Level of productivity included topics on participation, learning, ergonomics, training time, flexible delivery, availability of the eLearning platform and competence. The detailed co-producers are listed in Table 4.4.

Focus group 3

The co-producers for **MOP 1**: Level of achievement of business performance touched on topics regarding competence, commitment, motivation support and the application of learning in the work environment. The detailed co-producers are listed in Table 4.4.

The co-producers for **MOP 2**: Level of learner satisfaction achieved included topics on facilitation, motivation, competence, learning content, significance of eLearning, technology infrastructure and support. The detailed co-producers are listed in Table 4.4.

Table 4.4: Identified stakeholders, MOPs and co-producers as identified per focus group

Focus group	Stakeholder	Measure of Performance	Co-producers
Focus group 1	Business – eChannels Head	1. Level of profitability through sales and services	• Number of quality training courses • Quality of coaching • Level of competence • Quality of talent recruited • Number of quality resources • Availability of operating resources /infrastructure • Level of internal motivation • Level of quality service • Level of incentive • Number of products sold • Number of transactions successfully concluded
	eLearning sponsor – Head of People Management	2. eLearning sponsor – Successful completion of eLearning courses (level of participation)	• Quality of resources in the Design and Development Department[15] • Level of competence of Instructional Designers • Quality of appropriate course content per target population and business need • Level of quality of technological infrastructure • Level of marketing/training to empower learners to use eLearning • Level of competence of learners to use the eLearning platform • Level of significance of eLearning for the learner/business performance • Shared mental model of eLearning • Level of clarity in communicating available courses per target population • Level of clarity in marketing and introducing the eLearning platform • Level of clarity of the learning process to learner • Number of business requests for eLearning courses

[15] Design and Development is part of the Learning and Development Department.

Table 4.4: Identified stakeholders, MOPs and co-producers as identified per focus group (continued)

Focus group	Stakeholder	Measure of Performance	Co-producers
Focus group 2	People Management	1. Level of utilisation of the eLearning platform	• Amount of learner interest • Level of eLearning education • Level of management support and coaching • Level of awareness of new interventions • Level of applicability of the content • Level of awareness of the platform • Quantity of learner access • Level of system stability • Level of technical support • Hardware and software capability
	Business unit/Group Specialist Function Management	2. Level of productivity	• Level of participation in training • Quality of conducive learning ergonomics • Availability of schedules of training time • Flexibility of training delivery • Relevant availability of training tools • Level of competence achieved • Quality of staff employed
Focus group 3	Middle Management	1. Level of achievement of business performance	• Level of commitment of managers • Level of competence of middle management • Level of competence of learners • Degree of learner application • Degree of learner motivation • Level of technical support • Level of human support • Level of understanding of value of eLearning courses by middle management
	Instructional Designers	2. Level of learner satisfaction achieved	• Availability of online facilitation • Level of learner motivation • Level of learner application • Level of learner competence • Applicability of the content • Level of significance to the learner • Level of participation • Level of creativity within the learning design • Availability of the platform • Availability of technical support • Stability of the platform

During the session the behaviour of the focus group participants was recorded in order to collect evidence for **Research Objective 4**[16].

Observation feedback as provided by the observers

*Following lunch, the leader of **focus group 1** was absent for a period. This negatively impacted on this group's dynamics and levels of energy, resulting in the previous natural leader taking up her role to rescue the situation. The new leader in **focus group 2** maintained his influence over the group from the previous exercise. He initiated the move of the group to create a collective workspace, which sustained the levels of participation to achieve the objectives of the exercise. During this exercise, the members of **focus group 3** asked many questions and started to spiral in their thought processes. However, they achieved the objectives of the exercise and ensured collective input.*

There appears to be a fundamental gap between the methodologies used by L&D specialists in People Management versus the business understanding of human behaviour. Therefore business perceives the "value of money" as the driver of human behaviour and reduces the importance of the individual in the story. Overall the group appeared to have reduced levels of energy after lunch. The researcher and the facilitator took cognisance of this and decided to close the session following this exercise.

The MOPs and co-producers were used as input to design the systems dynamic model representing the system in focus.

[16] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

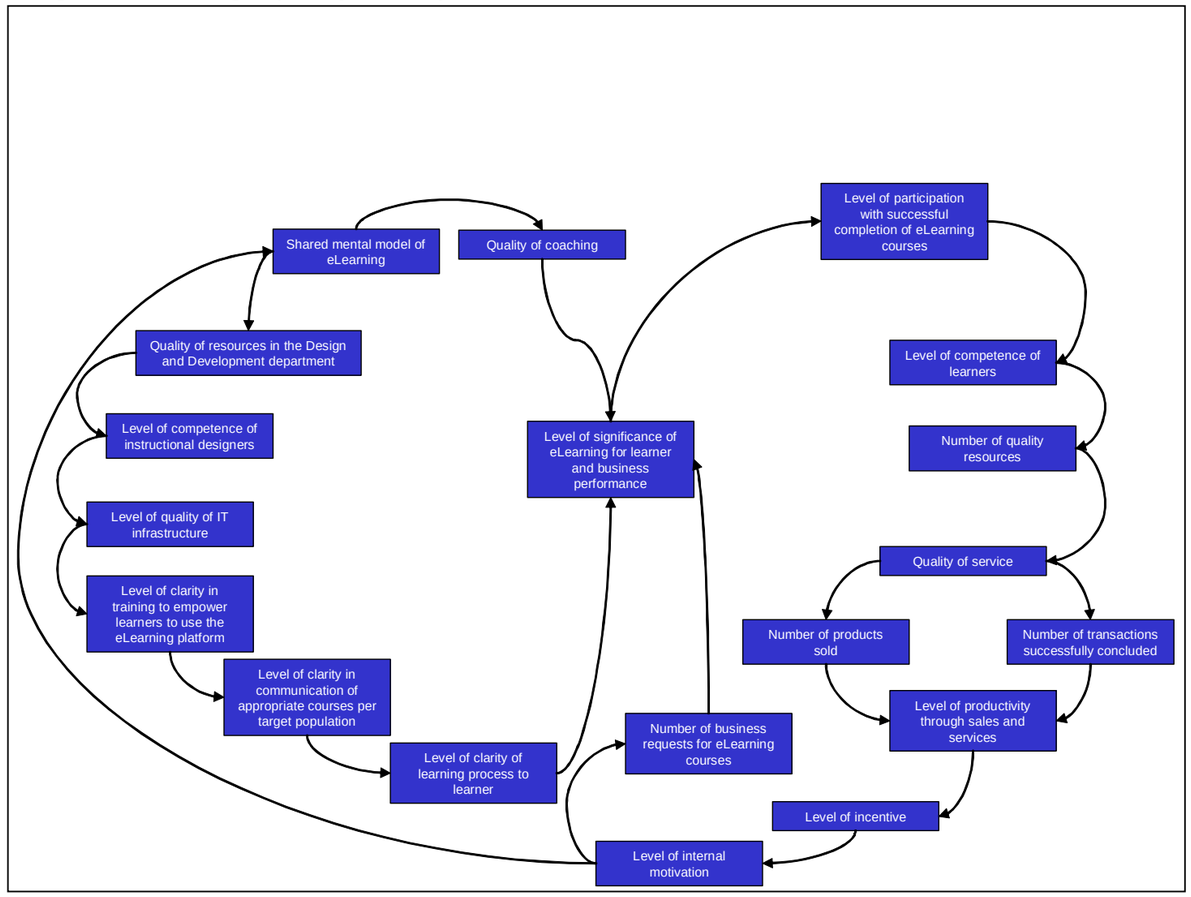
4.5.5. How can the elements of the system in focus (SIF) be represented systemically?

The **systems dynamic model** is a 'picture' of the deeper structure of the problem or phenomena (in this case the SIF) at hand being investigated. In order to create this model, the SIF was determined. Based on the SIF, the stakeholders with the most influence in that system were determined. Thereafter the MOPs and the co-producers were identified. A **systems dynamic loop** was drawn for each MOP and its relevant co-producers. Each focus group therefore had two systems dynamic loops. The loops were then integrated into a systems dynamic model illustrating the systemic interaction between elements of the SIF.

In the case of each of the focus groups, the illustrated systems dynamic model was followed by a systemic story as written by the focus group participants. The systemic stories were requested from the focus group participants to ensure that the story was told according to the context of the participant and not that of the researcher. The stories also serve to extend the understanding of the thought processes within each of the focus groups.

Figure 4.9 represents the systems dynamic model as designed by Focus group 1.

Figure 4.9: Focus group 1: Systems Dynamic Model



Group 1: Systems Dynamic Model Story

*If we have a system that **entrench a shared expectations** of eLearning and its contribution to enhance business performance, we will then have a **shared mental model of eLearning**. This shared mental model will improve the quality of resources in the Design and Development Department. If the **quality of the resources** is improved, the level of **competence** of the instructional designers will improve.*

*If we have a shared mental model of eLearning, the **quality of the level of IT infrastructure** will improve. This will mean that there will be a level of **clarity in marketing and training** messages to empower the learners to use the eLearning platform. This will also be helped in that the level of clarity in **communicating** appropriate courses per target population will be met.*

*Because the level of **competence** of the instructional designers is improved, the level of clarity of the learning process for the learner will become clear and succinct. This will immediately create a level of **significance of eLearning** for the learner and the business performance. This will influence the **level of participation** with successful completion of eLearning courses, thus increasing the level of competence of the learners and improving the number of quality resources.*

***Quality resources** will lead to quality service that will be measured in two ways:*

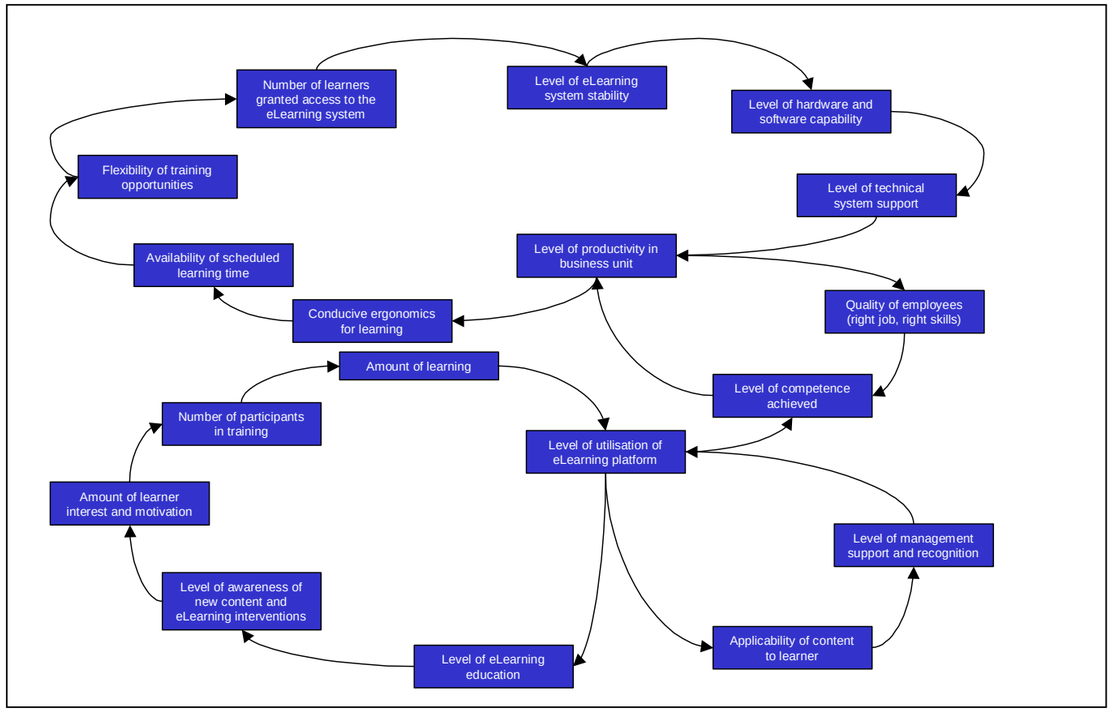
- *number of products sold; and*
- *number of transactions successfully concluded.*

*These two measures will impact on the **level of profitability** through increased sales and services. Having a shared mental model will also help in the **quality of coaching** to show the level of significance of eLearning for learners and business performance.*

*Due to the level of **internal motivation** shown because of the level of profitability through sales and services, the link is directly made to the shared mental model of eLearning, because the learners **know what is in it for them and what is in it for the business***
(Story as told by the Focus group participants: July 2004).

Figure 4.10 represents the systems dynamic model as designed by Focus group 2.

Figure 4.10: Focus group 2: Systems Dynamic Model



Group 2: Systems Dynamic Model Story

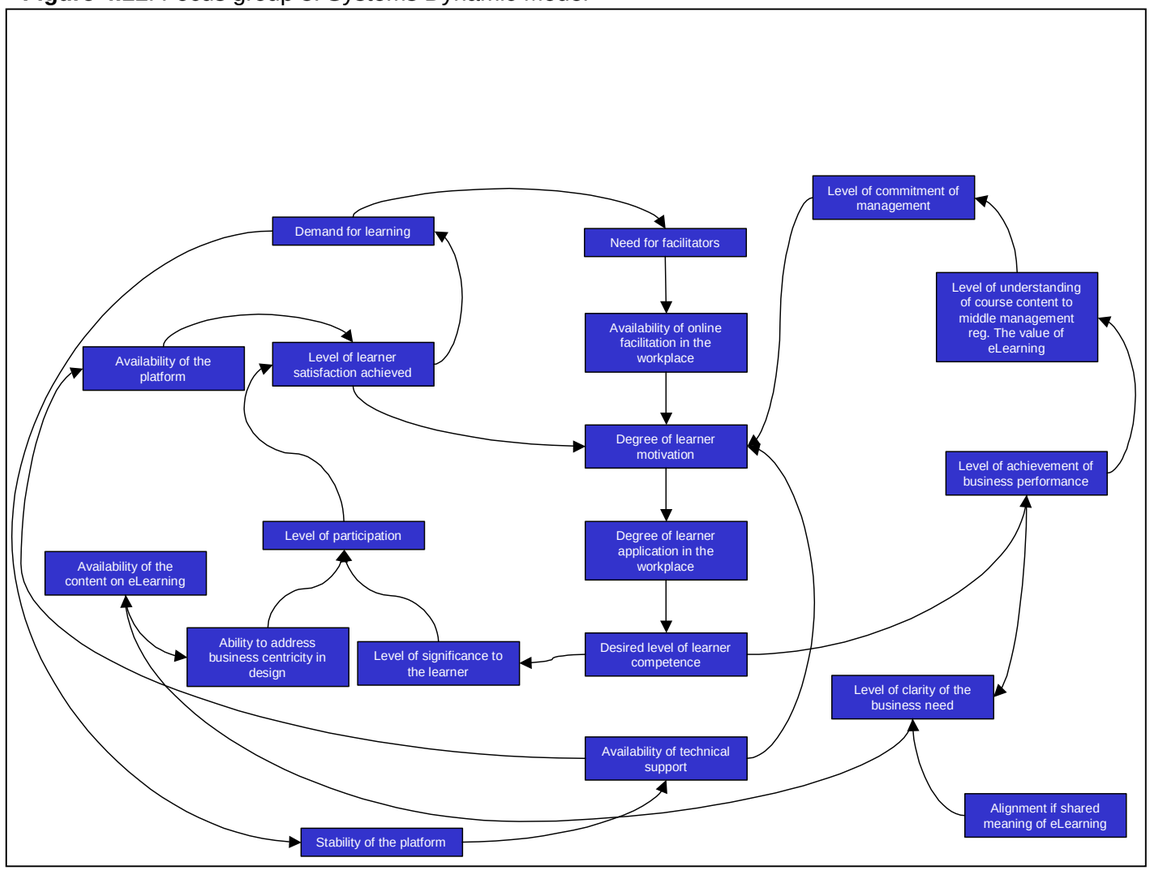
*A departure point to **leverage eLearning** as a contributor to improve business performance, is an awareness and educational effort that creates a shared mental model around eLearning and Business. Coupled to this, a technology infrastructure and **support** system needs to be in place.*

*Given the above, **utilisation of eLearning** is directly linked to the application of the content; from an organisational, business unit and learner perspective. Linking of training needs to meet SBU **strategic objectives** and goals will create this applicability for the SBU and linking of training to **performance management** will create this for the learners. Once the applicability and link to the business and/ organisational goals and the learner is in place, the learners will see the **'what's in it for me',** as well as **the management who will provide more support**, encouragement and enable learners, both from an **ergonomic** and system access point of view, as well as **motivational** aspects.*

*Ultimately, this will lead to **participation in new training** which, when directly linked to Business unit or organisational goals and performance management, will **increase productivity** and thereby close the leverage point that eLearning will be a contributor to improved business performance* (Story as told by the Focus group participants: July 2004).

Figure 4.11 represents the systems dynamic model as designed by Focus group 3.

Figure 4.11: Focus group 3: Systems Dynamic Model



Group 3: Systems Dynamic Model Story

*If there is **alignment between the stakeholders and shared meaning** regarding eLearning and Business, it will lead to a level of **clarity of the business needs**, which will, in turn, enable the instructional designers to address the business centricity of the design. This will lead to a **higher participation**, as we will address the need of the learner, leading to higher learner satisfaction. Learner **satisfaction** will lead to a higher demand for learning. The **higher demand** for learning will lead to an increased **need for facilitation** which leads to an increased need for online facilitation time. This will lead to a **higher degree of learner motivation** back in the workplace. This will mean a higher degree of **learner application** in the workplace. The increase in learner application will result in the desired level of **learner competence**. This will increase the level of **achievement** of business performance that will, in turn, increase the level of understanding of **course content** to middle management with regards to the value of eLearning. This will lead to a higher level of **commitment of management** who will, in turn, influence learner **motivation**. The demand for learning will influence the **stability of the platform** because the number of learners will increase. This will demand a higher level of availability for technical support that, in turn, will influence the availability of the platform. It will further lead **to learner motivation and satisfaction**.* (Story as told by the Focus group participants: July 2004)

During the design of the systems dynamic models, the behaviour of the focus group participants was recorded in order to collect evidence for **Research Objective 4**[17]. The design of the systems dynamic models was **started on Day 2** and **completed on Day 3**. The group behaviour over the two days is reported separately as the dynamics between the participants changed.

Observation feedback as provided by the observers

Day 1:

Focus group 1 *appeared to battle with the task and was not able to settle down and function effectively. The natural leader was visibly frustrated with the situation and demonstrated defensive behaviour. However, due to the manner in which some of the members of the group challenged and questioned the process, the group was still able to progress. Both leaders in* ***Focus group 2*** *appeared to have difficulty with the task and displayed similar defensive behaviour as observed for Focus group 1. The facilitator identified the need to assist them with the process and thereby enabled the group to proceed with the task. At one point, the group revisited their stakeholder analysis and was then able to progress, which illustrates the rigorousness of the process. As a result of the deep level of thought-processing that was taking place in* ***Focus group 3*** *in the previous session, the group continued to function optimally in this exercise. The group engaged in high levels of constructive challenging, questioning and generating ideas.*

[17] **Research Objective 4 – Question 1**: How did the behaviour of the individuals participating in the research process influence the research inquiry?

Observation feedback as provided by the observers, continued

Day 2:

The group members remained in the same groupings as the previous day. One of the members from ***Focus group 3*** *did not return on Day 3. Due to the levels of frustration that occurred in* ***Focus group 1*** *the previous afternoon, the natural leader took it upon herself to reorganize some of the work generated by the group. When the rest of the group arrived, it appeared that they had a sense of relief that someone had managed to sort out the task for them. However, both the natural leader and the new leader that had emerged on Day 2, spent considerable time ensuring that each of the group members had shared meaning and was in agreement with the new outcome of the task. The facilitator provided the group with their next instruction; combining the systems dynamic loops to create the systems dynamic model. Again, due to the complexity of the task, the defensive behaviour patterns reemerged. One member of the group adopted the harmonising role and facilitated the session to ensure the group meets its objectives. As a result, the team managed to complete the task with a moment of celebration. When* ***focus group 2*** *arrived, they appeared to have a renewed willingness to participate and displayed high levels of energy. Although it was apparent that they were battling with the task, it appeared that they were eager to work at the challenge. The participation level reached its peak in this session. The group progressed well, but not at the same pace as Focus groups 1 and 3. As a result, they had increased pressure to complete the task before the end of the session.*

Observation feedback as provided by the observers, continued

During the tea break, the natural leader took it upon herself to reorganise some of the work generated by the group. When the group returned, the leader shared the new outcome of the task with them. The energy levels in the group were negatively influenced and the group appeared to loose interest in the exercise.

After the group received the final instruction for the session - combining the systemic dynamic loops to create the systems dynamic model - they demonstrated fatigue and frustration. The group was not able to progress at all, and asked for help from the facilitator. As a result of the increased involvement of the facilitator in assisting them with the process, the group did manage to complete the exercise. However, it is questionable whether they would have managed to do this without the intervention of the facilitator.

*Although **Focus group 3** was short of one of its members, the synergy within the group continued from the previous day. The level of thought-processing from the previous day negatively influenced the levels of energy in the group. However, their passion for the subject matter was still evident and the levels of dialogue and participation remained high. By Day 2, this group had formed into a healthy, functioning team and was therefore able to manage the complexity of the three-day session.*

Observation feedback as provided by the observers, continued

It was apparent that in both Focus groups 1 and 2, the members were spiraling in the "storming" phase of the Groups' development, and hence were not functioning as effectively as earlier in the process, on Day 2. ***Focus group 2*** *appeared to have experienced greater difficulty with the tasks over the three days.*

Given the complexity of this exercise, the interpersonal dynamics ***within Focus groups 1 and 2*** *presented a challenge, whereas Focus group 3 applied their minds collectively to the task as a high performance, self-organised team. Due to the difficulty experienced by the groups, the facilitator continually visited each group to check their process. At no point did she influence the content, but rather guided the process by asking questions. Due to the level of complexity of the task and the groups' requests for guidance in terms of the process, the researcher conferred with the facilitator at times. The observers are of the opinion that she did not influence the content at any time. The approach was to ask each focus group to "tell their stories" to assist them in checking their own approach.*

On 18 July 2003, the content, as produced by the focus group participants, was **presented to a group of verifiers**. The main objective was to **validate and audit** the data produced and analysed by the focus group participants.

The second part of the systemic inquiry process was explained to the verifiers, the data and outputs produced were presented, and then the essence of the verifier comments was captured.

Verifier comments on the results produced by each focus group

Focus group 1

- *No breakdown in logic can be found.*
- *We* [the verifiers] *can identify ourselves best with the story presented by this group.*

Focus group 2

- *The SDM and the story told cannot be compared to each other. It almost seems as if the writer of the story tells his/her own story and not the story of the group.*
- *There are specific places where the logic described cannot be followed.*
- *There is no apparent depth in story told.*

Focus group 3

- *Clear differences in the insights and the contributions of the focus group participants can be seen.*

Generic comments from the verifiers

The following comments were made about the total picture that was verified:

- *clear differences in the insights and the contributions of the focus group participants can be seen*; and
- *There are common messages and meanings between the results produced by the focus groups.*

As a closing to the verification process, the verifiers were also requested to **comment on their participation in the process** in terms of the:

- value of the process; and
- personal value derived from their participation in the process.

The following **positive process comments** were made:

- *I like the comprehensiveness of the process and was especially impressed by the final products and the insight it seemed to have created with all the participants.*
- *The process was logical and methodological. The process accommodated off-the-cuff comments.*

- *I felt that the process was scientific and defensible in terms of data collection for the purpose of the study.*
- *I think it would be interesting to explore the impact on the individuals involved regarding their own mental models around learning.*
- *A sound research model.*

The following **constructive comments** were made about the process:

- *I am still concerned about the fact that all the parties identified 'shared meaning' as a common driver.*
- *The process might have been intimidating to some participants whose knowledge on the subject was limited.*

The **comments below were made about the personal value** that the verifiers experienced through the process.

- *I enjoyed the mental challenge and cognitive interaction.*
- *It sparked off a reading spree into areas such as eLearning return on investment.*
- *I enjoyed the view we had on what the learners experienced.*
- *I have learnt a lot from the process. It challenged my assumptions.*
- *I realise that bigger systems issues influenced the issues around eLearning.*
- *The whole exercise confirmed to me that all people management practices have to be implemented and driven by business strategy and context.*
- *The conversations affirmed many of my intuitions regarding trends and future requirements in the field.*
- *It assisted me in my own journey of challenging assumptions, practices and mental models in the discipline of learning.*
- *I also thoroughly enjoyed the inputs of the other verifiers. It was very stimulating and interesting. Thank you!*

4.6. Integrated Systems Dynamic Model

Based on the data produced by the focus group participants and the feedback of the observers, moderator and verifiers, the systems dynamic models were integrated and a single leverage point was established.

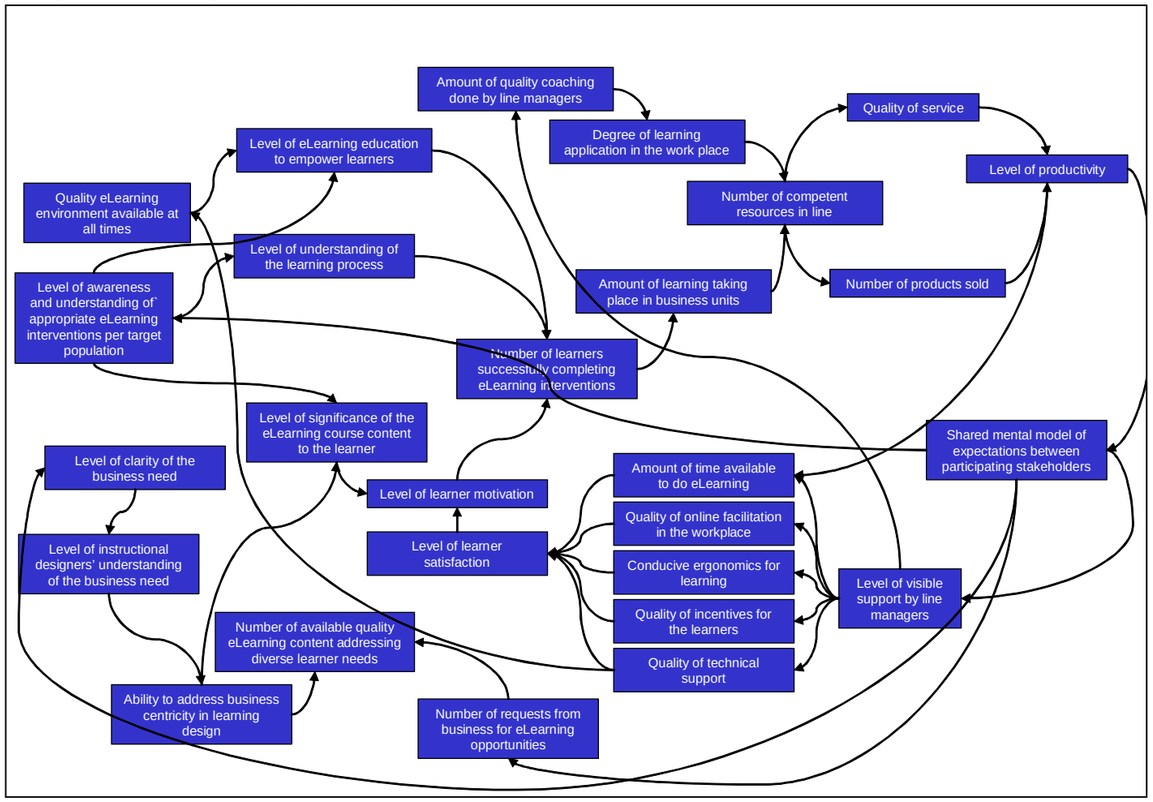
Ten **common themes** were identified from the three systems dynamic models:

1. Learning;
2. Shared meaning/significance of eLearning;
3. eLearning;
4. Technology;
5. Design and Development;
6. Content;
7. Business;
8. Learners;
9. Support; and
10. Communication.

The relationships between the themes were built, utilising the stories produced by the focus group participants.

Twenty-eight statements were re-written and utilised to create the new integrated systems dynamic model. The **integrated Systems Dynamic Model** is graphically represented in Figure 4.12.

Figure 4.12: Integrated Systems Dynamic Model



The integrated systems dynamic model story

The starting point of the story is a **shared mental model** of expectations between the participating stakeholders (Business and Learning and Development) regarding the contribution of eLearning to business performance. The shared mental model influences four elements on the SDM:

1. Level of **visible support** of the line managers;
2. Level of **clarity of business needs** to all relevant stakeholders;
3. **Number of requests** from business for eLearning opportunities; and
4. Level of **awareness and understanding** of appropriate eLearning interventions per target population.

The **level of support from the line managers** becomes visible through elements such as the quality of incentives available for the learners; provision of time to do eLearning during work hours; quality of online facilitation in the workplace; conducive ergonomics for learning; provision of quality technical support; and provision of quality coaching by line managers. The combination of the six factors above leads to an increased level of learner satisfaction. If the learners feel good about their achievements and the recognition thereof, this will increase their motivation to participate in eLearning courses.

The increased quality of **technical support** leads to the availability of twenty-four hours a day, seven days a week quality eLearning environment. Having such a stable, accessible environment could allow an increased number of learners in Absa access to learning through the provided eLearning courses. An increased level of clarity of the business needs will increase the level of understanding (or shared meaning) that the instructional designers have of the topic at hand. The increased understanding will, in turn, increase the ability of the instructional designers to address business centricity in their designs. This element, together with the increased number of requests from business for eLearning opportunities, will lead to richness in the availability of flexible quality eLearning content addressing diverse learner needs. The availability of quality eLearning opportunities will increase the potential number of learners completing eLearning interventions.

The increased level of awareness and understanding about eLearning interventions available for specific target populations and the business centricity of the learning design, will increase the level of significance of the eLearning course content to the learner. An increased level of significance will increase the internal motivation of the learner, which will, in turn, enable the successful participation of learners in eLearning interventions.

The increased level of awareness and understanding will further lead to an increased level in eLearning education empowering the learner, as well as ensuring an enhanced understanding of the learning process. These two elements may both lead to an increase in the number of learners successfully completing eLearning interventions.

The **completion of eLearning courses** increases the amount of learning taking place in the business unit. The learning, together with the quality coaching by the line managers, increases the degree of learning application in the workplace and thus increases the number of competent resources in line. The more competent resources will provide improved quality of services and sell more products. The successful conclusion of these transactions will lead to an increased level of productivity – improving the business results. With more money available, it can increase the quality of incentives for the learners.

The story closes with the start in mind. Every time the systemic route is completed, the shared mental model of eLearning contributing to business performance is enriched and confirmed, leading to positive reinforcement of the phenomenon.

4.7. Research Objective 3: To identify the leverage point within the systems dynamic model (SDM)

The following subsidiary questions were asked in order to realise the research objective:

1. Which of the co-producers influence the systems dynamic model the most?

In order to identify the co-producer/s that impact the SDM the most, the starting point of the story is identified.

Focus group 1: The starting point of the story is a shared mental model for eLearning.
Focus group 2: The starting point of the story is the awareness and education that will create a shared mental model regarding eLearning and Business.
Focus group 3: The starting point of the story is an alignment between the stakeholders and shared meaning regarding eLearning and Business.

The three leverage points that were identified are similar in that they address how people think about eLearning and Business. The recurring message is about reaching a **common understanding between stakeholders**. In this study this implies that both **Business** and **Learning and Development** must have the same departure point and end result in mind for the eLearning intervention. There must therefore be an agreement between the expectations from all stakeholders

Based on the integrated systems dynamic model, the starting point of the story is a **shared mental model** of expectations between the participating stakeholders (Business and Learning and Development) regarding the contribution of eLearning to business performance. The leverage point identified from the systems dynamic model is:

A shared mental model of expectations between the participating stakeholders

In this study the shared mental model is about how eLearning can improve business performance. The stakeholders represented in this study are:

- Business: Operational management and employees; and
- Learning and Development: Operational management and instructional Designers[18].

Thus, the leverage point for improving business performance through eLearning is a **shared mental model of expectations between the participating stakeholders** with regards to how the eLearning solution will contribute to business results. **In addition the systems dynamic model also highlights the requirements that are necessary from a Business point of view to capitalize on the eLearning intervention**. Examples of these requirements are 1) support from operational management and 2) a stable technology infrastructure.

During the design of the integrated systems dynamic model and the identification of the leverage point, **the creation of a story articulates the shared mental model of the participants**. In the story, it is as important to look at where there are relationships between co-producers, as it is to look at where there are no relationships between co-producers.

Both Business and Learning and Development agree that that the eventual outcome that they want to achieve is an increased level of productivity produced by an increase in the quality of service and the number of products sold. This leads to the creation of income for the specific Business Unit. In the systems dynamic model, the stakeholders (participating in the study) agreed that learning in general contributes to the competence of the resources in Business. These resources enable the increased productivity through the quality service in products sold.

The competence of the resources are build through formal eLearning interventions taking place, as well as more informal coaching done by operational managers. The coaching should be done in order to ensure that the theory, learnt via the eLearning intervention, is practically transferred to

[18] A detailed breakdown of the sample participating in the study is available in Chapter 3.

and implemented in, the working environment. Prerequisites for the positive completion of the eLearning interventions are that there should be a:

- stable technology infrastructure enabling a quality eLearning environment at all times.
- clear understanding of how to utilise the eLearning infrastructure.
- clear understanding of the learning process.
- high learner motivation.

The quality eLearning environment is built through the stable technology infrastructure as well as courses that address business centricity in learning design.

Learner satisfaction is a key point for increasing learner motivation. The satisfaction of learners are created through different actions including allocation of time to participate in eLearning interventions, availability of online facilitation, conducive ergonomics for eLearning, quality incentives for learners as well as the right level of technical support. These actions are managed and executed by line managers[19] (operational management).

From the story it can be seen that the influence that the operational manager has over the success or failure of the eLearning is intervention is significant. While executive management can support the creation of the environment, it is up to the operational managers to make the environment real.

Although they were against eLearning at the start of the process, the operational management as well as the team leaders agreed that if they had a clear picture or shared mental model on what they could expect from eLearning and what the eLearning implementers expected from them, they would be more supportive of the interventions. They also stated that they came to an understanding of how eLearning contributes to business performance through the conversations during creation of the systems dynamic model.

Therefore, while the research question asks for a leverage point, it is only one aspect of the answer to the question of how eLearning contributes to business

[19] In Absa operational managers are sometimes referred to as line management.

performance. The second level of the answer lies in the story of systems dynamic model illustrating that eLearning contributes to competence of individuals. This competence empowers the individuals to increase their productivity.

Once Business and Learning and Development starts going through the constructive cycle of the systemic model repeatedly, they will continuously build the **shared mental model of expectations**. This constructive cycle will build on the:

- Level of **visible support** of the line managers;
- Level of **clarity of business needs** to all relevant stakeholders;
- **Number of requests** from business for eLearning opportunities; and
- Level of **awareness and understanding** of appropriate eLearning interventions per target population.

The execution of the research methodology including the design of the systems dynamic models and the identification of a leverage point were observed throughout.

4.8. Research Objective 4: To reflect on the effect that the behaviour of the individuals, participating in the research process, has on the research inquiry

The following subsidiary questions were asked in order to realise the research objective:

1. How did the behaviour of the individuals participating in the research process influence the research inquiry?
2. What effect did the process have on the individuals participating in the research inquiry?

Data for this research objective was collected from the observers, moderator, verifiers and focus group participants.

The data from the observation report[20], post focus group debriefing with the observers and the moderator, and the interview with the verifiers, was utlised

[20] The original observation report as provided by the Observers is attached as **Appendix S**.

to determine the effect of the behaviour of the focus group participants on the process. The data collected from the post focus group questionnaire was used to determine what effect the process had on the individuals participating in the systems inquiry.

The debriefing discussions held with the moderator and the observers, as well as the verifier comments, were documented as part of the process in providing data for the specific research objectives.

4.8.1. How did the behaviour of the individuals participating in the research process influence the research inquiry?

The participants within the focus groups influenced each other as well as the outcome of the conversations that are documented as part of the process. It was therefore important to observe how the behaviour of the individuals influenced the outcomes.

The data collected for answering this question was reported throughout this chapter as summarised behavioural data (per research objective and subsidiary question). The two observers that participated in the study produced a detailed report.
The report follows the flow of the execution process and reports the data in terms of the research questions that were answered during the three-day process. It begins with observation on the activities for Research Objective 1, followed by the activities for Research Objective 2 and Research Objective 3. In addition, a short conclusion is provided at the end of the report.

In **conclusion**, the observers stated the following[21]:

> *The observers qualify the outcome of the three-day session as being a true and valid representation of the collective view of all participants. The way in which the process was facilitated ensured open discussion on the topic and each participant was able to contribute to the shared working space. The researcher did not influence the methodological process used in this study. The moderator was an objective and neutral role-player who executed the required steps of the process without influencing content. The profiles of participants at this session represented both a Learning and Development and Business view. This inherently resulted in participants from a variety of different levels of work being present. The participants eloquently captured the value of the integrated participation at the end of the session. Both Learning and Development and Business representatives reflected on the three days and* ***stated that their personal learning was to listen to one another and to really hear what each other's needs were****. The opportunity for the levels of true dialogue and shared understanding that took place between the business and specialist functions in this process is highly valuable in the business context and should not be underestimated. The process may be complete, but this component of the study has initiated an exciting journey ahead for Absa with regards to eLearning.*

The process also affected the individuals participating in the focus groups. A questionnaire was sent out to obtain feedback.

[21] The original observation report as provided by the Observers is attached as **Appendix S**.

4.8.2. What effect did the process have on the individuals participating in the research inquiry?

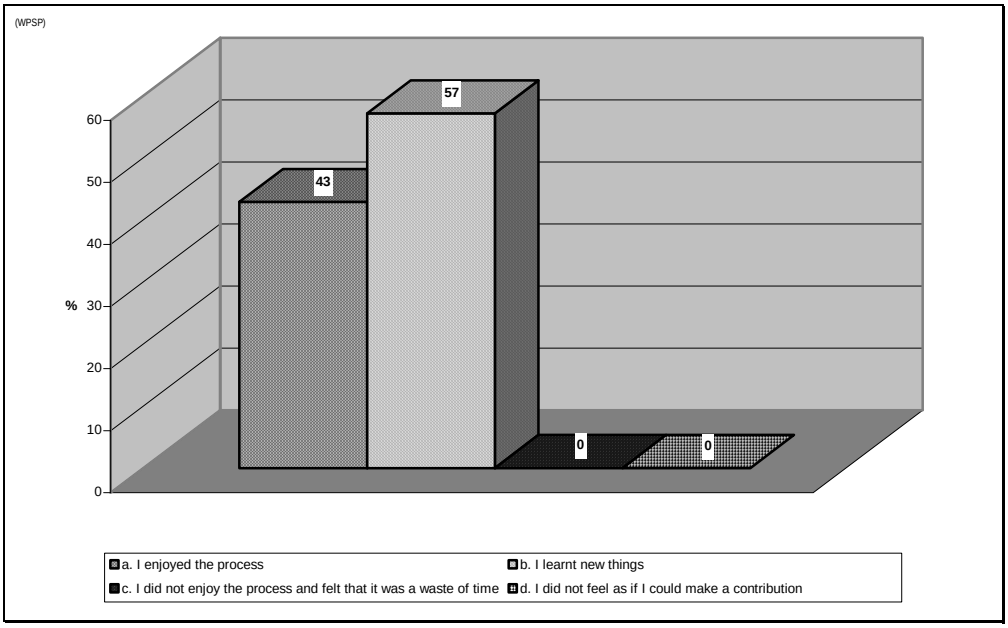
During the last verification session, the verifiers felt strongly that the effect of the process on the focus group participants should be determined. The questionnaire was aimed at obtaining feedback about the **Systems Thinking process** (Questions 1, 4, 5 and 7); the **logistical arrangements** (Questions 2, 8 and 10); the **objectives of the session** (Question 3); and the **learning** taking place (Questions 6, 9 and 11).

The questionnaires were sent out via email to all participants, including those who only participated in Day 1 of the process. **Ninety-five percent** of the participants responded. Subsequently, each question and the relevant results are discussed.

Question 1: How did you feel about the Systems Thinking process?

The objective of the question was to understand what the **effect of the Systems Thinking process** was on the focus group participant. The respondent was requested to select a response between enjoying the process, learning new things, feeling that the process was a waste of time or not being able to make a contribution. The data obtained from the answers to this question is presented in Figure 4.13.

Figure 4.13: Post focus group questionnaire: Results from Question 1

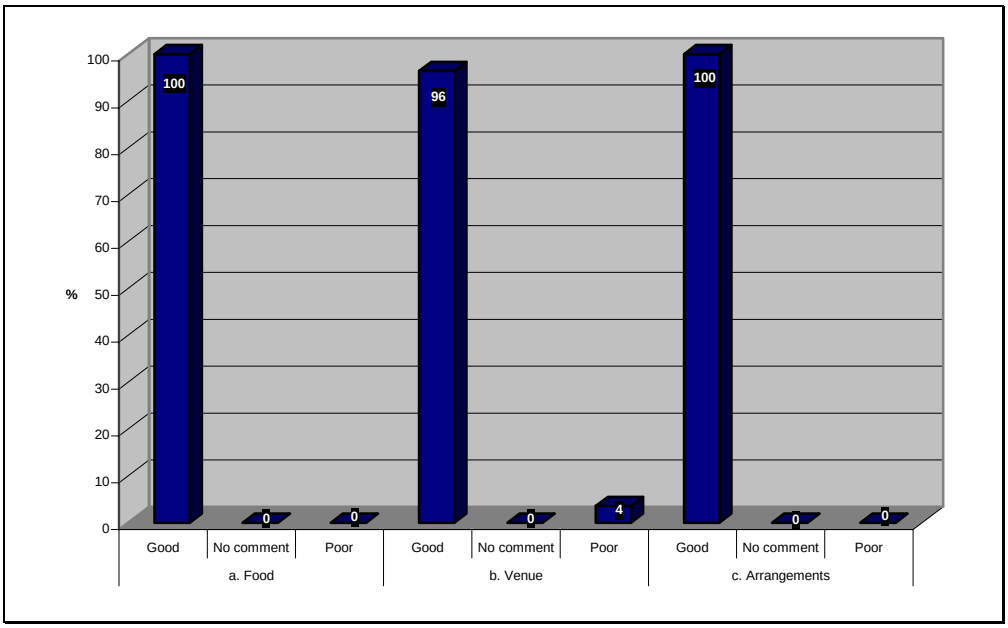


Forty three percent of the of the focus group participants reported that they **enjoyed the process** and 53% of the participants felt that they **learnt something new**. None of the participants felt that the process intimidated them, that it was a waste of time, or that they could not make a contribution.

Question 2: How did you feel about the logistical arrangements of the process?

Literature indicated that successful logistical arrangements contribute to the success of focus groups (Greenbaum, 1988; Krueger & Casey, 2000). This question was asked to obtain feedback from the focus group participants regarding the **food, venue and arrangements** during the sessions. The respondents were requested to indicate whether each of the elements was good, poor or no comment. The data obtained from the answers to this question is presented in Figure 4.14.

Figure 4.14: Post focus group questionnaire: Results from Question 2

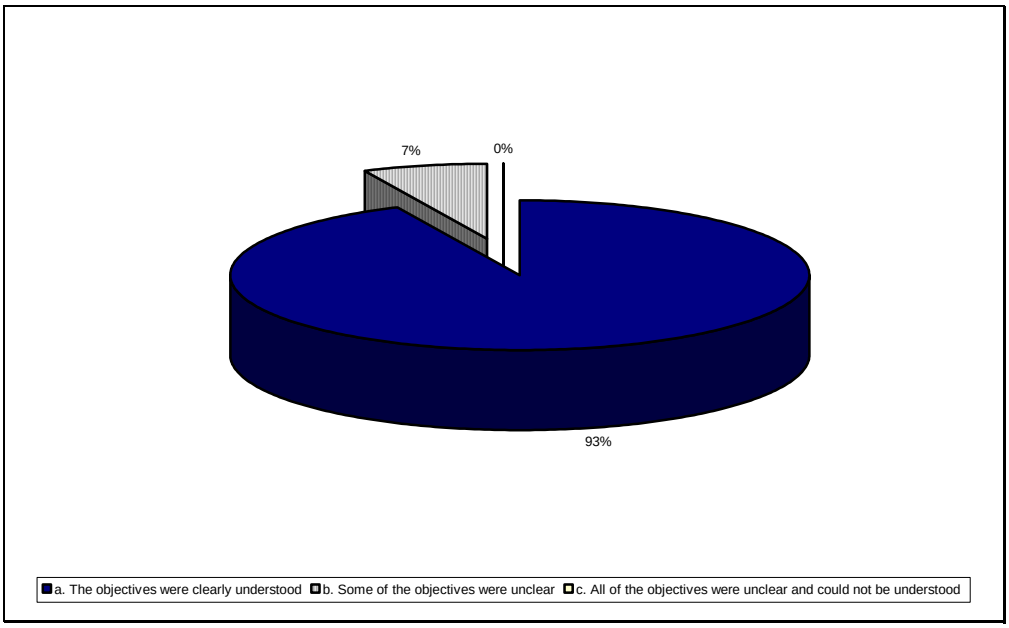


Ninety-nine percent of the participants felt that the **food, venue and arrangements** were good. One participant felt that the venue was not appropriate.

Question 3: Did you clearly understand the objectives of the Systems Thinking process?

This question was asked to determine if the participants **understood what they were requested to do** during the focus group sessions. The respondents were requested to indicate the degree to which the objectives were understood. The data obtained from the answers to this question is presented in Figure 4.15.

Figure 4.15: Post focus group questionnaire: Results from Question 3

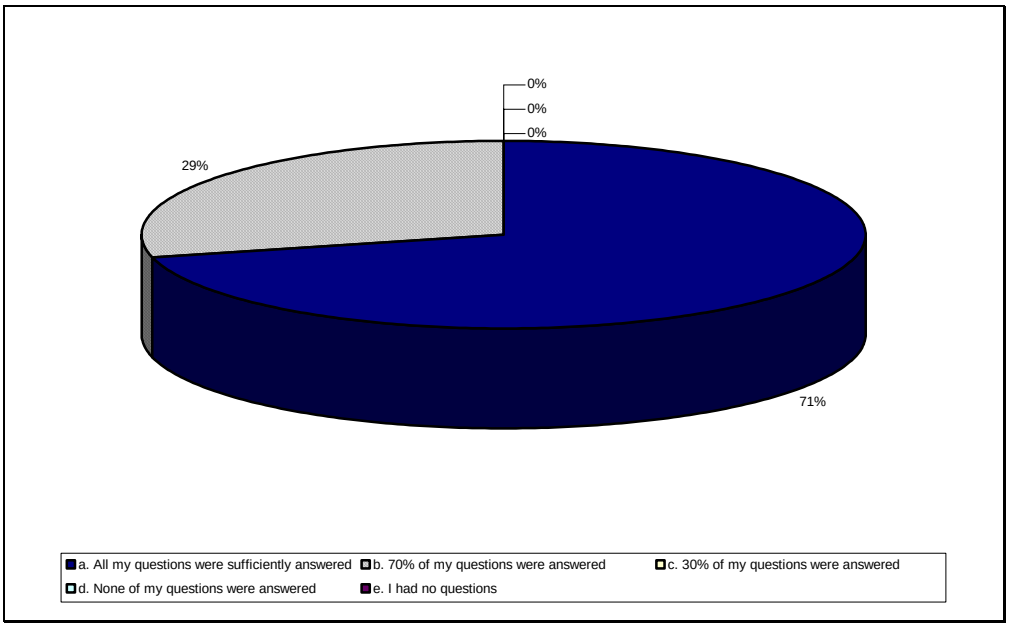


Ninety-three percent of the participants felt that the objectives were **clearly understood** and seven percent felt that some of the objectives were unclear. None of the participants reported that they could not understand any of the objectives.

Question 4: Were all your questions answered during the Systems Thinking process?

This question was asked to determine the extent to which the focus group participants felt that their **questions were answered**. The respondents had to select the degree to which their questions were answered. The available options ranged from having all questions answered to having no questions answered. An additional option was given for candidates who felt that they had no questions to ask. Thus it gives an indication to the clarity of the process applied. The data obtained from the answers to this question is presented in Figure 4.16.

Figure 4.16: Post focus group questionnaire: Results from Question 4

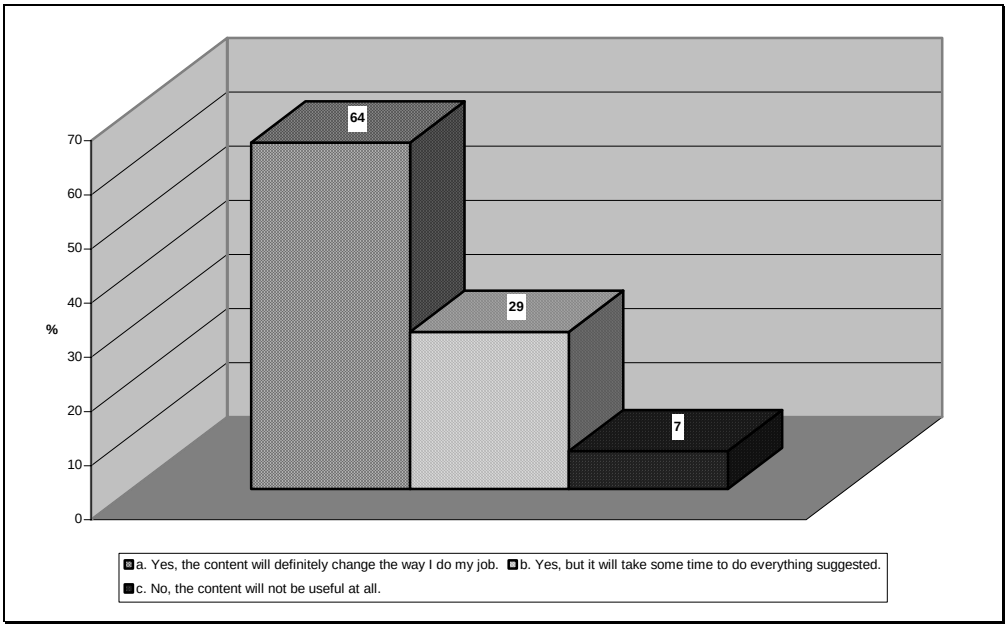


Seventy-one percent of the participants felt that their **questions were sufficiently answered**. Twenty-nine percent of the participants reported that **70% of their questions were answered**. None of the respondents selected options c, d or e.

Question 5: Will the results of the Systems Thinking process contribute to your working environment?

The objective of this question was to determine if the content of the process would have an **effect on how people work**. The selection range included immediate implementation, implementation over time or no implementation at all. The data obtained from the answers to this question is presented in Figure 4.17.

Figure 4.17: Post focus group questionnaire: Results from Question 5

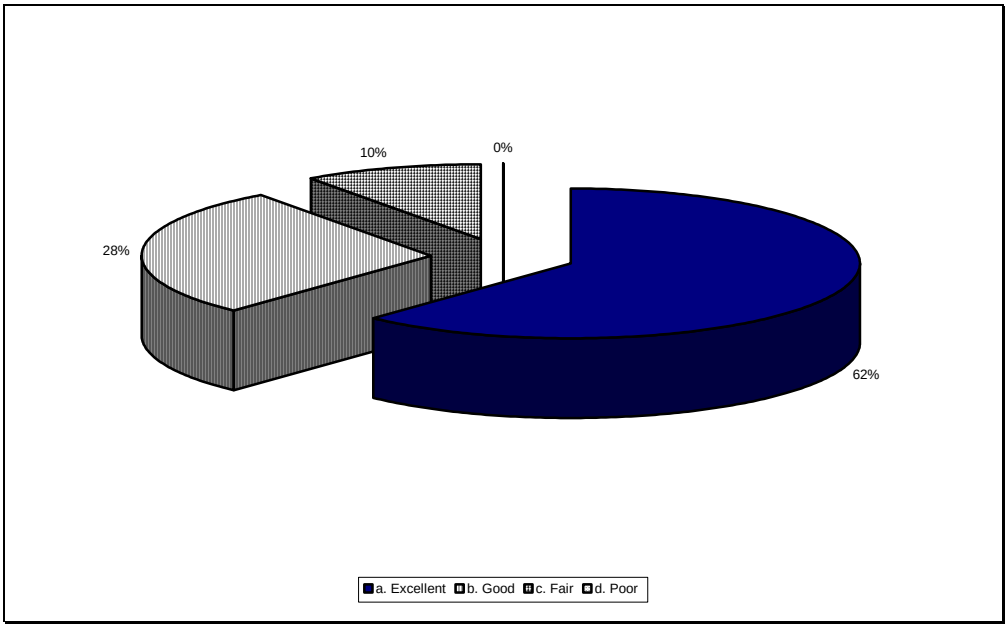


Sixty-four percent of the participants felt that the content of the workshop would **make a difference** to how they would do their work in future. Twenty-four percent felt that it would make a difference, but that it would take **time to become competent**. Only seven percent of the respondents felt that the process **could not add any value** to their work.

Question 6: Which one of the following terms describes your overall learning best?

Systems Thinking is proclaimed in literature as a process that also enables learning (Senge *et al.* 2001). This question was asked to determine the **quality of the learning** of the focus group participants. The selection options were excellent, good, fair or poor. The data obtained from the answers to this question is presented in Figure 4.18.

Figure 4.18: Post focus group questionnaire: Results from Question 6

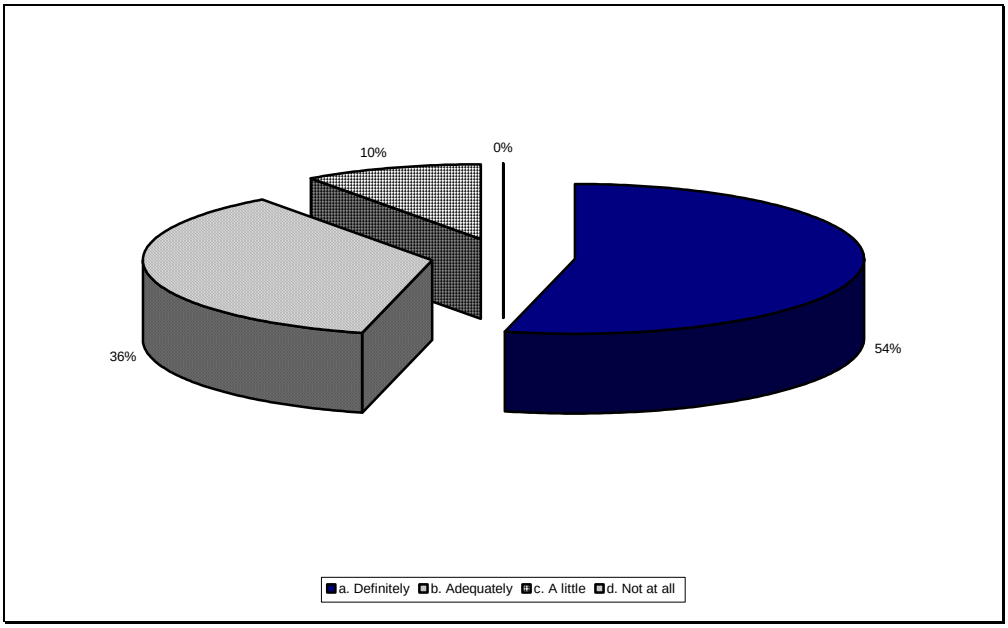


Sixty-two percent of the participants felt that the term 'excellent' described their overall learning best. Twenty-eight percent described their learning as good and ten percent described their learning as fair. None of the participants felt that their learning was poor.

Question 7: Did the Systems Thinking process meet your expectations?

This question was asked to determine the degree to which the process delivered an **expected outcome** as promised in the invitation letter. The respondents could select between definitely, adequately, a little or not at all. The data obtained from the answers to this question is presented in Figure 4.19.

Figure 4.19: Post focus group questionnaire: Results from Question 7

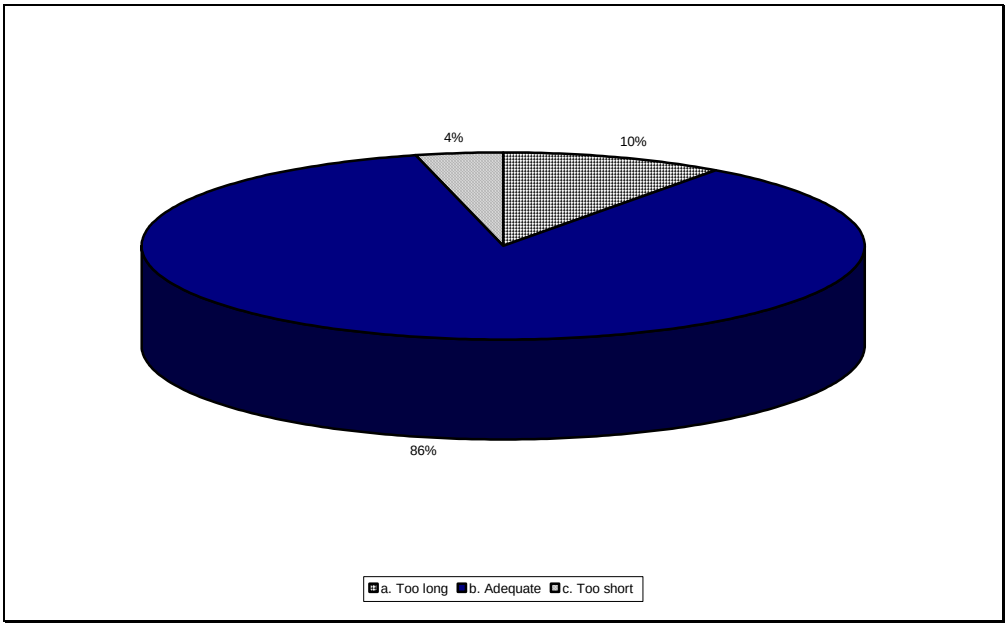


The workshop definitely met 54% of the **expectations** of the participants. Thirty six percent felt that their needs were **met adequately** while ten percent felt that their needs were met a little. None of the participants reported that their needs were not met at all.

Question 8: Three days of participating in a focus group was …

This question was asked to determine whether the **timing in the process** was correct. The respondents were asked if the time was too long, adequate or too short. The data obtained from the answers to this question is presented in Figure 4.20.

Figure 4.20: Post focus group questionnaire: Results from Question 8

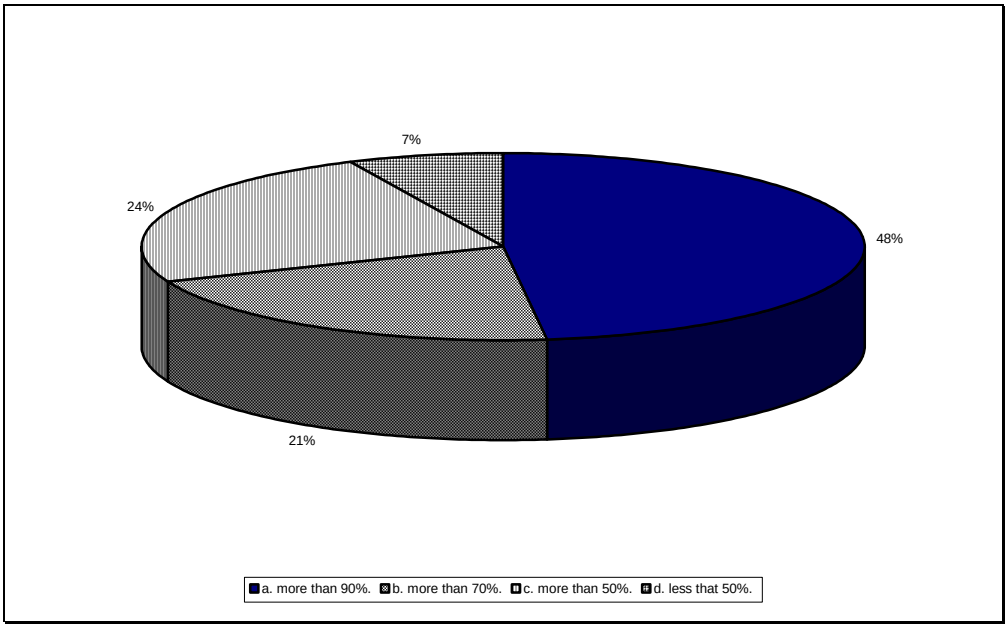


Eighty six percent of the focus group participants felt that the time spent to do the Systems Thinking process was adequate. Fourteen percent of the people were not satisfied with the time allocation – four percent felt it was too short and ten percent felt that it was too long.

Question 9: How much did you learn during the Systems Thinking process?

This question was asked to obtain the perception of the focus group participants with regards to their **own learning**. The respondents were requested to indicate the degree to which they had learnt during the process. The data obtained from the answers to this question is presented in Figure 4.21.

Figure 4.21: Post focus group questionnaire: Results from Question 9

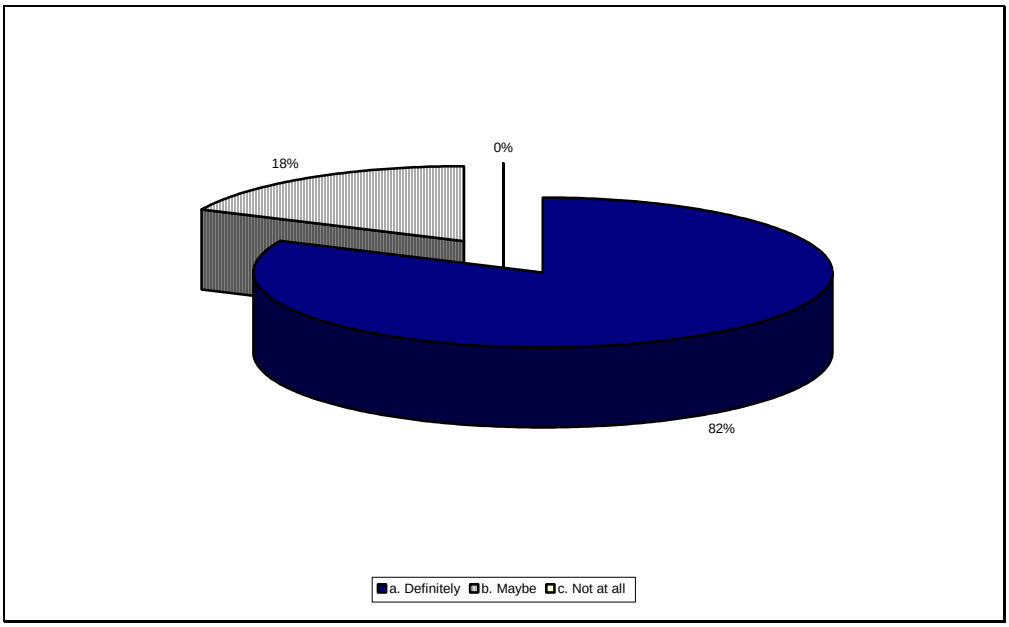


Forty-eight percent of the participants felt that they **learnt more than 90% during the Systems Thinking process**. Twenty-one percent felt that they had learnt more than 70%. Twenty-four percent felt that they had learnt more than 50% and seven percent felt that they had learnt less than 50%.

Question 10: Would you motivate your colleagues to participate in a similar session?

The objective of this question was to determine how **valuable the focus group participant felt that the process was**. The assumption was made that if the participant felt that it was valuable they would promote the process to a colleague. The respondents could select between definitely, maybe or not at all. The data obtained from the answers to this question is presented in Figure 4.22.

Figure 4.22: Post focus group questionnaire: Results from Question 10

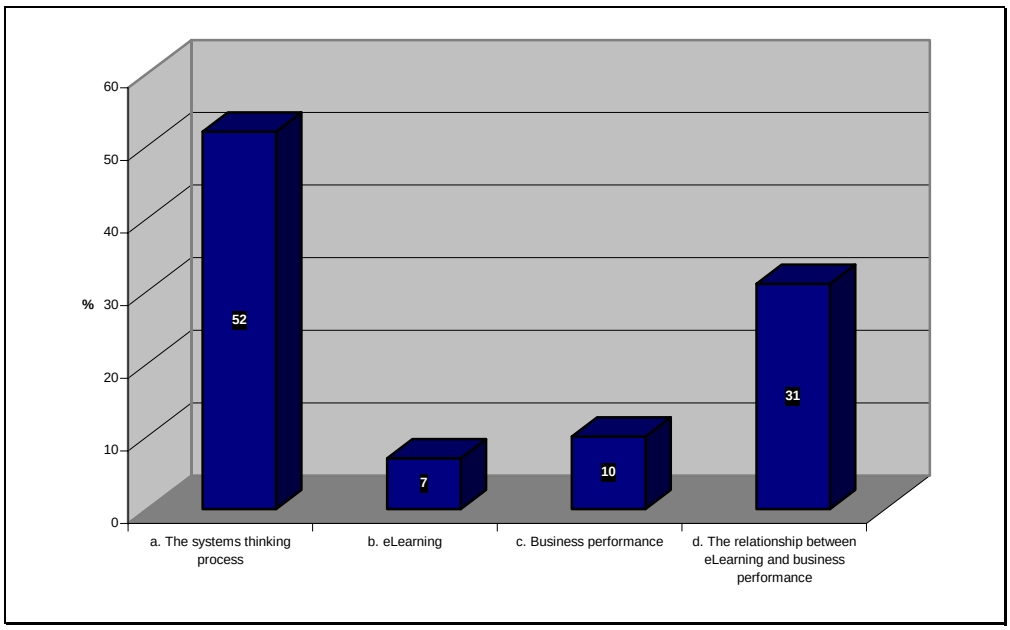


Eighty two percent of the participants reported that they would advise other people to **participate in a similar process**, while 18% said that they would 'maybe' do so. None of the participants felt that they would not promote it at all.

Question 11: Which of the following topics did you learn most about during the Systems Thinking process?

The objective of the question was to determine the **range of topics** that the respondents felt they had learnt about. The topics provided as options were the Systems Thinking process, eLearning, business performance or the relationship between eLearning and business performance. The data obtained from the answers to this question is presented in Figure 4.23.

Figure 4.23: Post focus group questionnaire: Results from Question 11



Fifty two percent of the participants felt that they learnt more about the **Systems Thinking process**. Seven percent felt that they had learnt more about **eLearning** while ten percent felt that they had learnt more about **business performance**. Thirty one percent of the participants felt that they had learnt more about **the relationship between eLearning and business performance**.

4.8.3. Summary of post focus group questionnaire responses

Feedback about the **Systems Thinking processes** indicated that the focus group participants enjoyed participating in the process, felt that they learnt something new and at least 70% of their questions were answered. The positive feeling about the process prevailed in the percentage of people indicating that their needs were met (90%) and that they would work with the process in future (88%).

Overall, the focus group participants felt the **logistical arrangements** in terms of food, venue, arrangements and the length of the session was sufficient. Further evidence for this was that 82% of the participants indicated that they would advise other people to participate in a similar process.

Most of the focus group participants indicated that the learning objectives were clear. Further to this, they found the process to be an excellent learning experience indicating that most of them learnt more than 70% during the process. The focus group participants indicated that the topic they learnt most about was Systems Thinking, followed by the relationship between eLearning and business performance.

General comments from the focus group participants included in the questionnaires are listed below.

- *The process was very insightful and a joy to be a part of. It would be great to be involved in a similar exercise in the future. I feel it would also contribute to the rest of the company if we can address more issues in this manner.*
- *No additional suggestions. However, I would like to comment on the method you utilised to reach the conclusion. It was great! There was no indication at the beginning that you can take a load of problems and then, in the end, end up with only one major concern. This is a wonderful method that you can apply in any other problem area of your life and I have already used it again.*

- I *would suggest that it would be better to book this session as a full three days because on the second day it was suggested that we might be finished by 13:00 and I think that a lot of the people there rushed to get finished and also squeezed in a meeting after 14:00 which might have an effect on the most important part of the sessions.*

In conclusion, the evidence indicated that the participants experienced the process as positive and that they enjoyed participating in the process. The participants further reported that they had learnt, albeit from different perspectives and different topics. The suggestions for improvement can be taken into account in future designs for similar focus group sessions.

4.9. Summary of case study evidence

In collecting evidence for the subsidiary questions of the research objectives, it was found that various **problems exist** with regards to eLearning, such as technology, communication, shared meaning, competence of learners, managers and instructional designers and links to business results. The focus groups linked the themes (grouping of problems) by determining the **relationship** between the relevant themes in that group. Each group identified **one driver problem**, for example: “Overall communication between stakeholders is insufficient”. Based on a verification process, an **integrated digraph** was designed that provided the basis for the second part of the research process.

In the second part of the process, a **system in focus** was designed, stating that: “a system in focus is a system that will entrench a shared mental model of eLearning and its contribution to enhance business performance”. In the next step, each of the focus groups identified two main **stakeholders** that had the most power over the system in focus. Examples of the stakeholders were middle management and Instructional Designers.

Measures of performance were designed for each of the stakeholders. Examples of the measures of performance were the “level of profitability through sales” and the “utilisation of the eLearning platform”. **Co-producers** were identified for each of the measures of performance. Examples of the co-

producers were the “number of training courses completed” and the “number of products sold”.

Having generated the MOPs and subsequent co-producers, the relationships between these variables were determined and **systems dynamic models** were designed. A **systemic story** was told for each of the systems models. The starting point of the story, representing the systemic model, defined the leverage point for each of the models.

Throughout the process, the **behaviour** of the individuals was **observed** and reported on as to how the behaviour influenced the outcome of the study. It was found overall that the behaviour of the focus group participants was conducive to the process. The focus group participants were also requested to share the effect of the process on them as individuals. The focus group participants felt positive about the process. They indicated that learning had taken place, that they were happy with the logistics and that some of them would re-apply the process.

Debriefing sessions were held at the end of each day with the moderator and the observers as to determine how the process could be improved. **Verifiers** were contracted to create an audit trial by checking the outputs produced by the focus group participants.

Finally, the outputs of the three focus groups were integrated utilising the outputs designed by the focus groups.

To conclude: the research findings were discussed in detail in this chapter. It was found that ‘**a shared mental model of expectations between participating stakeholders’** can be seen as a leverage point to improve business performance through eLearning.