

## CHAPTER 3

### A SYSTEMS VIEW OF THE FINANCIAL LITERACY INTERFACE

*The systems view looks at the world in terms of relationships and integration. Systems are integrated wholes whose properties cannot be reduced to those of smaller units.*

(Capra 1982:286)

#### 3.1 INTRODUCTION

This thesis proposes a financial literacy model that could be used to help bridge the gap between the information system and the human behaviour system, in order to enhance understandability and decision-usefulness. Beinhocker (2005:19) also sees the economy as a “complex adaptive system”. The financial information system and the human behaviour system can thus be viewed as two of the many subsystems comprising a complex adaptive system. These two systems interact with each other through the flow of financial information to the decision makers, and back. These systems also have to adapt to each other and to their environment, before decision making can occur. Hence if the communication of information between the decision-oriented information system on the one hand, and the human behaviour system on the other, is obstructed or clouded, the main objective of providing financial information is defeated.

The objective of this chapter is to use a systems view to explain the financial literacy interface between the information system and the human behaviour system. Beinhocker (2005:19) explains that a systems view provides one with a “... new set of tools, techniques, and theories for explaining economic phenomena”. A systems approach is also used because it gives a holistic and interdisciplinary view of both the interacting, ever-changing and complex information system and the human behaviour system. It is therefore necessary to explain certain aspects of a systems view of the organisation and, in particular, those involved in the decision-making process. Financial literacy

and its role in acting as a coordinating interface - common boundary - between the two systems are also elucidated.

Chapter 3 commences with an explanation of a systems view of the organisation, whereafter the human behaviour system (mind) and the information system (matter) are discussed in more detail. Financial literacy as the interface to bridge the gap between these systems is defined. The process of learning the financial language or technical terms used in financial reports is further considered, as well as the significance of feedback between the systems mentioned. The chapter concludes with a discussion of the intellectual capital necessary in both these systems and the cultural diversity between all role players.

### **3.2 A SYSTEMS VIEW OF THE ORGANISATION**

The organisation is more than a collection of assets, liabilities and people; it is about the way these resources interact with one another and the environment in which they exist. Various departments in the organisation produce financial and nonfinancial information and use information produced by external sources such as media releases, capital markets and others. Diverse individuals or groups of people also utilise this information for decision making. Because systems are defined as sets of interacting components that together form something more than the sum of their parts, the systems theory provides a useful tool to observe and analyse the interconnectiveness between the financial information system and the human behaviour system of the organisation. Beinhocker (2005:71) confirms that the systems approach can be applied to organisations because they can be regarded as social systems, which are “real physical systems made of matter, energy, and information; they are made up of people and all of that stuff outside your window, and they are just as subject to the laws of physics as any other phenomenon”. It is further assumed that the interaction and the feedback between the information system

and the human behaviour system may lead to an improved open social system, which in turn may inevitably lead to improved decision making.

For some time now there has been a definite shift towards a more holistic view of the world, viewing it in terms of integrated relations and complex structures. Since the beginning of the 20th century, there has been a breakdown of the mechanistic theory in favour of “sciences of organised complexity” – that is, systems sciences (Laszlo 1996:8). According to Koornhof (1998:19), “Systems Theory is a useful tool for studying the response of a system in turbulent times”. The reason for using a system’s interdisciplinary approach is summarised by Koornhoff (1998:22) in her statement that systems theory provides a “simple means of categorising, understanding, synthesising and structuring the knowledge gained from specialised and complex disciplines”. Every organism in nature is an integrated whole, a specialised and complex discipline - so is social systems, such as business organisations, which operate in turbulent times and an ever-changing environment. It follows that a systems approach is therefore well suited to explain the information system and the human behaviour system, the interaction between them and their external environment.

Since financial information is dynamic and changes continuously, the ability of the decision makers to understand and react to it also has to be constantly improved. In other words, they need the ability to thrive on individual choice and spontaneous creativity, but also need to be robust and capable of stability and self-renewal (Van Tonder 2004:40). The quality of choice in financial matters will be influenced by the decision maker’s level of financial literacy and his or her perception of the environment at the time of making a decision. As in natural systems, the organisation should be “in constant interaction with its environment, from which it takes in raw materials, people, energy and information, which are then transformed into products or services and which in turn are exported to the same environment” (Van Tonder 2004:37). According to Heylighen and Joslyn (1992), the biologist, Ludwig von Bertalanffy,

emphasised that “real systems are open to, and interact with, their environments, and that they can acquire qualitatively new properties through emergence, resulting in continual evolution”. Because of this interaction and constant feedback between the organisation and its environment, the business organisation, and consequently, its subsystems can be defined as *open systems*. It is imperative that for the organisation to remain an open system, it will constantly need to be open to new information and understand it.

Business organisations are usually composed of interrelated subsystems. Simon (1996:184) refers to these systems as *hierarchic systems*. Hierarchic systems interact with one another creating different relationships. Gouws and Lucouw (2000:29) emphasise that “business systems have to be understood in terms of processes that reflect the system’s dynamic organisation”. According to Hall (2007:7), “a system’s ability to achieve its goal depends on the effective functioning and harmonious interaction of its subsystems”. It may be inferred from the preceding quotations that the financial information system of an organisation can be identified as such a hierarchic subsystem. This, in turn, consists of more interrelated subsystems such as financial and management accounting systems and other systems, and the connection between these systems and, say, the human behaviour system, will determine the effectiveness of decision making in the organisation. If, for example, one of these subsystems fails, the overall system will fail to meet its objective. Hence, these systems need to be sustainable and coexist with one another.

The relationship between these different systems creates energy and new ideas in the organisation. Capra (1999:2) eloquently confirms that systems theory means “thinking in terms of relationships, connectedness, and context”. In this regard, Capra’s (2002:201) six principles of ecology – networks, cycles, solar energy, partnership, diversity and dynamic balance - could also be used to illustrate how “relationships, connectedness and context” can enhance sustainability in an organisation. These six principles of ecology could be related to a systems view of the organisation as follow:

(1) Networks

Communication between individuals and groups within the organisation creates networks. According to Littlejohn and Foss (2005:248), “the basic structural idea of network theory is connectedness ...” These authors (2005:41) also view feedback loops in an organisation as networks. Feedback loops among subsystems, for instance, the financial information system and the human behaviour system, is crucial to establish connectedness. Networks further control information flow and build common interpretations which are essential for self-regulation and the building of a learning community in order to create sustainability.

(2) Cycles

All networks have cycles. In the same sense that matter cycles through the web of life, information may travel around a cyclic path in an organisation and come back to its origin. The organisation can regulate itself because it learns from its mistakes and do it differently next time around (Capra 1994:6). An organisation has its own intelligence which is dependent on the interaction among the members of the organisation.

(3) Solar energy

While the constant flow of solar energy sustains life and drives ecological cycles, the cyclical flow of information through all the subsystems of an organisation is necessary for sustainability.

(4) Partnership

The cyclic flow of energy and the interdependence of network relationships imply cooperation and partnership (Capra 1994:7). In business organisations, as in ecosystems, cooperation and partnership is much more important than competition to ensure survival and sustainability.

(5) Diversity

The more complex the networks of an ecosystem or any kind of organisation, the more resilient it will be, because it can still function even if it loses some of its connecting links. Diversity means many links, many approaches to the same problem (Capra 1994:9). For diversity to act as a strategic advantage in an organisation there needs to be a free flow of information through its networks. However, diversity can generate prejudice if all the subgroups are not really part of the network, that is, if they are excluded from sharing and understanding the information that travels through the organisation.

(6) Dynamic balance

Dynamic balance in the ecosystem involves the creative interplay and adaption of all the above mentioned principles. To create dynamic balance the organisation needs to be seen as an interconnected whole, where information feedback loops regulates and organises itself. Self-organisation is dependent on a vibrant network of relationships and continuous fluctuation.

Decision makers can only react to the information if it relates to or is connected to a certain environment and is in context with the situation at hand. For an organisation to create sustainability, information has to be properly shared and understood as it travels through its diverse networks, or subsystems. However, the quality of the information determines the reaction of the decision makers, on the one hand, while the ability of the decision makers to use the information determines the creation of positive energy and new ideas, on the other.

### 3.3 THE TWO SYSTEMS: MATTER AND MIND

Descartes's (1989:27) celebrated statement "Cogito, ergo sum" – "I think, hence I am", placed a great deal of emphasis on rational thought which led to the division between mind and matter. For the purpose of this study, "mind" is assumed to be the behaviour of the decision maker, and "matter" the financial information produced in the organisation. Although mind and matter can be regarded as two separate systems, it follows from systems theory that there should be interaction and interdependence between matter and mind in order to form a dynamic whole system. Descartes proposed the concept of dualism in the 17<sup>th</sup> century: on one side is matter, *res extensa*, as described by geometry, and on the other, the mind, associated with *res cogitans* (Prigogine 1996:16). Wheatley (1999:89) also describes "a world of independence and interdependence, of processes that resolve so many of the dualisms we created in thought. The seeming paradoxes of order and freedom, of being and becoming ...". Because information cannot be regarded as a product, but rather as a process, it possesses the quality of "becoming". This means that information changes as circumstances change and becomes more suitable or fitting for the choice at hand. Information thus changes continuously and, without it, decisions cannot be made. This, in turn, changes the organisation as a whole.

Financial information thus needs to exist in an open system, in which there is a continuous interaction with other systems. Bohm and Hiley (1993:386), however, do not regard the relationship between the physical and mental systems as two processes, but rather as one because "some kind of information" bridges these two processes. Open systems therefore create a dynamic balance, by maintaining themselves far from equilibrium, through continual flow and change (Gouws & Lucouw 2000:29). In this study the "kind of information" needed to bridge the gap or "create the dynamic balance" between the information system and the decision makers can be seen as the

decision makers' enhanced financial capabilities to utilise the financial information.

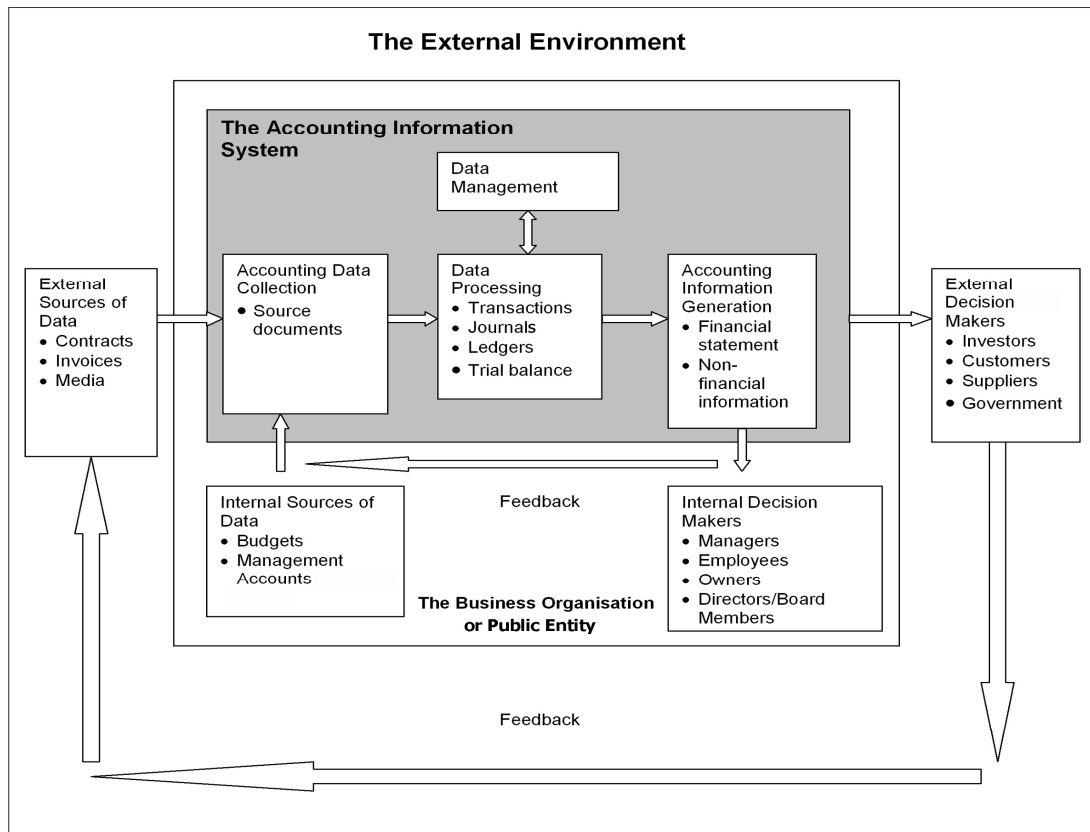
### **3.3.1 The decision-oriented financial information system (matter)**

It is necessary to define several individual terms before one can actually describe an organisation's financial information system. Romney and Steinbart (2006:4), define a *system* as "a set of two or more interrelated components that interact to achieve a goal". As already explained, systems are almost always composed of smaller subsystems, each of which is designed to achieve one or more organisational goals. The organisation consists of several departments, of which the information system is a subsystem and the financial information system yet a smaller subsystem.

Although the concept of *financial information* will be discussed in detail in chapter 4, the *information* concept must first be delineated from a systems perspective. The most basic form of information is data, which usually represent observations or measurement of business activities that are vital to information system users (Romney & Steinbart 2006:5). However, data as such cannot influence decision makers. Information, on the other hand, is data that have been organised and transformed to supposedly provide meaning to a user. Littlejohn and Foss (2005:13) argue that information can be transmitted without necessarily being received or understood. They regard the latter as a prerequisite for the successful exchange of a thought or idea. For example, decision makers can receive financial statements, containing loads of information, but if they do not understand it, it may as well been data. Hall (2007:12) contends that information should rather be determined by the *effect* it has on the user, and not by its physical form. In accordance with the systems view, the information system should contribute to decision making and the congruence of the organisational objectives or goals. The flow of information from the financial information system to the users, and back to the same system, is depicted in figure 3.1.



**Figure 3.1: Model of a financial information system**



**Source:** Adapted from Hall (2007:12).

This model, depicted in figure 3.1, is adapted from Hall (2007:12) to specifically refer to a financial information system and by providing examples for the different stages of the information process. The model illustrates the importance of interaction between the system and its internal and external environment. The flow of information to the internal and external users is as important as the feedback from them back to the system. Feedback also needs to reflect when the users of the information did not receive or understood it. If users lack the financial literacy to understand the financial information they receive, the interaction between the systems are interrupted.

The main goal of information is to resolve uncertainty. According to Weber (2002), “uncertainty is both the tormentor and motivator of life” and the concept uncertainty is epistemologically biased, in that it is viewed “as an attribute of

how we know what we know”. To alleviate uncertainty, more information is required before the mind can decide what action to take. Gouws (1997:69) states that an accounting message consisting of symbols and arranged according to accounting rules, has a degree of uncertainty and can lead to various interpretations. This implies that some messages may add to the uncertainty instead because the recipient does not understand the symbols or the way the message is presented. The purpose of financial information is to help people in an organisation to make decisions about economic activities and to reduce their uncertainty and financial risks. *Risk*, according to Ingram, Albright, Baldwin and Hill (2005:F5), is “uncertainty about an outcome”. It is important to keep in mind that risk is an integral part of every financial decision taken and that the external environment in which the firm operates, as stated by Zopounidis and Doumpou (2001:193) mainly causes these risks. Constant interaction with the environment and feedback from the information users may add value to the quality of information produced by the system.

The aim of financial information systems is to strive to produce information that alleviates uncertainty. Business organisation’s frequently uses financial information systems to assist them in producing quality information for decision-making purposes. These systems usually consist of a set of formal procedures and can be decomposed into two broad classes of systems: the *accounting information system (AIS)* and the *management information system (MIS)*. The AIS subsystem processes financial transactions and nonfinancial transactions that directly affect the processing of financial transactions, whereas the MIS processes mainly nonfinancial transactions that are not normally processed by traditional AIS (Hall 2007:9). An information system, be it formal or informal, is not an end in itself, but has to be contextualised and communicated to decision makers in order to enhance their understanding of the current situation.

With regard to financial information systems, Greenblo (2006:26) contends that “financial communications should be revolutionised so that people can actually understand them”. He further states that “‘Intelligibility’ is a requirement of the

King Code that's too often ignored but can be simply remedied". Although information as such does not possess intelligence, it has the potential to influence the users' thinking. Littlejohn and Foss (2005:164) see "intelligibility" as one of the characteristics of discourse that makes understanding possible. For them to share the same meaning, both the messenger and the receiver of the message should have experienced similar situations or have the same knowledge of the situation. Although the requirement in the King Code might be ignored in many situations, the remedy might not be that simple. Both the financial information system and the human behaviour system will need to adjust to satisfy the requirement.

Although information is essential for decision making, it is also true that information is not always perfect. Casta and Lesage (2001:432) conclude that imperfect information has cognitive implications for the decision process and that research on an individual's reaction in a situation of ambiguity shows that he or she may, according to his or her cognitive characteristics, adopt one of two opposed attitudes: ignore the problem or seek further information. It is therefore crucial to study not only the attributes of information, but also the behaviour of decision makers in reaction to the information.

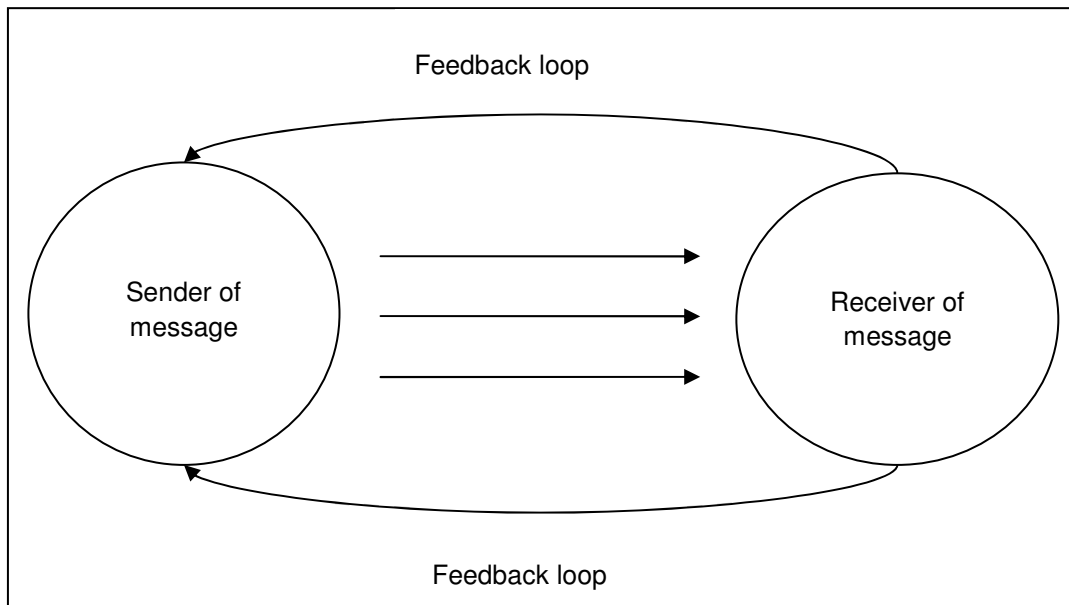
### **3.3.2 The human behaviour system (mind)**

Although information users' understanding of and reaction to information will be discussed in more detail in chapters 5 and 6, systems theory provides one with a certain view of human behaviour towards financial information. The creators of information (matter) must take cognisance of the fact that information has no value if it does not influence the behaviour of the recipients (mind) of that information. Littlejohn and Foss (2005:40) consider communication as the vehicle through which meaning is assigned to experience. Because it is so critical for the message to have meaning to the recipient, the communication concept will be discussed in greater detail.

### 3.3.2.1 Communication and cybernetics

Communication is only possible if the receiver of the message can decode and interpret the message correctly and if the receiver assigns the same meaning to the message as it was intended, and then responds in the desired way (Thill & Bouvée 2002:11). In finance, disclosure is often seen as communication. However, according to Schoonraad (2003:46), disclosure is only a “one-way process, while communication is ideally a two-way process”. The key element in the communication process (see fig 3.2) is how the receiver of a message interacts with past experiences and acquired knowledge and then reacts to the message received.

**Figure 3.2: Communication in an open system**



**Source:** Own observation

It is evident from figure 3.2 that the effectiveness of the message can only be evaluated by feedback from the recipient - in other words an open system must be formed to make successful communication and decision making possible. According to Littlejohn and Foss (2005:40&42), “the idea of a *system* forms the core of cybernetic thinking”, but more importantly “cybernetics is the branch of system theory that focuses on feedback loops and control processes”. The way in which the message is understood is essential to the output of the

receiver's cognitive system. To complete the communication circle this output is supposed to be communicated through feedback from the receiver back to the sender of the message as new input. Hence a weakness of financial disclosure might be the lack of formal feedback to the preparers of the disclosed information.

### **3.3.2.2 Behavioural studies**

The way human beings process information has generated new research efforts, inter alia, in the field of accounting, and resulted in a multidisciplinary approach and a keen interest in behavioural accounting studies. Beaver (1989:34) refers to information in a multiperson exchange setting with specific reference to more informed versus less informed users and to the problem of information asymmetry. The concern with information asymmetry, where there is a disproportion in the supply of information, is increased when one user of information is more informed than the other - that is, more financially literate than the other. One may assume that the more financially literate users may have a competitive advantage over those who are not financially literate. Riahi-Belkaoui (2004:372) further explains that the "behaviour of an individual is influenced by information in two ways: (1) through information use when acting as a recipient and (2) through information inductance when acting as a sender". The process of information inductance is the result of an individual's anticipation of the consequences of his or her communication of information - in other words, the individual anticipates the possible use of the information (Riahi-Belkaoui 2004:372). Information asymmetry and inductance, as explained in more detail in chapter 5, therefore jeopardises the objectivity of the information-producing process because of the behaviour of the users of the information.

One could infer that, although information is essential for supporting decisions and solving problems, it is never really neutral. According to Atkinson, Kaplan and Young (2004:17), "the mere act of measuring and informing affects the individuals involved". This phenomenon can be related to physics, where the

Heisenberg uncertainty principle notes that the act of measuring the position or velocity of a subatomic particle affects the particle's position or velocity (Atkinson et al 2004:17-18). This implies that the measurer or the person compiling the information affects it one way or another, thus influencing the measurer's objectivity. In other words, information is not a product, but part of a dynamic process, and the way information is acquired is also part of the process that influences the information user. Wheatley (1999:65) reiterates that there is an observation dilemma and that it is important to be aware of the realisation that no form of measurement is neutral. Measurement, which can be described as the assignment of numerals to events, activities or objects, according to specific rules, has certain constraints. According to Riahi-Belkaoui (2004:42), these are "limitations of availability of data as well as specific characteristics of the environment, like uncertainty, lack of objectivity and verifiability". Add to this the measurer's subjectivity and it follows that financial information cannot be entirely objective. It is almost impossible to generate objectivity when observers evoke different meanings and interpretations in different situations. Wheatley (1999:67) further recognises data as "a wave, rich in potential interpretations, and completely dependent on observers to evoke different meanings". However, it can be to the organisation's advantage if all the observers or stakeholders, irrespective of their position, can be capacitated to interpret information, especially financial information. The reason is that almost every decision in the organisation has financial implications, for example the decision to lay off employees or to manufacture a new product. If an organisation can mobilise the cognitive ability of all its stakeholders, this could lead to an organisation rich with many different interpretations and more competent decision making.

### **3.3.2.3 Cognitive styles and approaches**

Decision makers can process the same information differently because of their cognitive style or ability. In So and Smith (2003:5), Ho and Rogers (1993) define cognitive style as "distinctive ways of acquiring, storing, retrieving and transforming information", while Libby and Luft (1993) define cognitive ability

as “the capacity to complete the information encoding, retrieval, and analysis tasks”. These definitions indicate that information is crucial to initiating cognitive style and ability. One may therefore assume that producers of financial information have to be aware of the fact that the users of the information have different cognitive styles and abilities. The ideal situation to enhance the decision-making process is for financial information to be presented in such a way that it suits the cognitive style and ability of the majority of users.

The theory of constructivism has had a huge impact on the field of communication, because, according to this theory, individuals interpret and act according to conceptual categories of the mind. Littlejohn and Foss (2005:119) state that because cognitive complexity plays a key role in communication, it is a mainstay of constructivism. They further argue that individuals do not have a consistent level of cognitive complexity, but think at different levels of sophistication about different topics. For example, many people use accountants to do their books and even allow them to make financial decisions on their behalf because they do not understand the complexities of the financial environment.

It is imperative that accounting studies based on cognitive style approaches focus on classifying users of information by their cognitive structure and on designing information systems that are best suited to the decision-maker’s cognitive style (Riahi-Belkaoui 2004:377-378). This will entail, for instance, that tailor-made financial statements are necessary for each individual, resulting in a situation that will not be practical, cost effective or even verifiable. One may assume that sophisticated cognitive individuals, who can make more distinctions than cognitively uncomplicated individuals, may understand general-purpose financial information better. With regard to the *cognitive complexity* approach, decision makers are also classified in terms of two cognitive styles: heuristic and analytic. These styles, based on the terms used by Huysman, in Riahi-Belkaoui (2004:377), are as follows:

1. *Analytical decision makers reduce problem situations to a more explicit, often quantitative, model on which they base decisions.* They usually have a desire for more information, specifically quantitative facts and different alternatives to select from. Financial reports, budgets and “what-if” scenarios will suit the analytical decision maker’s style.
2. *Heuristic decision makers refer instead to common sense, intuition and unquantified feelings about future development as applied to the totality of the situation as an organic whole rather than to clearly identifiable parts.* These decision makers rely more on rules of thumb or selectivity based on feedback of information from the environment. An expert system (ES), also known as a knowledge-based information system, that uses decision models and specialised databases, is an example of a computerised heuristic problem-solving and decision making tool. Such a tool can assist decision makers who do not have the financial knowledge to rely on rules of thumb or common sense.

Research has shown that there are different approaches to decision makers’ cognitive approaches and styles (Riahi-Belkaoui 2004; Littlejohn & Foss 2005; Robbins 2003). Based on research on decision styles, Robbins (2003:140) identified four different decision-making approaches, namely directive, analytic, conceptual and behavioural. These approaches differ along two dimensions, firstly, their way of *thinking*, and secondly, a person’s *tolerance for ambiguity*. According to their way of thinking, most decision makers in the financial fields are logical and rational, and process information serially, while others may be more intuitive and creative, and perceive things as a whole. With regard to a person’s tolerance for ambiguity, some people have a high need to structure information in ways that minimise ambiguity, while others are able to process many thoughts at the same time (Robbins 2003:140). Financial information systems produce information that is not necessarily adapted to suit the cognitive styles or abilities of different users, and these systems are usually driven by people who are experts in their respective fields, while the users of the information might not be.

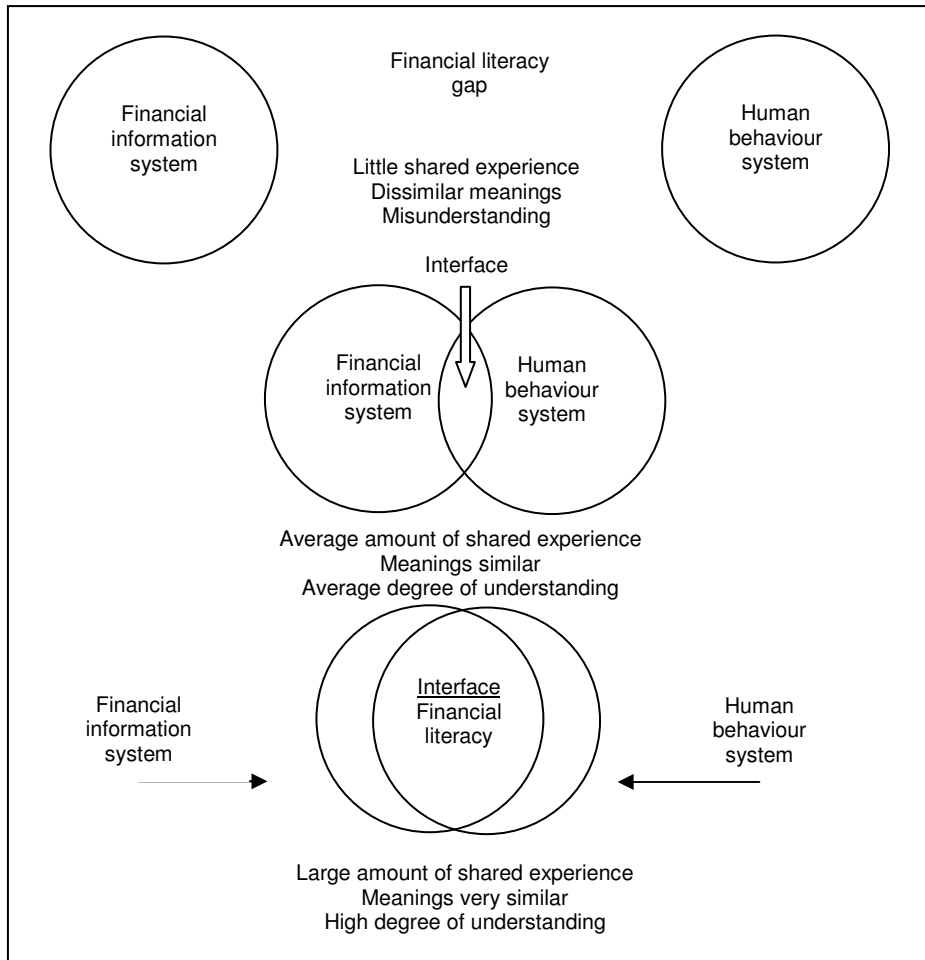


The human information-processing approach also encompasses the cultural relativism in accounting. According to Riahi-Belkaoui (2004:379), “cultural relativism postulates that culture shapes the cognitive functioning of individuals faced with an accounting or auditing phenomenon”. Although various concepts of culture exist in anthropology, this study will specifically take into account Geertz’s symbolic anthropology, in which culture can be viewed as “a system of shared symbols and meanings” (Riahi-Belkaoui 2004:381). In a diverse cultural society such as South Africa, it is critical to take cognisance of the different interpretations that people from different cultural backgrounds may attach to certain symbols or terms. This phenomenon will be discussed in more detail in section 3.7 in this chapter.

### **3.4 FINANCIAL LITERACY AS THE INTERFACE BETWEEN TWO SYSTEMS**

Individual subsystems in a complex system need a liaison between them - they need something to act as an interface in order to form an integrated whole. An interface, as defined by the *Oxford concise dictionary*, is a “surface forming common boundary between two regions”, a place where interaction occurs between two systems. The interface’s function is to “pull together the behaviour of their own parts, and to integrate this joint effort with the behaviour of other components in the system” (Laszlo 1996:53). An interface can also be described as a meeting point between two environments or systems and is concerned with attaining goals by adapting the one to the other (Simon 1996:6&113). The two systems, the *decision-oriented financial information* system and the *human behaviour* system, can only become more than their individual parts if they are linked by an interface (see fig 3.3) that can enhance the feedforward (prediction) and feedback action between them. There may be many such interfaces, but this study will focus on financial literacy as a necessary link in bridging the gap between the decision-oriented financial information system and the human behaviour systems.

**Figure 3.3: Towards a financial literacy interface**



**Source:** Adapted from Thill & Bovée, (2002:13)

While Thill and Bovée (2002:13) illustrated how shared experience affects understanding, figure 3.3 depicts how a financial literacy interface can affect the integration of the financial information system and the human behaviour system. From figure 3.3 it is clear that the aim of the interface is to integrate both the financial information system and the human behaviour system into a one-encompassing process in which decision making can be facilitated. When there is little shared experience, and individuals attach dissimilar meanings to certain financial terms and concepts, there is an understanding gap between the two systems. The process of integrating these two systems will only be possible if there is a large amount of shared experience, similar meanings and a high degree of understanding between them. Financial literacy can be seen

as the interface facilitating this high degree of understanding between the financial information system and the human behaviour system.

### **3.4.1 The financial literacy concept**

Because financial literacy is used in this study, as an interface between the financial information system and the human behaviour system, the concept needs to be further explained. The word *literacy* means to be “learned” or “skilled in reading and writing”. Mr Koïchiro Matsuura, the Director-General of UNESCO on the occasion of International Literacy Day (September 2006), highlighted the fact that “literacy is not merely a cognitive skill of reading, writing and arithmetic, for literacy helps in the acquisition of learning and life skills that, when strengthened by usage and application throughout people’s lives, lead to forms of individual, community and societal development that are sustainable”. From Mr Matsuura’s message one can deduce that without basic literacy it is difficult to ensure a sustainable livelihood. *Financial literacy*, on the other hand, is generally defined as “the ability to make informed decisions and take appropriate actions on matters affecting one’s financial wealth and well-being” (Piprek et al 2004:4). It would therefore seem that literacy alone will not necessarily ensure sustainability, but that the individuals should also be financially literate to be able to create wealth and promote wellbeing. Wealth, according to Beinhooker (2005:317), is the same thing as information, or rather fit information - in other words, knowledge. While information on its own may be worthless, in this context, knowledge is information that can be used to create wealth. It follows from this definition that financially literate individuals have more knowledge than financially illiterate ones to allocate their resources and those of the organisation - time, money, labour and knowledge effectively to ultimately create some form of wealth. This definition also applies to people from all walks of life, consumers, students, entrepreneurs, managers, shareholders, pensioners, etc, who should all be capacitated to make educated financial choices. Education in economic and financial matters, like educating people to read and write, affects the financial wellbeing of every individual and the community as a whole.

In an increasingly complex marketplace, a lack of financial literacy can impact negatively on individuals in the human behaviour system. Jacob, Hudson and Bush (2000:15) define three categories of money knowledge:

- (1) *Economic literacy* or general knowledge. This is about the way in which economies function. Examples are costs, prices, and interaction of supply and demand, inflation and regulations. Ideally, decision makers need economic literacy to operate effectively in the global economy.
- (2) *Consumer literacy* or the knowledge of the rights and responsibilities of economic actors and the skills of comparing price and quality to make purchasing decisions. Individuals, managers of organisations, company directors and other decision makers are all consumers, one way or the other. In any situation, be it personal or organisational, they need to make sound procurement decisions.
- (3) *Financial literacy* or personal financial knowledge and skills. Financial literacy entails the ability to understand financial terms and concepts and to translate that knowledge skilfully into behaviour. Topics under this term include, savings, earning interest, budgeting and managing credit and loans. Financial literacy embodies different knowledge levels necessary to participate gainfully in the economy. Without this financial knowledge or these skills, it would be almost impossible to make personal daily financial choices, let alone financial decisions in a business management or executive decision-making role.

Because learning is a distinctive feature of the human behaviour system, it is vital to be aware of efforts to enhance financial literacy education. Many countries embarked on programmes and other initiatives to introduce and enhance the financial literacy of individuals in the human behaviour system. As the President of the National Council on Economic Education (NCEE) in the USA, so aptly explained “Educating young people in economics and personal finance is vital to our nation’s future. Indeed, it is an essential key to building a nation of knowledgeable investors and savers, informed consumers, productive members of the workforce, responsible citizens and effective

participants in the global economy” (Zulauf 2003). The American Institute of Certified Public Accountants (AICPA) launched its 360 Degrees of Financial Literacy campaign in May 2004. The aim of the campaign is to forge a network of partnerships with state societies, schools, small businesses and local organisations to help chartered public accountants (CPAs) deliver the benefits of financial literacy to people across the country (Tie 2004:14). It is acknowledged that the mentioned financial literacy programmes and initiatives in the USA are only a few examples and not a comprehensive list.

In the UK the Association of Chartered Certified Accountants (ACCA) identified international research priorities, one of them being to enhance financial literacy. The Basic Skills Agency (BSA) and Financial Services Authority (FSA) in the UK also developed an *Adult financial capability framework* that outlined the skills and competences deemed necessary for financial capability (BSA & FSA 2006:3). These are but a few examples of the countless programmes, projects and seminars on financial literacy in some developed economies. However, the fact remains that there are still too many financial illiterate decision makers out there, especially in developing economies, many of whom are on the African continent. Initiatives and programmes to enhance the financial literacy level of South Africans in particular were addressed in chapter 2.

The Financial Accounting Standards Boards (FASB), the US standard-setting body, has long claimed that the main purpose of financial statements is to “provide information (to external users) that is useful in making business and economic decisions”. But, the FASB states that the information will only be comprehensible to users “who have a reasonable understanding of business and economic activities and are willing to study the information with reasonable diligence” (Bardo 2004:1). On the other hand, one of the objectives of financial statements, according to the Trueblood Report (AICPA 1973), is to “serve primarily those users who have limited authority, ability, or resources to obtain information and who rely on financial statements as their principal source of

information about an enterprise's activity". One could infer from these seemingly opposing statements that there is a definite need for a financial literacy interface to integrate the financial information system and the human behaviour system. Such an interface is necessary because the usefulness and comprehensibility of information produced by the financial information system can only be improved up to a point, whereafter it is up to the decision makers as part of the human behaviour system, to improve their ability to understand and use the information.

The concern about financial literacy has increased in recent years. Financial literacy or the lack of it, has gained the attention of a wide range of banking corporations, government agencies, educational institutions, consumer and community interest groups. This has resulted in an increased supply in the number and variety of financial literacy programmes and programme providers. According to Braunstein and Welch (2002:445), some of these providers offer comprehensive information on "savings, credit, and similar topics for a broad audience and others tailored to a specific group, such as youth or military personnel, or focused on a specific goal, such as home ownership or savings". Notwithstanding all these financial literacy programmes, there are still many occurrences of high-profile corporate malfeasance and misfeasance. More specific financial literacy programmes will enhance the efficacy of responsible decision making in the boardrooms of companies and public entities.

### **3.4.2 The financial literacy interface**

In the modern, computer-based global environment, financial literacy serving as an interface between the two systems will be almost unattainable if decision makers are not also "information literate". Simon (1977:108) contends that, "the critical task is not to generate, store or distribute information but to filter it so that the processing demands on the components of the system, human and mechanical, will not far exceed their capacities". Without the competence to demarcate information into usable and understandable components, information overload can become a problem. Information overload is discussed

in chapter 5, section 5.7.2. In a society in which information abundance rather than a lack of information is the norm, the ability to use the relevant information at the right time, based on the appropriate knowledge, could form the foundation of the interface between any two systems in the organisation.

The American Library Association Presidential Committee on Information Literacy, stated that “to be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate and use effectively the information needed” (Thompson & Cronjé 2001:3). For example, it is difficult, albeit impossible, for a financially illiterate person to know when and what kind of financial information is needed. One should therefore bear in mind that subject knowledge is just as necessary to provide “the underlying structure for information retrieval and use” as “information literacy cannot take place in a vacuum” (Thompson & Cronjé 2001:6). Without an understanding of the relevant subject, the information literate person will still experience uncertainty and apprehension. The problem is exacerbated when the decision maker is in a state of ambiguity - that is, if he or she does not know enough to determine whether he or she is asking the right questions (Peters 2003:23). Although everybody cannot be financial experts, at the very least, decision makers in general need to be financially literate enough to know the right questions to ask.

The financial literacy interface demands, on the one hand, a well-structured financial information system, and a knowledgeable information literate individual on the other. Knowledgeable in this sense refers to individuals who are able to combine information with thinking, insights and experience to produce solutions. According to Hammes (2001:49), knowledge is much more than organised information, and acting on it is far more valuable than merely possessing it. To be able to act swiftly on intricate financial information, the decision maker needs to be able to at least understand the financial language in which the information is presented.

### **3.5 THE FINANCIAL LITERACY LEARNING PROCESS**

In the same way as information continuously changes, individuals in the human behaviour system also adapt to change through a learning process. To maintain a competitive advantage, organisations have to innovate and adapt to change. Individuals in an organisation need to continuously adapt to their environment, to produce new ideas and develop new skills in order to contribute positively to the organisation's competitive advantage. Claxton (1999:11) contends that "learning is what you do when you don't know what to do". When individuals are uncertain about a situation, they search their memory to retrieve information from previous experiences to try and solve the problem, and if they fail to find something, they will seek new information. This is when learning really occurs. In the same sense, Simon (1996:94) holds that "efforts to solve a problem must be preceded by efforts to understand it." It follows that daily financial decisions can only be made if the decision maker understands the short- and long-term financial implications of such a decision. Because the organisational environment changes continuously, decision makers learn new financial knowledge on a daily basis. Learning is therefore not a finite process, but a lifelong process to be encouraged by every knowledge-driven organisation.

#### **3.5.1 Learning the financial language**

Both the financial information system and the human behaviour system communicate with each other through some kind of language. Language is the tool used to express ideas, feelings and events. According to Sayre (1976:198), language is the medium through which intentions are communicated. Claxton (1999:136) states that there is more to language than literal comprehension: "language gives us contrasting ways of organising experience and making meaning". In the financial language facts and figures should be organised in such a way that it communicates meaningful information. Goldberg (2001:74) explains that communication is "an *attempt* to bring into common agreement the perceptions of different people of their



understanding of symbols of the language used between them”. Although English is the most prevalent language in international business, it would be a mistake to assume that everyone understands it (Thill & Bovée 2002:58). The same is true of the “language of business”; not everyone speaks or understands it. Hence, with the growth in social interdependence and developed exchange of commodities, there is an emergence of the need for orderly ground rules to facilitate exchange (Tinker 1985:93-94). These ground rules or terms of trade and the value assigned to the tradable commodities need to be articulated in a common “financial language”. The financial language commonly produced by the financial information system, uses unique symbols, for example, a certain monetary unit will be used to assign value to a commodity.

The financial language, of which accounting forms a part, has many things in common with other languages. According to Littlejohn and Foss (2005:40), language is packed with meaning and the “spoken word” constantly affects our experience of events and situations. For instance, financial “terms” and numbers have to mean the same thing to a wide variety of users. Financial terminology is even published in much the same way as the vocabulary of different languages is listed in a dictionary. With specific reference to accounting as a component of the financial language, Schoonraad (2003:44) warns that the use of accounting language poses the same dangers as any other language, namely that of misunderstanding, or even misrepresentation. On the basis of Hawes, Riahi-Belkaoui (2004:99) concludes that the recognition of, for say, accounting as a language rests on the same two components as any other language, namely: *symbols* and *grammatical rules*. He (2004:99-100) argues as follows:

1. The *symbols or lexical characteristics* of a language are the “meaningful” units or words identifiable in any language. Symbolic representations do exist in accounting. Financial language uses numerals and unique symbols, for example, “R” or “\$”, or words, for

example, “assets”, “liabilities”, “debits” and “credits” give meaning to certain concepts.

2. The *grammatical rules* of a language refer to the syntactic arrangements in any given language. In financial language, grammatical rules refer to the general set of procedures used that are followed to create meaning. For example, the format in which a balance sheet is presented depicts grammatical rules and the specific order in the statement creates meaning for the receiver of the message.

The view of financial language as a science, with a relationship between theory and practice, implies that decision makers have to understand the financial consequences of their decisions in practice, which, without a basic theoretical knowledge of financial terminology and financial numeracy will be almost impossible. According to Goldberg (2001:72) “the way people react to a symbol depends upon the symbol’s relation to his or her remembered experience”. Claxton (1999:120) adds that learning power comprises both literacy and numeracy, and is ultimately more fundamental than either of them. Learning power can be obtained through various means, such as formal education, informal education and/or experience. Decision makers will only be able to encode the financial information presented to them if the symbols (terminology and numbers) communicated to them relate to their learning experience of the financial language.

The deficiency in the communication of financial information does not only lie in the education or training of the recipient of the message, but can also be in the ambiguity of the words used by the sender of the message. The same word produced by the financial information system can mean different things to different people. Goldberg (2001:78-79) confirms that financial experts and financial writers often demonstrate a lack of precision in the use of some words. For example, some writers might use the words income, net profit and total income interchangeable. If financial terminology is used erratically when reporting financial activities, it might confuse financial experts, but it can be detrimental to laypeople without the financial background to understand the

terminology in the full context. Notwithstanding the fact that the financial language changes and that new terminology is often coined, the onus is still on decision makers to ensure that they understand the meaning attached to the terms and symbols used.

### **3.5.2 Feedback as a learning tool**

Feedback is the basic ingredient for communication to take place; it is an essential part of the information exchange process between systems. Sayre (1976:49) defines feedback as a “process by which the behaviour of an operating system is influenced in turn by the effects of this behaviour with respect to the system’s operating environment”. Feedback is necessary for the existence of an open system. According to Capra (1982:289), the functioning of organisms or, in this context, a business organisation is guided by “cyclical patterns of information flow known as feedback loops” (see fig 3.2). Wheatley (1999:145) adds that in order to change, the system needs to learn more about itself from itself. Since change in an organisation is essential in order to grow and remain competitive, the organisation cannot afford to operate in a closed system. Substantially more information available and placed in the feedback loop implies a substantial intensification of change, which again generates more information (Van Tonder 2004:47). Feedback information creates continuous improvement in an open system; the system learns from itself and from the environment in which it operates.

Feedback, on the one hand, is the result of a process, and the beginning of a new process on the other. As Hall (2007:15) puts it, “feedback is a form of output that is sent back to the system as a source of data”. Feedback may be generated internally or externally - either way it is used to initiate or alter a process. Feedback control shows how a system can work towards goals and adapt to a changing environment (Simon 1996:172). To survive in a changing environment, an organisation needs feedback from its environment to become a self-organising and self-renewing system.

Feedback can be categorised as either positive or negative. Waldrop (1992: 34) views positive feedback as the “sine qua non of change, of surprise, of life itself”. Sayre (1976:50) argues that positive feedback is a process that results in self-administered positive reinforcement of the activity in question, but, if left unchecked, it can also be a source of instability and lead to the destruction of the system itself. By contrast, he considers negative feedback as a source of stability and control because it acts to prevent (“negate”) excessive deviation of the system from a standard operating condition. Sayre (1976:61) also refers to negative feedback as a “mode of interaction by which a system gains structure at the expense of energy extracted from its operating environment”. Waldrop (1992:35) concurs in stating that negative feedback or diminishing returns are what “underlie the whole neoclassical vision of harmony, stability, and equilibrium in the economy”. Consequently when the information system is in equilibrium, that is, when it is not influenced by information from the external environment or by feedback from the users, it follows that such a system can stagnate.

Disequilibrium, however, contributes to system’s growth – hence the need for positive feedback for the organisation to adapt and change. A state of equilibrium, on the other hand, may lead to stagnation. Feedback between systems should be regarded as a learning tool and not as something that threatens the organisation’s stability. It should be used to transform and transcend the organisation as well as the individual using the feedback information. However, for this to happen, the receivers of financial information and the preparers thereof need to understand the feedback they receive.

### **3.6 INTELLECTUAL FINANCIAL CAPITAL**

The financial literacy learning process as discussed in the previous section, appends the intellectual capital of the organisation. Representing a section of the human behaviour system, financially literate board members and

employees of an organisation both constitute a portion of the company's intangible assets. Intangible assets can be described as those things that represent the "knowledge, know-how, and relationships that may be used to create value for the owner or owning organisation" (Harrison & Sullivan 2006:5). One can also assume that the collective interaction of individuals' financial knowledge can create even greater value for the organisation. According to these authors, intangibles may be tacit or codified. "When they are tacit, they reside within the mind(s) of company employees and other stakeholders. When they are codified, they have been committed to some form of media – typed into a computer, drawn on a blueprint, written on a piece of paper, or painted on a canvas." Tacit intangibles are referred to by an array of terms, such as "economic capital", "social capital", "human capital", "knowledge capital", "knowledge assets" and "intellectual capital". Minsky in Beinhocker (2005:378) refers to the "society of mind", thus emphasising the value of collective intelligence. Although these terms are often used interchangeably, they have been defined differently and influence initiatives in human capital differently.

Some researchers define intellectual capital as comprising "human capital (individual capabilities, knowledge, skill and experience of the firm's talent), structural capital (intellectual property, methodologies, software, documents and various other representations of knowledge acting as the firm's supportive infrastructure) and customer capital (client relationships)" (DiVanna & Rogers 2005:52). Swartz (2005:7) cites various authors to illustrate the increasing importance of a company's intellectual capital as being crucial in creating economic wealth and a competitive advantage; and that it is projected to become the "pivotal factor in corporate growth and development". Organisations have a competitive advantage if they have something that distinguishes them from the next organisation. Financial literacy can be regarded as one of the sought-after competencies required in employees to create economic wealth and a competitive advantage for the organisation. If

employees do not have financial competencies on all levels in the organisation, these competencies can be developed through training or formal education.

Although it is also necessary to measure the value of a firm's intellectual capital, the focus in this study is not on the measurement thereof, but on the enhancement of the financial know-how of the decision makers. It is believed that to perform well in a knowledge-based global economy, the decision makers on each and every level of the organisation must have access to information, appropriate education and a mindset to embrace lifelong learning.

### **3.7 FINANCIAL LITERACY IN A CULTURALLY DIVERSE SOCIETY**

The human behaviour system consists of individuals with diverse cultural backgrounds and different value systems. The interaction between these different cultures brings a certain dynamic to the system. Cultural diversity can be delineated on more than one level. There is cultural diversity in the global sense, in an individual country or society, or in an organisation. As explained in chapter 2, South Africa, with its multicultural population speaking different languages, does not only play a role in the economy of African countries, but also participates in the global economy.

Human development in any country forms the basis of sound economic growth and sustained upliftment. According to the United Nation's *Development Programme Report* (2004), human development is about much more than the rise and fall of national incomes. "It is about creating an environment, in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests" (Venter & Neuland 2005:129). The South African economy has been undergoing rapid transformation since 1994, and a new force of economic active participants who were previously not part of the business scene has erupted. However, it is a known fact that if an individual does not feel confident in a particular post and does not have the

know-how or experience to do his or her work, this is contraproductive to both the individual and the organisation. Such an employee cannot add value to the organisation's knowledge base and contribute to its intellectual capital. If the nation's total human capital is not adequately developed, economic growth will be seriously constrained.

Cultural diversity can have a positive influence on the way business is conducted. However, problems may arise if people do not attach the same meaning to certain key concepts, especially with regard to the financial aspects of the organisation. One of the dimensions that reflects the cultural orientations of a country and explains 50 percent of the differences in value systems, as provided by Hofstede, is individualism versus collectivism (Riahi-Belkaoui 2004:381). For example, the concept of *ubuntu* (African humanism), which is underpinned by a set of traditional African values based on inclusivity, humility, respect, responsibility and concern for others, generational responsibilities, and a spirit of participation (Khoza & Adam 2005:3), differs from capitalism, where the focus is on wealth creation by individuals. If these fundamental differences in value systems are not taken into consideration in financial education, some individuals may feel alienated. Cling (2001:76), however, attests that in order "to succeed, black business has to respect the laws of profit, in which respect for solidarity objectives should be of secondary importance only". The development of individuals' financial capabilities therefore needs to take cognisance of the value systems of the cultural diversity of individuals in an organisation. In order to capitalise on cultural diversity in South Africa, a middle course needs to be found to combine the African way of doing business with the Western way.

There are also cultural differences in the different economic sectors in a country. Throughout the African continent, a high percentage of the economic activity takes place in the informal sector. Freeman (2000) conceptualises African economic activity as occurring in three separate interlinked and interacting economies: "the informal, the formal and the global". He

acknowledges that high unemployment statistics throughout Africa are one indication that most people are excluded from the formal economy and are thus driven into the informal. Some of the entrepreneurs in the informal sectors need to interact with the formal sector, for example, to borrow money from them. If they are not well grounded in the financial terms or financial mathematics, they may lend at much higher rates or lose money because they do not understand the fine print. Hence financial illiteracy is not only a legacy of cultural diversity, but also one of an education system not catering for the needs of people operating in the informal sector of the economy.

### **3.8 SUMMARY**

A systems view was used in this chapter to illustrate the complex nature of organisations and its subsystems. The dynamics of an open system depicted the importance of feedback between two systems, in this case the financial information system and the human behaviour system. Management's and other stakeholders' responsibility to properly manage the resources of the organisation, also known as the stewardship function, rests on the quality of the available information on which their decisions are based. However, it also depends on their understanding, interpretation and perception of the information presented. There is a dire need to narrow the gap between the financial information system and the cognitive abilities of those who use it for decision-making purposes.

Financial literacy was identified as one of the basic requirements needed to form an interface between the financial information system and the human behaviour system. In essence, financial literacy was described as the ability to use and understand the business language and to be fluent enough in it in order to make decisions and be accountable for them. Financial knowledge has become not only a convenience but also an essential survival tool, whereas the lack of such knowledge can contribute to the making of poor



financial choices (Jacob et al 2000:3). An organisation's financial intellectual capital can be vastly improved if everyone in the organisation can acquire a financial conscience. South African companies and other organisations are made up of people from different cultural backgrounds. Some of the prominent decision makers in these organisations are well educated in certain fields, but not necessarily in the field of finances or economics. In view of the fact that almost every decision in an organisation has a financial impact, it can only be to the advantage of organisations if their decision makers, on all levels, are financially literate individuals.

## CHAPTER 4

### INFORMATION: THE CREATIVE ENERGY OF THE ORGANISATION

*Information is unique as a resource because it can generate itself. It's the solar energy of organisation – inexhaustible, with new progeny possible with every interpretation”.*

(Wheatley 1999:97)

#### 4.1 INTRODUCTION

While the function of information can be seen as “to inform”, the timing and quality of information have a huge impact on its usefulness. However, the dynamic nature of financial information can only be considered as the creative energy of the organisation if the recipients of the information have the financial knowledge to use it for decision making. Financial information will positively contribute to decision making if it has certain characteristics and if it is presented to financially literate individuals in a knowledge-driven organisation.

In chapter 3 the concept of *information*, and *financial information* in particular, was introduced as part of the decision-oriented financial information system. A system’s approach was used to explain that interaction between the financial information system and the human behaviour system is crucial for decision making. It was further noted that information is a process and needs to function in an open system in which feedback creates continuous improvement. Hence the objective of this chapter is to further consider the information system in more detail and to focus on the attributes of information, with special reference to financial information, in order to enhance financial decision making in organisations. This chapter also aims to explain the dynamic nature of information and its contribution to create a knowledge-driven organisation.

Chapter 4 starts with a description of information dynamics with special reference to the nature of financial information, the knowledge-driven

organisation, communication in an information-rich organisation, and consequently, the way in which financial information promotes decision making. The conceptual framework underlying financial information is then discussed. As part of the framework, the objectives of financial reporting, the qualitative characteristics of financial information, the elements of financial reporting and the recognition and measurement concepts of financial reporting are highlighted. The financial information value chain is then explained and the role of financial information producers as message transmitters in a financial literacy context is finally addressed.

## **4.2 INFORMATION DYNAMICS**

Information is presumed to be the energy that converts the uncertainty of the future into the certainty of the past. Information about the past may be quite reliable or certain, but could lack relevance, whereas information about the future may be extremely relevant, but not that reliable. Goldberg (2001:56) attests to this by asking: “Why should, or how can, accounting information, which portrays past activity, be relevant to, and therefore useful for, determining what should be done now for effect in the future?” It follows that if organisations focus on historical information they might find it difficult to shape the future of the organisation. Information has to be dynamic because time continuously changes the present into the past and influences the quality and relevance of information. Dynamic information also means that the information generates new ideas and energises the decision-making process. Hence change, that is, change in the timeframe and the environment, generates new information. However, the dynamic flow of information is also necessary to initiate change, because new information leads to new decisions, resulting in changed actions. In turn, changed actions generate new information.

#### 4.2.1 The nature of financial information

In the accounting literature there are various examples of the terms, *financial accounting* and *accounting* or *accounting reports* and *financial reports*, being used interchangeably (see Riahi-Belkaoui 2004; Deegan & Unerman 2006:5& 11; Hollander, Denna & Cherrington 2000). In view of the interchangeable use of the terms, *accounting* and *financial*, it is noted that the name of the International Accounting Standards (IAS) recently changed to that of International Financial Reporting Standards (IFRS). Therefore, in this study, reference to financial information and nonfinancial indicators can also be regarded as reference to accounting information, and vice versa.

As stated in chapter 3, the financial information system should presumably contribute to decision making and reduce uncertainty about the organisation's financial prospects. However, Beinhocker (2005:317) reasons that information should be useful and fit for some purpose in order to create knowledge. This is only possible if the information is presented in such a way that the target audience can understand and interpret it, which in turn implies that the audience should have the cognitive capability to understand it. According to Christensen and Demski (2003:3), information in the broadest sense is "some observable that reveals something, leading to a change in the probability assessment". In other words, a change in the probability assessment means that the available information alleviates the probabilities and ultimately leads to choice making. Financial information should refine the recipient's knowledge of the different states or probabilities present in the organisation. If the decision maker is confronted with a set of alternative choices, the financial information at his or her disposal is supposed to help him or her to choose the better alternative that usually entails the better allocation of resources. Resource allocation is essential for survival, sustainability and creativity.

The dynamic nature of financial information implies that the information produced by the system is not a product in itself but rather a continuous process. However, although financial information is supposed to be dynamic, it

usually only provides the history of an organisation's transactions in its environment. According to Gouws and Rehwinkel (2004:96): "the financial accounting and reporting system focuses on the effects of *past* events, creating a perception of reality by a set process of observation and reporting standards, which direct what we choose to notice and the manner in which we reflect". Financial information is by nature historical and can only have decision-making value if the information can be used to choose between alternatives. Hence users of the information produced by the information system need to have the financial capability to recognise the historical value of the information and adapt, analyse and interpret it for their unique decision making purposes. It follows that in order to adapt it, the recipient of the financial information must be able to observe the information in context and be able to assess if the information was manipulated in any way and to what extent it can be used for decision making. If the user is not financially literate, he or she will find it extremely difficult to assess the authenticity of the information.

#### **4.2.2 The knowledge-driven organisation**

It is easy to confuse information with knowledge. The truth of the matter is that one needs to apply a cognitive process to information before it can be regarded as a form of knowledge. In this regard, Abell and Oxbrow (2001:72) concur that

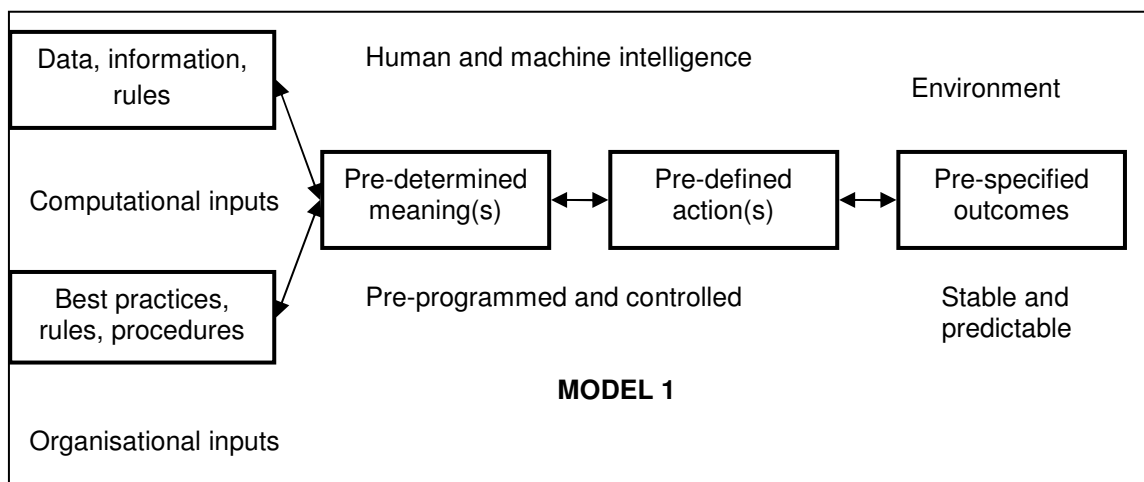
... information and knowledge meet, converge and overlap. They are not the same but it is difficult to see how one exists without the other. Information is not of itself valuable. Its value is in its use and its effective use depends on the ability of an individual to see meaning and significance in that information and thus to create new knowledge.

This knowledge creation process will be explained in more detail in chapters 6 and 8. Knowledge, according to Edwards, Collier and Shaw (2004:2), is a key organisational resource. According to them, knowledge management is "more concerned with 'flows' of knowledge that take place as part of organisational processes than the 'stocks' of knowledge presented in financial reports". This flow of knowledge is indicative of a continuous process and not only that of a

once-off final product. Consequently, the continuous flow of information and the users' ability to analyse and use it, form the basis for the flow of knowledge.

Apart from managing information in the organisation, it follows that a firm also has to manage knowledge and the capability to create and utilise such knowledge. The investment in, inter alia a knowledge management system (KMS) can become extremely costly because rapid changes in the business environment demand high-quality, timely and flexible information. Hence the design of new knowledge management systems for the organisation should "ensure that adaptation and innovation of business performance outcomes occurs in alignment with changing dynamics of the business environment" (Malhotra 2004). But, to fully utilise the outcomes produced by a KMS, the decision makers in the organisation first have to understand the financial information used as basic input into the system. Malhotra (2004) further distinguishes between two knowledge management systems, namely: model 1: knowledge management for routine and structured information processing, and model 2: knowledge management for nonroutine and unstructured sense making. These models are depicted in figures 4.1 and 4.2 below.

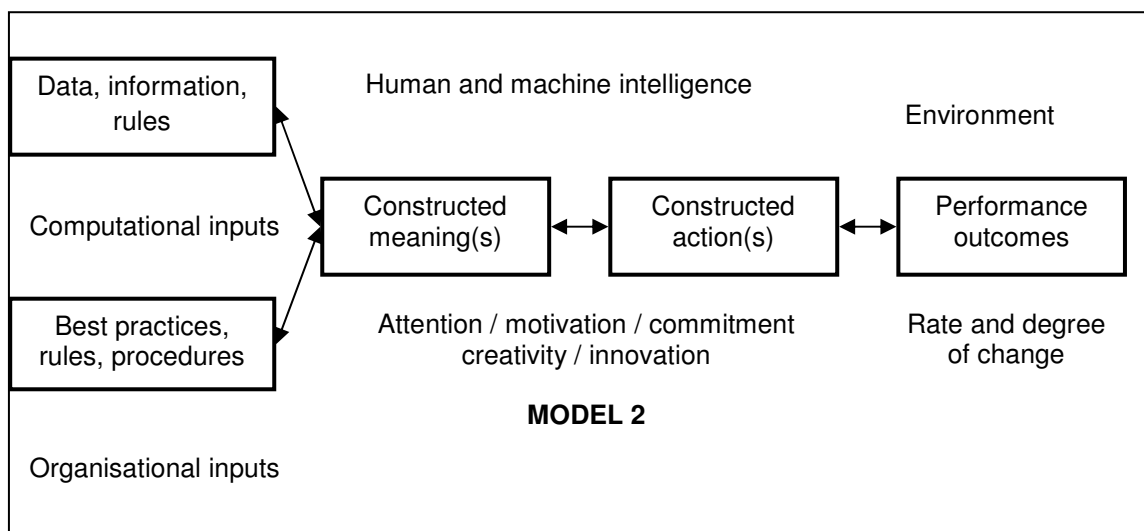
**Figure 4.1: Knowledge management for routine and structured information processing**



Source: Malhotra (2004)

Model 1 (see fig 4.1) depicts knowledge management for routine and structured information processing. It focuses primarily on *knowledge re-use* over *creation of new knowledge* and is often characterised as “getting the right information to the right person at the right time”. The outcomes are usually prespecified, stable and predictable. According to Malhotra (2004), the overriding belief is that “designers of the systems and the knowledge managers have accurate and complete knowledge about the viability of the input-output transformation process as well as the viability of the performance outcomes that have been predefined”. This input-output transformation process refers to the calculations and changes done on the data in order to provide information. The lack of feedback from the users to the designers of the system can be regarded as a weakness of the model as depicted in figure 4.1. This model is also characteristic of the accounting information system with inputs processed through a system based on predefined accounting standards. The designers of the accounting system uses predefined source documents or set rules for input information, and the process of capturing and processing it is also predetermined, resulting in a prespecified outcome.

**Figure 4.2: Knowledge management for nonroutine and unstructured sense making**



Source: Malhotra (2004)

Because figure 4.2 illustrates knowledge management for nonroutine and unstructured sense making, knowledge is represented in model 2 as a *dynamic* construct in contrast to the more *static* representation of model 1. This model is more dynamic because there are no predetermined meanings or predefined actions resulting in prespecified outcomes. According to Malhotra (2004), this dynamic representation is because “diverse [individual and shared] meanings are possible based upon diverse interpretations of the same information inputs across different contexts and at different times”. The lack of feedback on the diverse interpretations of the same information can also be seen as a limitation of Model 2. Whereas model 1 is more concerned with rules and specification of tasks, model 2 takes into consideration the way in which the data are interpreted and the fact that performance outcomes should be reassessed with respect to changing conditions.

From the above it is evident that a knowledge-driven organisation does not only need information but also individuals who are able to interpret it in order to give the firm a competitive advantage. To enhance the information dynamics, the users also need to give feedback on the way they use and interpret the information. Goldberg (2001:72) contends that although intellectual people live in a world of signs that set up boundaries around their interpretations, these boundaries are not inflexible and may therefore vary their interpretations as and when necessary. This implies that these different interpretations express a certain level of uncertainty, referred to here as knowledge complexity. Ditillo (2004:405) explains that knowledge-intensive organisations are difficult to manage because they need to not only attract the right individuals with the right expertise, but they also need to integrate the knowledge of those recruited in order to perform activities primarily characterised by uncertainty. Hence organisations need individuals who are able to apply their knowledge to the available information in order to maximise profit and/or performance.



### **4.2.3 Communication in an information-rich organisation**

Basically, communication is the process of formulating or preparing a message, sending it and receiving it by someone else, who interprets it. However, communication is only effective “when people understand each other, stimulate others to take action, and encourage others to think in new ways” (Thill & Bovée 2002:3). Thus, according to Goldberg (2001:73), effectiveness requires some commonness of experience between sender and receiver, and an agreement between them about the relationship between the signs or symbols to be used when referring to such a shared experience. The problem is that, say, individuals in different departments of the organisation do not always share the same experiences or understand the signs and symbols used in other departments.

With regard to communication in the business world, Schoonraad (2003:8) defines financial communication as “The establishment and maintenance of mutually beneficial relationships between a company and its relevant stakeholders, by exchanging information that is needed to facilitate optimal decisions regarding the allocation of scarce resources”. Physical (eg plant and equipment) and human (eg management talent, employee skills) resources are what management use to explore and exploit opportunities (Beinhocker 2005:367). However, without the necessary information and the ability to interpret it, they will be unable to detect opportunities and allocate resources for the financial benefit of the organisation.

Information can be exchanged in different ways; it can be done through writing, verbal or even nonverbal means. Financial information can even be exchanged by using a variety of tables and graphs. However, communication through writing, especially printing, led to profound changes in society. According to Littlejohn and Foss (2005:278): “When you can write something down, you can separate it from the moment. You can manipulate it, change it, edit it, and recast it. In other words you can ‘act on’ information and knowledge in a way not possible in the oral tradition”. Financial information is generally

communicated by way of written reports, and as a result, in some instances, it can be changed, manipulated or recasted. Decision makers will be in a better position to make decisions if they are aware of this and acquire the experience and expertise to separate the wheat from the chaff.

Factors such as globalisation, intricate financial instruments and transactions, have resulted in the development of increased numbers of international financial reporting standards, new legislation, listing requirements and other pronouncements. These requirements have a profound effect on accounting information as well as other financial information. These factors have added to the growing complexity and expanded volume of financial reports. Nevertheless, Holman and Bruce-Gardyne (2002:9) hold that that “greater disclosure does not automatically produce more informed investors”. With specific reference to financial reporting, Smith (2003:17) states that “unsophisticated users of accounting information rely almost exclusively on narrative sections in the annual report. But the financial narrative is a complex document and, if the user can’t understand it, there are opportunities for misinterpretation”. Where the narrative section is supposed to explain more about the amounts and figures used in the reports, it follows from Smith’s statement that the complexity thereof defies the object, especially when the readers are financially illiterate. It is evident that there may be a widening communication gap between these complex written reports and the users who need to base their decisions on the information concealed in pages of intricate figures and financial jargon.

The increase in the sheer volume of financial information can lead to some degree of *information overload*, which in turn can influence the effective communication of financial information to decision makers. According to Simon (1971:40): “In an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes.” In his opinion, this scarce commodity is the attention of the recipients who can only attend to one thing at a time. This problem is

aggravated if the recipient is financially illiterate, and does not even know what information he or she needs. This information overload has a cost implication. The cost incurred by the recipient to interpret and utilise an abundance of information may actually be more than the cost to produce the information.

Hence the proper aim of transferring information is not to give decision makers all the information they need, but to reorganise their environment of information in order to reduce the amount of time they have to spend in receiving it (Simon 1971:44). In an information-rich organisation a proper information management system or information-processing system is essential to filter and organise the information decision makers need. Apart from having such a system, accountants and other financial intermediaries also need to produce information in a user-friendly format that reduces the time spent deciphering it. According to Smith (2003:17), “accountants have a professional idiom that can be an obstacle when communicating with outsiders”. Although the preparers of financial reports are deemed to be different and separate from the users, these reports should still contribute to effective communication in the organisation by taking the users’ financial acumen into account. If users find the information incomprehensible, they have to at least know if and when to use intermediaries to facilitate the success of the communication process. The ideal would be for financial information to be communicated in such a manner that the users could interpret it without having to pay intermediaries to assist them and without having to spend too much time deciphering it

#### **4.2.4 Financial information that makes decision making possible**

Decision making is a complex activity of reducing the decision maker’s uncertainty and making choices from different alternatives. This implies that decision making clearly involves a distinct “information gathering function” (Harris 1998:1). Goldberg (2001:149), however, states that the basic reason behind any desire or requirement for making a decision is “a felt need or wish to alter the status quo, that is, some dissatisfaction or unease with existing circumstances”. Romney and Steinbart (2006:12) see decision making as a

multistep activity consisting of: identifying the problem, collecting and interpreting information, evaluating ways to solve the problem, selecting a solution methodology, and implementing the solution. Hence, all these steps require that the decision maker should have the financial acumen to identify the status quo, collect the applicable information and be able to interpret it, before a decision can even be contemplated.

With regard to problem-solving, “Einstein is often quoted as saying: No problem can be solved from the same consciousness that created it” (Wheatley 1999:7). In other words, radically different information is sometimes necessary to view decision-making problems from a new perspective. According to Schoonraad (2003:42), “decision-usefulness is based on a utilitarian philosophy, also referred to as the ethics of care”. This means that the available information should also reflect the effect of the decision, not only on the organisation, but also on society and the environment. This characteristic of decision-usefulness is in line with the “stewardship” responsibility of decision makers in an organisation. If they are not financially literate, they will not be able to fulfil this stewardship role. Rayman (2006:15) refers to the stewardship responsibility as the “custody and safekeeping of enterprise resources”. From the above it is evident that making a decision implies that information is needed to consider and choose between different options, to allocate resources and reduce uncertainty. Hence, if information on these resources and the activities surrounding it is not available or is not clear, decision makers will not be able to properly fulfil their stewardship responsibility or their management function.

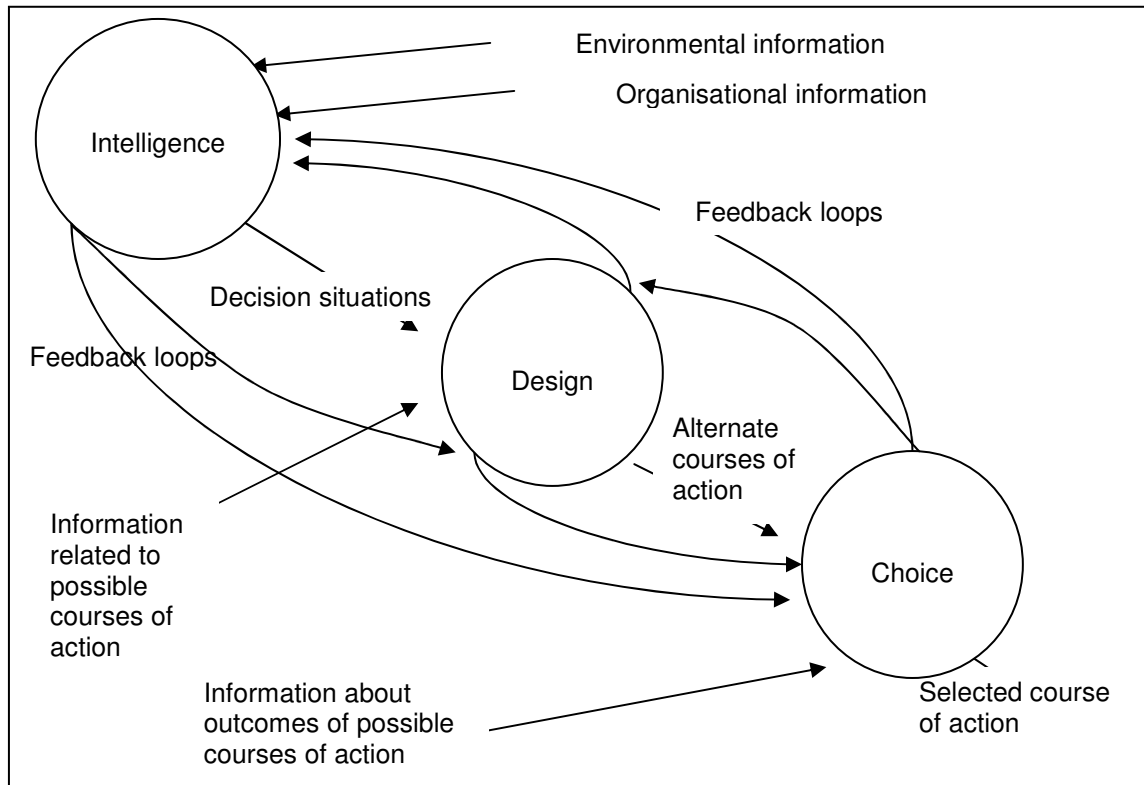
The Nobel prize-winning economist, Herbert A Simon (Gelinas, Sutton & Hunton 2005:28), describes decision making as a three-step process:

1. *Intelligence*: Searching for and identifying things that require change. Seeking information and analysing it are important actions to initiate and facilitate change.

2. *Design*: Results of the analysis process need to be interpreted, a resolution made and possible courses of action are then formulated. The interpretation of the analysed information will indicate different options to choose from.
3. *Choice*: Change may be required or the status quo may be the best available alternative. When decision makers are faced with uncertainty they search for more information (step 1), use computational and other means to analyse and interpret (step 2) the information and eventually choose (step 3) the option they feel most comfortable about.

All three decision-making steps referred to above, emphasise the importance of information and the proper interpretation thereof. If the decision is a financial one or has financial implications, financial information is needed to identify (investigate or analyse) options, to make a resolution or take a possible course of action, and to ultimately choose the best available option. This is only possible if the individual choosing between alternatives has the financial knowledge to seek, investigate and analyse the information available at that particular moment. Decisions cannot be postponed indefinitely until the decision maker can acquire more information or until he or she acquires the financial knowledge to use the available information. However, in the three-step process described by Simon, there is no indication of the timeframe in which a decision has to be made. Evidently, decision making has a time constraint, which simply means that the time and effort to gain information or identify alternatives are limited, and as time passes, the decision environment continues to grow and expand (Harris 1998:2). The three decision-making steps are depicted in figure 4.3.

**Figure 4.3: Steps in decision making**



**Source:** Adapted from Gelinias et al (2005:28)

The original figure depicted in Gelinias et al (2005:28) was adapted by inserting feedback loops only described by the authors. The three steps, intelligence, design and choice, explained above, are linked by the continuous flow of information. As shown in figure 4.3, feedback loops are an integral part of decision making and should improve the flow of information to and from all three steps in the decision-making process. Feedback, “should improve the intelligence, design, and choice that occur as part of an *iterative* process” (Gelinias et al 2005:28). Feedback on the success or failure of the selected course of action that has been taken should therefore improve all three steps illustrated in figure 4.3. For example, if the choice made did not yield positive financial results, more or better financial information on certain elements may be identified as necessary for future decision making. In addition, information from the environment and the organisation itself is needed to recognise problems and opportunities requiring decisions. Thus continuous feedback

through the three decision-making steps will contribute to the better reporting of financial information, and ultimately, to better decision making.

In an attempt to find out whether the current financial reporting model was meeting the decision making needs of investors for transparently presented and complete financial information, PricewaterhouseCoopers conducted an in-depth survey among 43 investment professionals in the UK. The results showed that participants were not obtaining the information or insights they needed to do their jobs effectively (Phillips 2005:60). According to the survey, the providers of financial information are struggling under the current regulatory model to present the information they believe is actually important in running the business. On the other hand, the users of that information are increasingly frustrated that they are not receiving the information they need (Phillips 2005:60). It follows from this survey that there is a need for interaction (feedback) between the information-reporting model and the user's information needs, before information can actually make decision making possible. Everingham and Kana (2004:2) conclude: "Over time, companies can expect growing pressure to develop meaningful disclosure practices that more adequately address the diverse information requirements of different stakeholder groups on an integrated basis." In order to meet the expectations of the user groups, organisations will have to encourage stakeholder groups to give feedback on their information requirements and then take cognisance of this feedback. Users' responses could contribute to a more user-specific reporting model.

#### **4.3 THE CONCEPTUAL FRAMEWORK UNDERLYING FINANCIAL INFORMATION**

Financial information originates from the happening of events or transactions. It emanates from various sources, such as the financial media, capital market releases and the organisation's own accounting process. It therefore follows

that there can hardly be one single conceptual framework underlying financial information per se. Although the accounting profession developed a framework for the presentation of accounting information, the principles of this framework can also be used as a guideline for the presentation of other financial information. The key principles of this framework applicable to financial information in total will be discussed.

Before the establishment of a conceptual framework, the accounting profession was criticised because the generally accepted accounting principles of the time allowed for much diversity in accounting treatments. There was a lack of agreement on key issues about, inter alia, the acceptance of decision-usefulness as the criterion for the formulation of accounting policy, “the role and objectives of financial reporting, appropriate definition, as well as recognition and measurement rules for the elements of accounting” (Deegan & Unerman 2006:172). These problems led to the formation of the Trueblood Committee, which listed 12 objectives and seven qualitative characteristics that financial information should possess, to make it useful for decision making. The real meaning of the Trueblood Committee centred on the establishment of objectives that would be relevant and responsive to the financial information needs of different users for decision-making purposes. The idea was to narrow the gap between financial information, on the one hand, and the usability thereof for decision makers, on the other.

The Financial Accounting Standards Board (FASB) in the USA developed one of the first conceptual frameworks in accounting, which was based on the Trueblood Report’s recommendations. According to Gibson (2007:4), the FASB’s Framework is intended to “set forth a system of interrelated objectives and underlying concepts that will serve as the basis for evaluating existing standards of financial accounting and reporting”. The FASB formally defined its conceptual framework as “a coherent system of interrelated objectives and fundamentals that is expected to lead to consistent standards” (FASB 1978:SFAC No. 1). Consistency in the way financial information is presented is

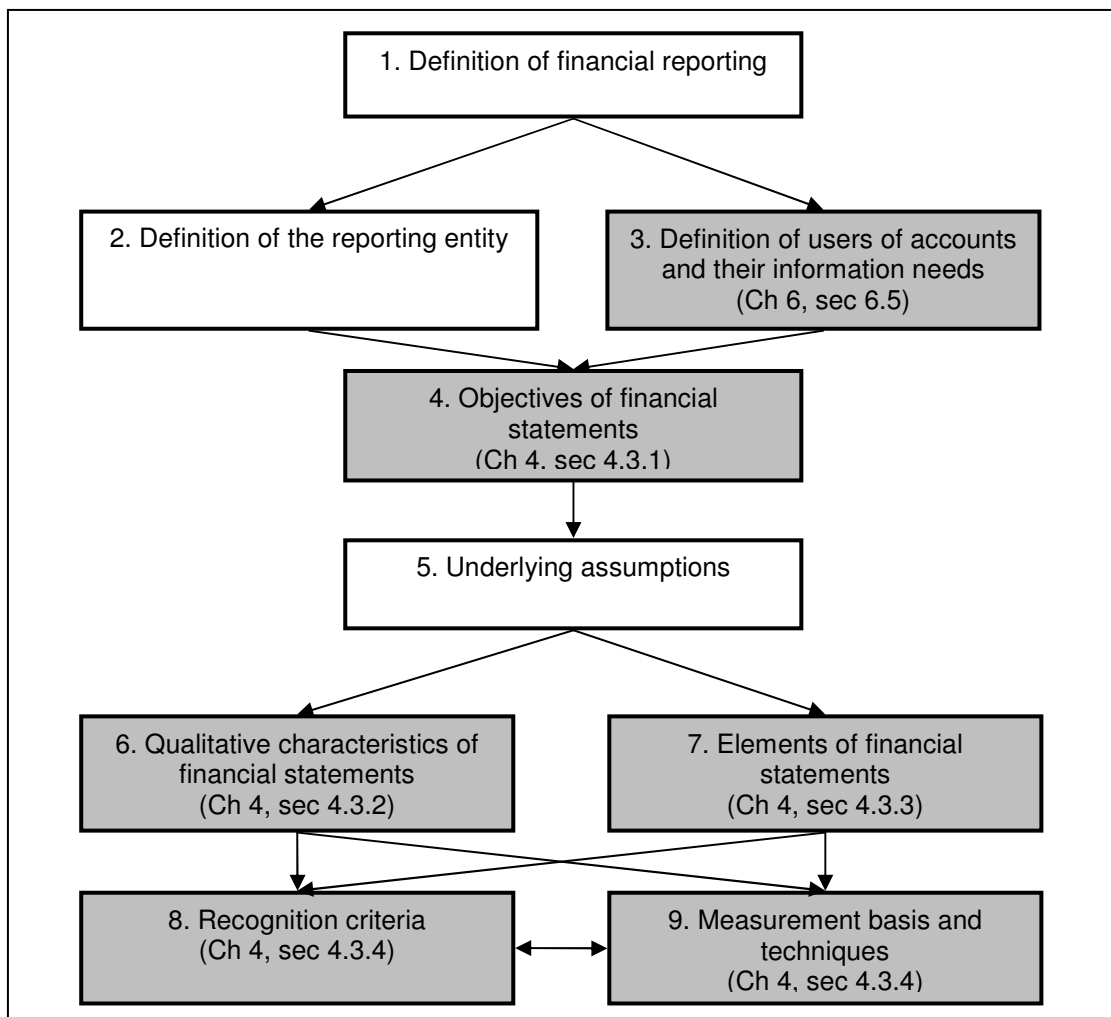


crucial when users, especially those who are not as affluent in the financial language, need to base their decisions on the information or to compare different sets of information in order to make decisions.

Other countries also embarked on the development of a conceptual framework for accounting. *The Corporate Report* (1976) in the UK, *The Stamp Report* (1980) in Canada and similar attempts in Australia and New Zealand were all developed with a number of similarities to that of the FASB's Framework. As a result of globalisation and the attempt to set international accounting standards, the International Accounting Standards Committee (IASC) also developed a Framework (1989) that its successor, the International Accounting Standards Board (IASB), subsequently adopted. The South African Framework, issued in 1990 as the *Framework for the Preparation and Presentation of Financial Statements* (AC 000), is based entirely on the Framework developed by the then IASC. All these attempts were initiated with the intention of increasing the quality and usefulness of financial information for decision making.

Although decision makers can at least be sure that financial information based on the conceptual framework was prepared according to a well-considered process, the complexity of these financial reports, as will be discussed in chapter 5, has the potential to baffle decision makers who are not financial experts. There seems to be general support for differential reporting rules and the IASB is writing its SME standard using the same conceptual framework as used for IFRS but reducing the financial reporting burden (IFAC 2006:21). For the many small entities, where the owner or managers may find current financial information based on IFRS complex and incomprehensible, these new standards may come to the rescue. The components of a conceptual framework based on the IASB/IASC framework are illustrated in figure 4.4. This figure indicates the sections in which some of these components are further explored in this thesis.

**Figure 4.4: Components of a conceptual framework (based on the IASC/IASB framework)**



**Source:** Adapted from Deegan & Unerman (2006:170)

As indicated in figure 4.4, the components of the conceptual framework of specific importance to the decision-usefulness of financial information are addressed in this study. The objectives and qualitative characteristics of financial statements used by decision makers who are financial experts as well as those who have limited financial acumen are relevant to this study and are discussed in some detail. However, the elements of financial statements, recognition criteria and measurement basis are only briefly explained. The different users of financial information and their information requirements will be discussed in chapter 7.

#### **4.3.1 The objectives of financial reporting**

The basic objective of financial reporting is to provide information on which users can base economic decisions. Information serves to reduce the uncertainty inherent in the business environment and further reduces entropy on the basis of the assumption that chaos exists where there is no information (Koornhof 1998:33). Information can thus be regarded as the energy available to lower the measure of disorder (entropy) in the system. In line with information's basic decision-usefulness objective, is the claim that information has value if the "decision maker's expected utility is higher with than it is without the information" (Christensen & Demski 2003:113). However, the decision-usefulness objective also entails that the expected utility depends on the user's financial ability to understand and use the information. Other schools of thought regard accountability (or stewardship) to the owners and investors of a company as the primary objective of accounting (Schoonraad 2003:42). However, according to IAS 1 (SAICA 2008:par 7), the objective of financial statements of generally accepted accounting practice (GAAP) is "to provide information about the financial position, performance and cash flows of an entity that is useful to a wide range of users in making economic decisions". Hence, in IAS 1 the focus is not only on owners and investors, but on a wide range of users. Irrespective of which one of these objectives is the most important, if financial information is not presented in a format useful for decision making by a wide range of users, it serves no purpose.

The 12 objectives stated in the Trueblood Report were intended to be equal, but in the opinion of Riahi-Belkaoui (2004:167) there is a definite hierarchical structure to these objectives. The basic or first objective of financial statements is "to provide information on which to base economic decisions" (AICPA 1973). Although all 12 objectives embrace the usefulness of information for decision making, as well as predicting, comparing and alleviating uncertainty attributes, objective No. 2 is of special interest for the purposes of this study. As mentioned in the previous chapter, objective No.2 states that the purpose of "financial statements is to serve primarily those users who have limited

authority, ability, or resources to obtain information and who rely on financial statements as their principal source of information about an enterprise's activity" (AICPA 1973). Although "limited ability" may be interpreted as stating that financial statements should serve specific users, say those who are financially illiterate, Wolk, Dodd and Tearney (2004:175) state that it may simply be a code for full disclosure and broad, general-purpose financial statements. The Discussion Document, *Making Corporate Reports Valuable*, states that users of corporate reports can cover the whole spectrum, from those who are highly knowledgeable in financial matters, to those who tend to become bemused when faced with masses of figures (McMonnies 1988:28). Therefore if the objective of financial statements is to aid users in making rational decisions, then financially illiterate users, that is, those with a *limited ability*, should presumably also be able to understand and interpret the statements correctly if they have been fully disclosed in broad general-purpose financial statements. If this is not the case, then they should either become more financially literate in order to understand it or the information should be presented in a more user-friendly, comprehensible way so that even those with limited financial capability can understand it. One can argue that a process of establishing an interface is necessary to integrate the financial information and the decision makers' ability to understand and interpret it.

Users of financial reports, especially company shareholders, are concerned whether management uses the resources entrusted to them for the intended purposes. This *stewardship* objective is dependent on whether the financial information made available to the shareholders is presented in such a way that they can base their decisions on it, and also that they have the ability to understand it. Apart from the *decision usefulness* and the *stewardship* objectives, another commonly cited objective of financial reporting is in the following opinion of Deegan and Unerman (2006:179): "to enable reporting entities to demonstrate *accountability* between the entity and those parties to which the entity is deemed to be accountable". Wolk et al (2004:184-185) regard the *accountability* concept to mean more than the narrower concept of

*stewardship*, which follows Ijiri's usage that it is management's responsibility to report on achieving goals for the efficient and effective utilisation of organisational resources. Owing to numerous corporate failures, inexorable pressure has been placed on the accountability of organisational managers and decision makers. It is therefore becoming imperative for, inter alia, individual company directors and board members of organisations to understand the entity's financial reports before they commit themselves and become accountable for decisions taken by these boards of directors. Although the onus rests on these stakeholders to become competent in interpreting financial information, the financial information presented to them needs to possess certain characteristics before it can be useful for decision making.

#### **4.3.2 The qualitative characteristics of financial information**

The qualitative characteristics as described in the conceptual framework pertains to accounting information, but are also applicable and fundamental to any other financial information. Qualitative characteristics are those properties of the information provided in financial reports that will render it useful to users for decision making. Hence the objectives of financial reporting, as stated above, are a natural starting point in assessing the quality of financial information. The characteristics of information that make it a desirable commodity, guide the selection of preferred accounting policies from among available alternatives. The qualitative characteristics are those basic attributes deemed necessary to attempt to narrow the gap between financial information and decision makers.

As far back as 1973, the Trueblood Report listed seven qualitative characteristics that accounting information should possess. These characteristics are relevance and materiality, form and substance, reliability, freedom from bias, comparability, consistency and understandability (AICPA 1973). Since accounting reports are by no means the only source of financial information about organisations, one can infer that these characteristics are also relevant to enhance the quality of any other kind of financial information.

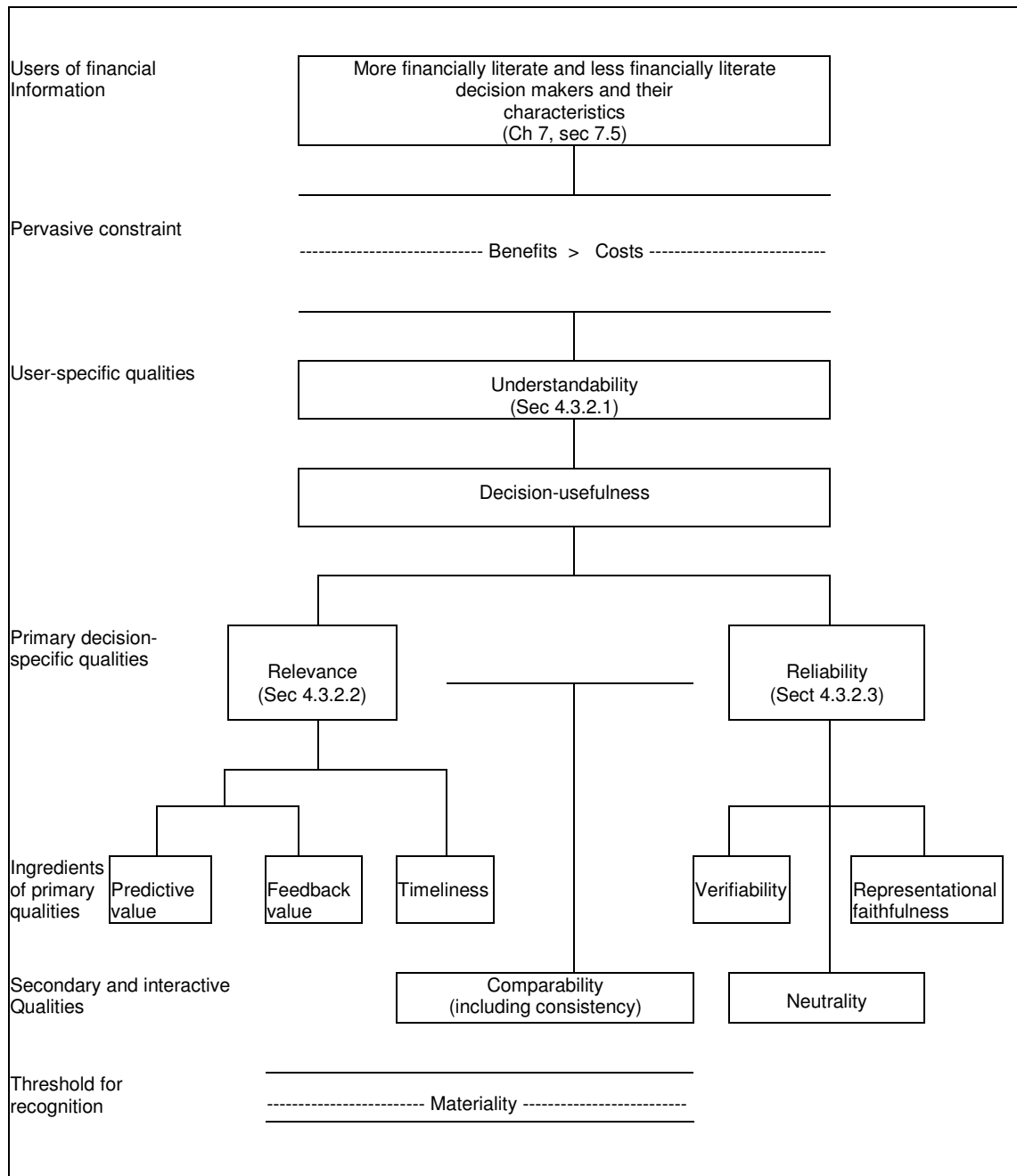
The main purpose for the establishment of these characteristics is to serve decision makers' needs. The Financial Accounting Standards Board's (FASB) *Statements of Financial Accounting Concepts (SFACs) No. 2* (1980) examined the characteristics that make accounting information useful for investment, credit and similar decisions (Gibson 2007:5). While the Trueblood Report refers to users with "limited ability", the FASB's statements adopt the position that "... users of financial statements must be assumed to be knowledgeable about financial information and reporting ..." (Wolk et al 2004:198). One can thus infer that the qualitative characteristics can only enhance the usefulness of information up to a point; thereafter the onus is on the users to become financially knowledgeable in order to base their decisions on it. Therefore, financial literacy can be used as a dynamic interface to bring the information side and the decision makers closer to each other.

Regarding the function to serve the decision needs of users, the FASB makes a further distinction between the different qualitative characteristics. According to Hendriksen and Van Breda (1992:131), the FASB distinguishes between *decision-specific* qualities and *user-specific* qualities. Although these qualities are defined from an accounting perspective, they are just as important for the preparation and presentation of any other financial information. These authors regard decision-specific characteristics such as timeliness, relevance and reliability as independent of users because all users need these information qualities. On the other hand, user-specific information qualities relate to the nature of the user. Knowledgeable users might find some information irrelevant because they already know it, while sophisticated users might find complex information more relevant than novices (Hendriksen & Van Breda 1992:131). Novices can also be seen as users with "limited ability" or who lack financial skills or experience.

The International Accounting Standards Board's (IASB) framework, identifies four principal qualitative characteristics, namely understandability, relevance, reliability and comparability (SAICA 2008) deemed fundamental for decision

making. Before the qualitative characteristics as set out by the IASB's framework are discussed, the FASB's hierarchy of information qualities is depicted in figure 4.5, with reference to the applicable sections of the thesis in which it is further discussed.

**Figure 4.5: A hierarchy of information qualities**



Source: FASB (1986: 44)

Regarding the theme of this study, both the characteristics of the decision makers and of information are depicted in figure 4.5. Decision makers and their characteristics, however, will be discussed in detail in chapter 7, while the focus in this chapter is on the characteristics of information. The above hierarchy (see fig 4.5) includes two primarily qualitative constraints on information. Firstly, the benefits must exceed the costs, and secondly, all the stated qualities of information are subject to a materiality threshold. If it is to be desirable, information has to be worth more to decision making than the cost of providing it. The problem with this constraint is that the benefits cannot always be quantifiable and directly related to the costs of providing the information. According to Nikolai and Bazley (2003:37), materiality refers to “the magnitude of an omission or misstatement of accounting information that, considering the circumstances, makes it likely that the judgement of a reasonable person relying on the information would have been influenced by the omission or misstatement”. It is meaningful that the hierarchy distinguishes between primary and other qualities, but does not assign priorities to these qualities. However, some authors (Gibson 2007:5; Riahi-Belkaoui 2004:167) are of the opinion that *understandability* and *usefulness for decision making* are the most important characteristics that makes information a desirable commodity. However, one should bear in mind that understandability is also dependent on the users’ level of financial literacy and not only on the quality of the information. If information is not understandable and useful for decision making it becomes obsolete and serves no purpose.

#### **4.3.2.1 Understandability**

As mentioned above, understandability, depicted in figure 4.5, is a user-specific quality; hence the understanding of the information is also dependent upon the nature of the user. The understandability of financial information in particular is closely related to the cognitive characteristics and knowledge level of decision makers. It follows that a certain level of expertise, including numeracy skills, is expected of financial information users. Dantzig (2005:1&5) does not refer to numeracy, but instead to having a *number sense* or even to



possessing the *art of reckoning*. This implies that numeracy involves not only counting, but also the ability to discern numbers and devise rules for operating on them. The art of reckoning includes not only being able to count, estimate or calculate, but also to account, judge and consider the effect of the amounts on the organisation. Numeracy is discussed in more detail in chapter 6. More specifically, Deegan and Unerman (2006:178) even expect financial report readers to be proficient in financial accounting. Paragraph 25 of the FASB's conceptual framework adds that "... users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence". Users may well be willing to study the information, but if they do not understand what they are reading, it will be almost impossible to study the content with reasonable diligence. This leads one to believe that all users of financial reports should be at least financially literate and capable of understanding these reports.

Contradictory to the above, Objective No. 2 of the Trueblood Report refers to those users who have "limited authority, ability or resources to obtain information". The discussion document: *Making Corporate Reports Valuable*, also states that "reports should be framed in such a way that users can get what they want from them without having to turn for advice to an accountant, lawyer, economist or other specialist" (McMonnies 1988:28). This document goes further to suggest that accounts do not need to be translated for the lay user, but should be comprehensible to a reasonable person (McMonnies 1988:50). If a "reasonable person" refers to the person's financial capabilities, one may assume that a lay person is then regarded as someone who is less financially literate. Deegan and Unerman (2006:181) see *understandability* as a requirement or challenge for standard-setters to ensure that the accounting standards they develop for dealing with complex issues produce understandable disclosure, irrespective of the complexity of the underlying transactions. In the same sense, an individual may be able to drive a car, but does not necessarily know how the engine works.

It is thus preferable that the disclosure of financial information should be of such a nature that the users can understand it without knowledge of the detailed transactions underlying it. One may assume that financial statements should ideally be presented in a comprehensible fashion and that unnecessary technical jargon should be avoided. The dilemma in the understandability of financial information is that the financial reports need to be presented in plain format, but that the user needs to have a reasonable knowledge of business and economic activities. The fact that users may have different levels of financial literacy has to be considered when contemplating the presumed understandability of the information. Users need to possess a specific level of financial expertise to understand the numbers in the context of other financial information and the economic environment. Besides the need to understand the information presented in financial reports, users should also be able to base their decisions on the belief that the information presented is relevant and reliable, as explained in the next section.

#### **4.3.2.2 *Relevance***

Relevant information is supposed to influence “the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations” (SAICA 1990: par 26). However, without financial literacy it would be difficult to evaluate events and, if necessary apply any corrective actions. Although relevant information should be able to influence the user’s decisions, the degree of relevance will depend on his or her needs and expectations. According to Hendriksen and Van Breda (1992:133), information will only be relevant if it affects goals, understanding and decisions. Goldberg (2001:174) argues that the relevance of information relates to the use made of it. He further states that the “provider of information cannot foretell its relevance; he may speculate or hold an expectation (perhaps justified) that it will be (or will not be) interpreted by the recipient as being relevant”. It follows that for information to be relevant - in other words, to serve a purpose - there should be a definite link between the quality of the information and the decision makers’ objectives. The quality of the information,

in turn, will depend on the decision makers' ability to understand it and also on the feedback that users give to the producers of this information.

In figure 4.5, relevance is depicted as a primary decision-specific quality. However, the nature of the user is shown as a secondary determinant in order to decide what information to submit. Wolk et al (2004:167) regard relevance as the major issue of financial information because of the different user groups with different backgrounds who need to make decisions in different contexts. According to the IASB framework (SAICA 2008:par 26), relevant information should further have *predictive value* and *feedback value* to assist the different decision makers. These are not the primary qualities of financial information but the essential ingredients of an encompassing process to produce relevant information. In contrast to the IASB framework's statement on financial information's predictive value, Goldberg (2001:19) contends that "... however valid an analysis of past performance may be, the future is always unknown, even though it may be imagined". This suggests that financial information as such might not always have predictive value and that it depends instead on the users' imagination or perceptions of future financial conditions. However, financially illiterate users may find it difficult to imagine or perceive future financial conditions. As far as feedback value is concerned, Nikolai and Bazley (2003:35) state that financial information has feedback value when it enables decision makers to confirm or correct prior expectations and that knowledge about previous actions will generally improve a user's ability to predict the results of similar future actions. As seen in chapter 3, feedback, be it positive or negative, is the basis for information flow in an open system, and it is essential for the user to adjust to the outcomes of decisions made in the past.

Knowledge of past events is also necessary to predict future events and the outcome of similar future actions, say, credit and bank lending decisions may be predicted on the basis of the organisation's accounting and other financial information. A survey by KPMG (2008:39) commented that investors "... are asking for better measures of economic value and more reliable guidance on a

company's future performance". The problem is that value already relates to a future concept and is dependent on future circumstances unknown in the present. According to Simon (1996:147), one of the requisites for good predictions is an understanding of the phenomena to be predicted. Predictions on a company's future performance can therefore be risky if those who use financial information for predictions are not financially literate enough to understand the information used as the basis for such predictions. Forward-looking financial information and its predictive ability are discussed in more detail in chapter 5. Hence, although financial information has predictive value, it can never be a prediction in itself; it can only be used as guidance on the organisation's future prospective. If decision makers do not have the necessary financial acumen they may find it difficult or even impossible to make predictions on the basis of the available information without the help of, say a financial analyst.

A further ingredient for information to be relevant is that of *timeliness* (see fig 4.5). Timeliness implies that information must be available to the decision maker before it loses its capacity to influence any resolutions. Gelinas et al (2005:24) confirm that "lack of timeliness can make information irrelevant". Hall (2007:15) further explains that "information must be no older than the time period of the action it supports". Because financial reporting often happens up to and between three to six months after the financial year end, decision makers need to have the financial capability to assess if the information is still relevant and applicable to the specific decision-making situation. Users must take timeliness into account when using financial information as basis for decision making. The less informed may use irrelevant and outdated information to base their decisions on. Timeliness as such does therefore not guarantee relevance, but a lack of timeliness robs information of its relevance (FASB 1980:par 56). Hence timeliness does not only imply that financial information must be produced as quickly as possible, but rather that timely information must be available throughout the financial period, be it in the form

of management reports or any other financial information releases, in order to make sound economic decisions at the required time.

#### **4.3.2.3 Reliability**

The credibility of information is jeopardised if it does not have both the qualities of relevance and reliability. The IASB framework defines reliability as the quality information possesses “when it is free from material error and bias and can be dependent upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent” (SAICA 2008:par 31). From this definition one may infer that in order to be reliable, information must be neutral and free of bias. Bias, according to Gelinas et al (2005:24) is the “tendency of information to fall more often on one side than on the other of the object or event it represents”. If the debtors’ account, for example, is higher than what can be collected, the balance presented is bias. Free from bias also means that the information preparer is only an observer and has no judgement to express (Goldberg 2001:16-17). The preparer is only supposed to present the financial events of the organisation objectively and realistically without clouding them with his or her own interpretation thereof. Hence the users of the information, especially those with limited financial knowledge, need to know that the information was not influenced by the subjectivity of the preparer. If the user is financially illiterate, it will be almost impossible to judge whether the information is neutral and unbiased. Verifiability addresses the reliability of the measurement method, whereas neutrality addresses the reliability of the person doing the measuring (Gelinas et al 2005:24). It follows that to be neutral, the person who measures is not supposed to influence the outcome of the measurement in any way.

Free from material error in the above definition further means that the information must be accurate. Users who do not have financial knowledge and experience will find it extremely difficult to evaluate the accuracy and materiality of the financial information presented to them. *Material* in this sense implies that in some cases, information must be perfectly accurate, while in

others, the level of accuracy may be lower (Hall 2007:15). According to Hall (2007:15), material error exists “when the amount of inaccuracy in information causes the user to make poor decisions or to fail to make necessary decisions”. This means that for decision making, the numbers must at least agree and be based on legitimate events or transactions. As stated by McDonnell (2005:83) “there needs to be a single, consistent version of the truth, both for compliance purposes and for ongoing credibility with the investor community”. This implies that *representational faithfulness* is a necessary attribute to ensure that information is accurate and not based on artificial or superficial events in order to use it for decision making. By contrast, the application of IFRS emphasises that certain assets are valued at fair value or revaluated to present a more realistic current value. This may lead to different values being based on different calculations, which may not represent one single consistent version of the truth; something that complicates the use of financial information, especially for those without financial expertise.

The usefulness of financial information for decision making is further enhanced if *verification* of the information proves that the accounting measures represent what they purport to represent. The word “verify” is derived from the Latin word *versus*, which means truth. Verifying the reliability of information implies that the measurement has an existence separate from the person making the measurement (Hendriksen & Van Breda 1992:138). In contrast to this statement, Wheatley (1999:65) states that no form of measurement is neutral. This makes it difficult to know if decisions are based on sound measurement techniques. Measurement in this context means assigning a value to certain objects or events according to certain rules (Riahi-Belkaoui 2004:42). The verification process can therefore help to reassure users who are not that financially literate that the financial information at least represents the truth. According to Horngren, Sundem and Elliot (1996:734), verifiability means “that there would be a high extent of consensus among independent measurers of an item”. It is thus assumed that less subjectivity and personal bias are applied by the measurer. Where a lack of neutrality and uncertainty may create

constraints to measurement, the limitation of the less financially literate user to verify the validity of the numeral assigned to the object or event can also be regarded as a major drawback.

#### **4.3.2.4 Comparability**

Comparability is defined as a secondary and interactive quality in the hierarchy of information qualities (see fig 4.5). Financial information becomes more useful for decision making if it can be compared with similar information for other reporting periods or information on other enterprises. Some companies compare their figures or ratios with benchmark figures or ratios established by a set of leading companies in the same industry. Consistency in the methods and policies used to prepare and present financial information is an essential attribute if information is to be compared from one period to the next. Consistency and comparability enable even those less experienced in financial matters to make some sense of current financial results. This is true not only for annual financial statements but also for other financial information, such as management reports, budgets and stock market releases.

For instance, financial statements prepared according to GAAP and based on IFRS are presumed to be comparable because the same accounting standards are applied throughout. However, “comparability should not be confused with mere uniformity and should not be allowed to become an impediment to the introduction of improved accounting standards” (SAICA 2008:par 41). Users must be aware of the possibility that there may have been a change in the way certain standards were applied. There could be environmental circumstances that dictate a more desirable change in accounting policy or technique (Riahi-Belkaoui 2004:187). If this is the case, the nature of and justification for a change in accounting policy and its effect on, for example, income should be disclosed to enable decision makers to compare the information with the reports for any other period.

The increasing number of multinational corporations and cross-border transactions demands the compatibility of accounting standards worldwide. Cross-national analysis of organisations entails, firstly that comparability of the reporting methods and accounting principles employed by the organisations is achieved, and that the user needs to thoroughly understand the reporting practices employed in different countries (Stickney, Brown & Wahlen 2004:381). However, it is debatable whether this level of comparability is simultaneously attainable in both the developed and less-developed countries of the world where there is also a huge difference between individuals with financial knowledge and those without. Even if the information is comparable, users in different countries may not have the financial acumen to even understand the information, let alone to compare it. Hence globally, users will benefit from having financial knowledge.

#### **4.3.3 The elements of financial reporting**

Financial reporting represents only a section of financial information. Although the elements described in the conceptual framework relate to accounting and form part of annual financial reporting, they have an influence on many other forms of financial and management reporting. For example, the value of the elements as depicted in a company's financial reporting is reflected in information such as the listing of share prices in the financial media. Having considered the qualitative characteristics of financial information, it is therefore also imperative to consider how the elements of financial reporting are defined. The users of these financial reports need to at least know what the elements stand for before financial reports containing these elements are used as the basis for decisions. Five elements of financial reporting were identified by the IASB's conceptual framework. These elements were subdivided into two broad groups, firstly, elements relating to the *financial position* of the organisation, and secondly, elements relating to *performance*.

An organisation's financial position comprises the elements of *assets*, *equity* and *liability*, which are also the elements portrayed in the balance sheet.



According to Berman and Knight (2006:76&77), for the less financially intelligent user, the balance sheet is a little harder to understand than the income statement and these users may be somewhat wary of it and the assumptions, decisions and estimates that go into compiling it. If users are at least financially literate enough to identify if something is an asset, liability or part of equity, they might be less wary of using the statement of financial position in taking certain financial decisions. Assets are defined as having “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events”. However, liabilities are “probable future sacrifices of economic benefits arising from the present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events” (Riahi-Belkaoui 2004:188). Equity is defined in paragraph 49 of the IASB’s framework as the “residual interest in the assets of the entity after deducting all its liabilities”. Although these definitions are general, decision makers, especially those with limited financial knowledge, will at least need to know what these definitions mean before they can interpret the elements presented in the balance sheet.

Users of financial information will also benefit from understanding the elements used to compile the organisations income statement. The elements relating to the entity’s performance or income statement comprise *income* and *expenses*. Even for the financially illiterate, these elements are usually not that difficult to understand because they relate to their own experiences of receiving money and paying expenses. However, an organisation’s income and expenses are somewhat more complicated, and users need to understand what they entail. For example, expenses include losses, which imply a reduction in net assets. Losses are caused by events that are not under the control of the entity, for example, losses caused by fires or floods which were not insured (Deegan & Unerman 2006:192). Income and expenses are recorded in the income statement and are used to determine profit or loss. Riahi-Belkaoui (2004:189) attests that the above terminologies are critical for decision makers because they “provide a significant first screening method for determining the content of

financial statements”. Hence, if users of financial information are not familiar with the terminology used to describe these elements or with the effect of these elements on the financial results of an organisation, they will be unable to make sound financial decisions. These users may benefit from a financial literacy interface when using the statement of financial performance for decision making.

#### **4.3.4 The recognition and measurement concepts of financial information**

To be recognised and included in the financial statements, items must first meet the definition of an element of financial statements. They must further be measurable, relevant enough to make a difference in user decisions and reliable (Riahi-Belkaoui 2004:190). Knowledge of the conceptual framework’s recognition criteria of elements included in financial statements will contribute to the usefulness of these statements for decision making. Although the recognition criteria are the rules or conventions determining when an asset, liability, revenue amount or expense has to be recorded in the financial statements, the recognition of an item cannot be divorced from decisions on its measurement. Users of financial information need to be financially literate to be aware of the recognition criteria, and need to know if they base their decisions on inaccurately recorded information.

According to the conceptual framework, there are different bases of measurement to determine the monetary amounts at which the elements of the financial statements should be recorded. These bases include (1) historical cost, (2) current replacement cost, (3) current market value, (4) net realisable value, and (5) present (or discounted) value of future cash flows. While on subsequent measurement, IFRS gives an entity the choice to revalue certain assets such as property, equipment and investment property to fair value (IAS 16), the revaluation of certain assets to fair value is mandatory (IAS 39) (PWC 2006). For decision making, it is imperative that users of financial statements know on what basis items are measured and whether there was a change in

the measurement basis from one period to the next. Although users of financial information do not necessarily know how the values were calculated, they at least have to have a certain financial literacy to know if the values given in the statements are not entirely unrealistic.

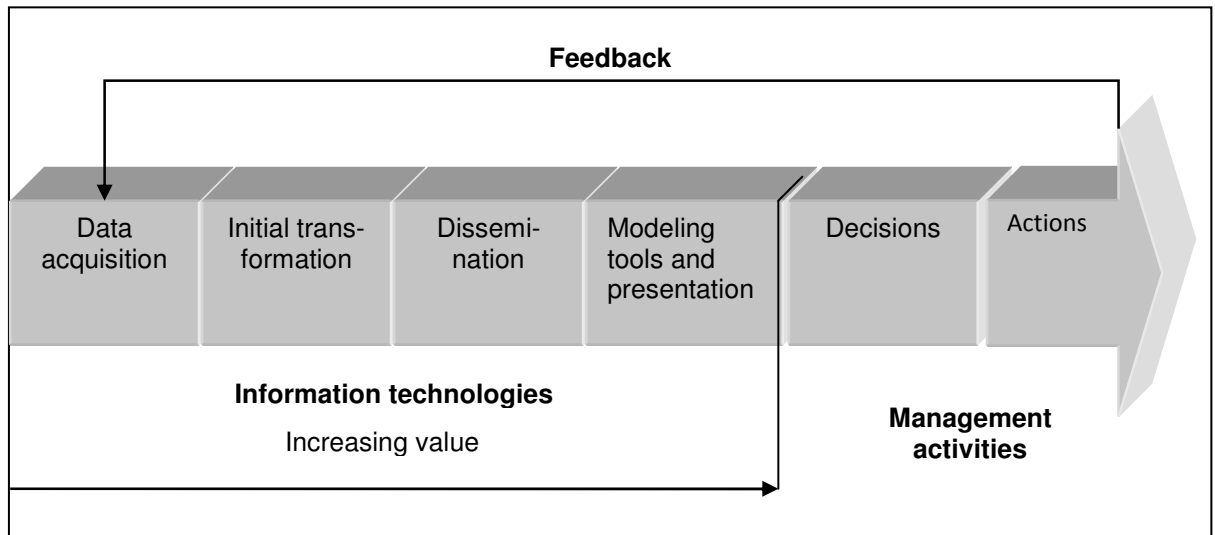
#### **4.4 THE FINANCIAL INFORMATION VALUE CHAIN**

A financial information system is perceived to help an organisation make better decisions. Such a system may also assist less financially literate decision makers in making financial decisions. For this to happen, raw data need to be transformed through a process in order to become valuable to the organisation. This process can be regarded as a value chain similar to the production value chain introduced by Michael Porter in the 1980s. Atkinson, Kaplan and Young (2004:286) define the *value chain* as “a sequence of activities that should contribute more to the ultimate value of the product than to its cost”. A value chain approach requires that cost-creating activities should be reduced and that nonvalue-adding activities in the organisation should be eliminated. It follows that an information value chain has to contribute to the production of useful information to add value to the decision-making process.

A financial or management information system also consists of a sequence of activities with the ultimate goal of effecting decisions and alleviating uncertainty. Phillips (2001) refers to a management information value chain (MIVC) approach which, inter alia, makes possible explicit cost-benefit analysis of information technology investments. As shown in figure 4.6, according to Phillips (2001), an MIVC consists of all the activities in an organisation whereby information is acquired, transformed, stored, disseminated and ultimately presented in order to support decision making. According to this encompassing process, information acquisition, transformation and presentation flow into decision-making actions without any boundaries. However, if decision makers do not understand the information, there will be a

break in the value chain, which could be linked by means of a financial literacy interface.

**Figure 4.6: Elements of the MIVC**



**Source:** Phillips (2001)

As depicted in figure 4.6, the MIVC includes six types of activities (Phillips 2001):

- (1) The *data acquisition* activity includes the internal and external acquisition of raw data in the system.
- (2) The *initial transformation* activity involves the summary and purifying of the raw data as well as combining data from different sources to ultimately produce information.
- (3) The *dissemination* activity delivers the right information to the right people at the right time. The purpose of this activity is to determine who needs what information when.
- (4) The *modelling tools and presentation* activity involves the final transformation and presentation of the information. In this step, information from different sources is combined and transformed into a format that provides clear guidelines for decision makers. Although the idea is to present understandable information to users, they still rely on a financial literacy interface to understand it.

- (5) The *decisions* activity is usually done by humans, but in certain situations, where a great number of decisions need to be made quickly, computerised decision-making systems may be used. This may be helpful to those without financial acumen, but can also be detrimental to the organisation if the decision makers do not have the financial knowledge to verify the quality of the computerised decisions.
- (6) The *actions* activity is a dynamic process and depicts the conversion of information into actions while continually adjusting to changes in the environment.

The volume of information presented to decision makers does not necessarily add value to the decision-making process. To create a competitive advantage, it may be better if the information system is seen as a value chain and each one of the activities can be streamlined to produce the right information to the right people in time. However, if the value chain is broken because people do not understand the information produced by the first four stages for lack of financial capability, the management activities in the last two stages will not take place. This implies that an interface might become necessary between the information system and the users thereof. Simon (1996:113) contends that an interface is concerned with attaining goals by adapting one environment or system to another. The decision makers' information requirements therefore need to be established and communicated to the accountants or other presenters of information before any of the other activities can be initiated. The problem is that, this feedback activity is only possible if the decision makers are knowledgeable enough to know what kind of information they need at a specific time.

#### **4.5 THE ACCOUNTANTS' ROLE IN FACILITATING DECISION MAKING**

It is acknowledged that accountants are not the only providers of financial information, but that the information they prepare is a vital basis or source to produce other financial information. According to Gouws and Terblanché (1998:102), accountants are “communication facilitators between entities and users” and as such need to keep in mind that communication involves the “awakening of perceptions and experiences”. To be able to truly transmit a message, an accountant needs to be aware of his or her audience and the way the message is interpreted by them. In other words, the accountant is supposed to receive feedback from the audience on their perception of the message they received which makes him or her not only a message transmitter but also a message receiver. However, it is not always possible for accountants to adjust the message according to the feedback they receive from those who are not that financially literate, because they are obligated to adhere to certain standards and rules.

Accountants, as the main transmitters of financial information, are perceived to have a certain degree of power. Deegan and Unerman (2006:50) confirm that accountants have an extremely powerful role in society because “they provide the information that is used in many decisions and they are able to highlight or downplay particular facets of an organisation’s performance”. According to Belkaoui (1989:173), the basis of accountants’ power is “not their monopoly on accounting working knowledge, but the control they have of such knowledge”. They present financial information from this position of power without always taking into account that the users have not obtained the same level of power in interpreting such information. Montondon and Marsh (2005:53&56) further state that while standard-setters place increasing emphasis on providing information for individuals, accountants are not accustomed to preparing reports to reach such a less-informed audience. Schoonraad (2003:43-44) explains that because accounting, with its countless rules and standards, is

difficult for most individuals to understand and use for decision making, accountants, who can interpret and use the information, are therefore not only in “a privileged position, but also in a very powerful one”. From this position of power, it would be useful if accountants could act as an interface between the information system and the decision makers, but unfortunately they cannot compromise their role as objective measurer in order to interpret the information for the decision maker.

In his address to the South African Institute of Professional Accountants in August 2006, Minister Trevor Manuel, stressed the importance of accountants who are “professional, observe the highest standards of ethical conduct and deliver a service of the highest quality to the organisation they belong to” (Manuel 2006:19). In the light of this statement, one can expect of accountants as financial message transmitters to adhere to the highest standards when expressing an objective and accurate account of the organisation’s financial affairs. A counter-view to this perspective is that “accountants can, in a sense, create different realities, depending upon the particular judgements taken, the accounting standards available, and so on. That is, accounting does not objectively reflect a particular reality – it creates it” (Deegan & Unerman 2006:45&47). Accountants therefore only deal with representations of reality - they cannot create reality. Receivers of financial information need to be aware of this and be knowledgeable enough to realise the difference between real happenings and created realities.

Stakeholders in publicly traded companies, private enterprises and government organisations rely on the reports prepared or assessed by accountants. According to Ward (2006:8) “the assurance of accurate records, the stewardship of assets, and the mitigation of risk, are all elements within the professional accountant’s mandate”. This mandate does not, however, include taking decisions on behalf of people in the organisation. The public need to be protected by accountants committed to integrity and objectivity in fulfilling their mandate - hence the need to remain independent in order to demonstrate

objectivity and integrity. In this sense, the accountant's role could be reduced to that of a technician, merely capturing and reorganising data. On the other hand, accountants can assist decision makers, both the financially literate and financially illiterate, in an advisory capacity.

To add to the supposed independence and objectivity of accountants, the person who records activities in an organisation is not supposed to be the user of the data initially recorded and subsequently processed in the system. For example, "the accountant may not be the decision maker, the recorder has to interpret the occurrence or phenomenon and use symbols which can be useful, when processed, to the decision maker" (Goldberg 2001:93). This, however, does not imply that the accountant, when fulfilling the task of recorder, does not need to keep the specific users' needs in mind when preparing financial information. Since accountants are supposed to be objective and independent in preparing financial information for users, they cannot be the interface between the information and the decision makers.

#### **4.6 SUMMARY**

This chapter examined the dynamic nature of financial information which makes decision making possible. Communication in an information-rich organisation is highly dependent on how knowledgeable decision makers are. The creative energy in an organisation is dependent on a continuous supply of new information. A component of the financial information produced by organisations originates from the capturing of events by the accounting department. Since the implementation of, inter alia, IFRS, financial information systems have proliferated tremendously. The increase in the volume and complexity of financial information often outstrips the users' abilities to understand and interpret the information thus presented. The need for knowledgeable users of financial information who can provide feedback to the presenters of such information was therefore further highlighted.



In the light of the above dilemma, financial information has to at least comply with certain attributes to supply useful information for decision making. It was therefore necessary to identify the objectives of financial reporting and the qualitative characteristics of financial information as part of the conceptual framework underlying financial information. The elements of financial reporting and the recognition and measurement thereof were discussed. It was also mentioned that without these basic recognition criteria and established measurement bases, users of financial information might be exposed to unreliable and confusing information.

The vital role of the accountant as a message transmitter was explained. Following the recent highly publicised accounting scandals and corporate failures, the international and local accounting profession has attempted to regain the public's confidence by introducing more legislation and overseeing bodies, such as the Financial Services Bill and the GAAP Monitoring Panel. The result is that accountants are under tremendous pressure to adhere to a myriad of accounting standards, legislation and codes of corporate governance, while they also have to take cognisance of the information needs of different stakeholders. They even have to consider the fact that some of the users of financial statements have a limited ability to understand the information presented to them. In the light of the fact that financial information increases in complexity and accountants as producers of it cannot act as an interface between the information and the decision makers, one may infer that the improvement of the decision makers' financial abilities actually enhances the decision-making process.

In chapter 5, the array of information sources, the complex nature of financial information, financial reporting controversies and the effective communication of financial information is further discussed.