Chapter 2 Theoretical Framework

2.1 Introduction: Holism

Holism as interpreted in education and the development of personhood is the over-arching theoretical base of my research. *Whole-brain learning, holistic learning, holistic learning environments and* **holistic learning strategies** are consequently based on *holism* which refers to the *whole* or *totality* of the unit in question. Copley (2000a), Holdstock (1987) and Piet Beukes, quoted by de la Hunt (1990) refer to the contributions to holism of South African statesman Jan Christiaan Smuts. Copley (2000a: 2) even names him the "father of modern holism". Holdstock (1987:2) says, "Smuts (1926) dealt with the fundamental tendency of 'whole-making'" while Storr (1992:175) declares that "creating wholes" is the essence of human nature.

The swing of the societal pendulum towards holism as a result of the scientific revolution of the seventeenth century is explained by Zohar and Marshall (2000:26):

> [John Locke], founder of liberal democracy, used atoms as his model for individuals, the basic units of society. The social whole, he asserted, was an illusion; the rights and needs of the individual were primary. Atomism is also the cornerstone of Sigmund Freud's view of psychology and his 'theory of Object Relations'.

The recent emphasis on holism is the fruit of the protest movements against an overly technological view of the world in the 1960s, maintains Plunkett (1990:63). In consideration of the complex and broadly recognized trend toward a return to *holism*, Holdstock (1987:2), comments simply that "since the earliest times…the student as a *whole person* [emphasis mine] is what education is about. Yet, somewhere along the way we have lost sight of this reality. The student can never be divided into different bits and pieces of the curriculum".

Bruner (1986:94) dates the late 1950s as the beginning of what is called the cognitive revolution that turned scientific research toward questions of the mind which had previously been the realm of philosophers and theologians. "Psychologists…devoted themselves not to their subjects' overt, objective responses, but rather to what they *knew*, *how they acquired knowledge* and used it….this inevitably led to the question of *how knowledge was represented in the mind"*. This turning is toward a more holistic view of personhood.

The cognitive revolution has four strands according to Gardner (1987:394): first, the nature of *thinking* with "little concern with the human brain or nervous system". Then came the strand of the electro-mechanical comparison between brain function and computers. The third strand he cites is "*modal view' of cognition"* – a view in which psychological, computational, and neurological considerations are far more intricately linked and the fourth, the "*parallel distributed processing"* approach. Throughout my research, I give attention to each of these strands. The first strand extends psychology to culture; the second broadens the image of synapse to multiple impulses. The third and fourth strand are discussed later in more detail, but they describe cognitive function in terms of models which became increasingly familiar to teachers-in-training in the 1990s.

After my reading from cognitive psychologists, brain-based educators and neuroscientists, who have written over the last three decades, I suspect that a significant force toward the present holistic view of humankind springs from the arena of these professionals. They have written many books which have enjoyed popularity as they undertake to explain the intricacies of mind workings and learning. Their descriptions take into account multiple aspects of human development and identity. They make valuable contributions to our global understanding of personhood. Figure 2.1 below presents the type of organisation frequently presented by these experts. The arrow spinning off the figure below that starts at the *Intro* and moves clockwise.
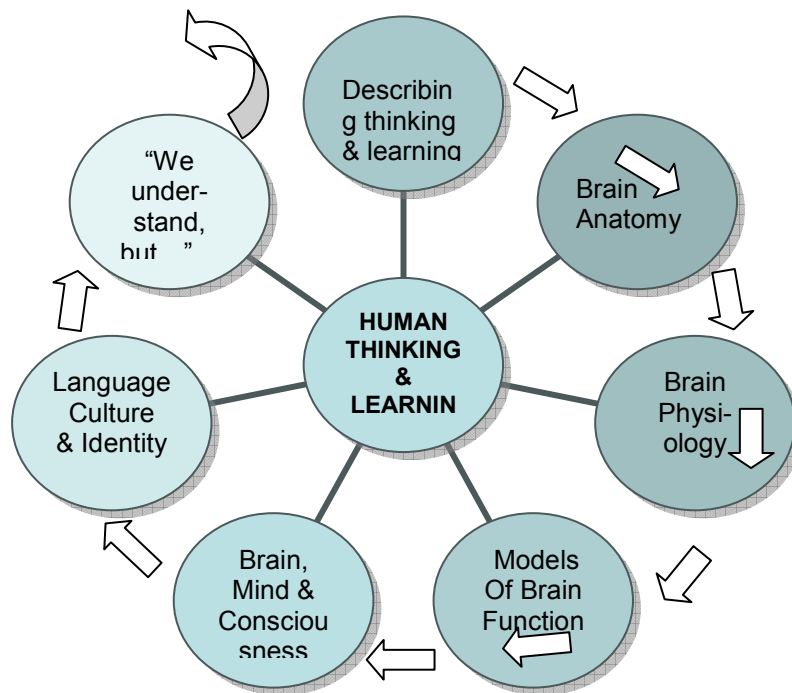

Figure 2.1 Representation of an Organised Path of Theorizing about the Mind

In Figure 2.1 The curved arrow represents the trajectory of theory and not the relationship between the subjects.

Many of these researchers and theorists seem to me to follow a similar sequence of development which I use as an introduction to the complex subject of this chapter, illustrated graphically as Figure 2.1. They tell us that it is immeasurably complex to describe "thinking" or "learning". They sketch, verbally and/or graphically, the anatomy of the brain in ways pertinent to their position and brain physiology, frequently referring to research conducted on *split brain patients* by Sperry (Gardner 1987:275, Restrak 1988, Sprenger 1999, Wegner 2002). These patients are those who have had surgically severed, for life-threatening reasons, the thick bundle of fibers, the corpus collosum, which connects the two hemispheres of the cerebral cortex. The research on these patients supports educational applications of *hemispheric asymmetry* which is the specific functioning of each the right and the left hemisphere of the cerebral cortex. Many writers make reference to the triune brain model of MacLean which appeared in 1952 which adds the importance of lower brain and limbic area functioning to the cerebral hemispheres and they may describe the metaphorical or physiological model of brain functioning which they favor. They discuss, from remarkable positions of understanding, the relationships between the brain and the mind, or the brain and consciousness generating challenging definitions and relevant issues of *language, culture and identity*. They may cite Freud, Piaget, Bruner or

Gardner for their contributions. Those who include language in their considerations will usually make reference to a contemporary of Piaget, the Russian scientist Vygotsky, who died young but whose brilliant students, including Chomsky, continued his work for several decades. They may treat "memory" at any juncture since it is actually linked to every aspect mentioned, it is discussed logically at any juncture. Before the writers close, they may make comment to the fact that they possess significant knowledge and understanding of the human mind / consciousness / thinking, yet they respectfully allude to this complexity as beyond their understanding. The effect of these statements is to posit each theory onto a trajectory towards a point somewhere beyond, a better way, a more complete model or explanation. An example of this type of "it is beyond us" statement follows from Wegner (2002:27):

> When we turn our attention to our own minds, we are faced with trying to understand an unimaginably advanced technology. We can't possibly know (let alone keep track of) the tremendous number of mechanical influences on our behavior because we inhabit an extraordinarily complicated machine.

The perception of limitation is formulated by Bergland (1985:177) as a question:

> The pattern-discerning right brain of any individual who takes the time to understand the new make-up of thought will be forced to the conclusion that the fabric of the mind is woven by some wise creator… the static form cannot produce thought; molecules come from the brain and others from the body … What force moves these molecules?

In order to clarify explanations and positions I give in this study, some superficial descriptions of brain anatomy and physiology are included in the next few sections. Detailed descriptions of such abound and are found in almost every book in my list of references which has *brain, mind, memory* or *learning* in its title.

2.2 Holistic Models of Brain Organization and Function

2.2.1 Multiple Intelligences Theory

Intelligence is classically and commonly understood as singular. The coining of the word *intelligences* in the plural was a deliberate and provocative choice by Gardner (1983) when he introduced the multiple intelligences (*MI) Theory*. His observations as a research psychologist led him to lay aside the image of the human mind as a "single, all-purpose machine that performs steadily at a certain horsepower, independent of content and context" having a single quality called *intelligence,* and "a series of relatively separate faculties" (Gardner 1999:32). He admits that he chose the plural term, at least in part, to challenge 'the widespread belief – one held by many psychologists and entrenched in many languages – that intelligence is a single faculty and that one is either 'smart' or 'stupid' (34)". He (1999:33-34)   reconceptualises thinking about the activity and ability of the mind by redefining *an intelligence* as "a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture". In reference to the effectiveness of this plural terminology and the *MI Theory* in general, Armstrong (1994:3) comments: "Once this broader and more pragmatic perspective was taken, the concept of intelligence began to lose its mystique".

Gardner (1983) originally named seven intelligences: Linguistic Intelligence /Logical-Mathematical Intelligence / Spatial Intelligence / Bodily-Kinesthetic Intelligence / Musical Intelligence / Interpersonal Intelligence / Intrapersonal Intelligence. He named them so aptly that understanding the differences between them seems quite clear from the outset. There are those who would refer to the *Mozart Effect* (Campbell 1997) as "spatial IQ".

In later writings, Gardner himself explores the possibilities of adding three intelligences to the original seven. He considers *spiritual*, *moral, existential* and *naturalistic intelligences* and concludes that naturalistic adheres to the criteria by which the others were established so that it could be added as an eighth, and he considers a ninth possibility (1999:68):

> …one connotation of spirituality seems congruent with other intelligences: *the capacity to think about cosmic and existential issues — from our existence and role in the universe to the nature of life, death, bliss, and tragedy* [italics mine.] In most societies, organised religious, mystical, or philosophical systems deal with these issues, but people may also develop their own unique existential or spiritual frameworks. While I am not ready to proclaim a ninth intelligence, I am willing to accept the possibility that a proclivity for pondering ultimate cosmic or existential concerns constitutes a distinctive human intellectual capacity.

Any of the multiple intelligences developed singularly would be a misuse of Gardner's *MI model.* They are no more stand-alones than other facets of personhood since no one has only one intelligence. Both Gardner (1983, 1997, 1999) and Armstrong (1987, 1993, 1994) clearly and repeatedly articulate the danger of inferring this possibility.

"E*motional intelligence"* is explored by Goleman in two top-selling books (1996, 1998) but his aim is not so much to add an intelligence to the list but to encourage all to develop this capacity by learning more about how emotions affect rational functioning. Wilks describes the state of being *emotionally intelligent* in terms of reconciliation and acceptance between different sub-identities or sub-selves of an individual. Wilks (1998:45) maintains that the public front of a person, the *ego* is sometimes shocked when other *members of the inner family* misbehave. The *ego* becomes "emotionally intelligent when [it] can say to itself, these people are part of me and I am no longer ashamed of them".

An *intelligence* is not a *unit*, according to Vygotsky (1962:4):

> By *unit* we mean a product of analysis which, unlike elements, retains all the basic properties of the whole and which cannot be further divided without losing them. Not the chemical composition of water but its molecules and their behavior are the key to understanding of the properties of water.

Already in the 1960s, on what he called *an intuitive level,* Gardner (1999:32) also embraced "the view of the human brain and human mind that is now called *modularity*" which was introduced in Section 2.1 and is discussed in the next section.

2.2.2 Modular Brain Theory

While the MI Theory offers concepts that present themselves as easy to grasp, explain and utilize, the Modular Brain Theory seems to be much more technical,

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anatomical, and difficult to describe. It is a theory held by holists, according to Gardner (1987:269): "The Gestalt assumption that the nervous system is organised in terms of neural fields, operating across wide regions of the cortex, struck a responsive chord with…holists".

A key factor in understanding this model of brain organization is described by Restrak (1988:22): "The organization of the neurons of the cerebrum in *vertical columns*…extends from the surface down through the six layers of cortex". Harth (1993:123) describes the organization as "thousands of sub-units or *modules*, columns of neurons that extend downward from the surface of the cortex to the top of the white matter". The vertical organization presents a different image than those of the maps of the cerebral cortex which commonly appeared in psychology textbooks several decades ago. The vast number of the neuronal cells and the specificity of the connections between the neuronal cells − greater than previously thought are significant aspects of brain modularity as well as the distribution of the modules in the brain.

Theorists give several metaphors to aid in understanding brain modularity. Restrak (1988:22) describes the modules as *subsets.* Pinker (1997:30) says mental modules are more like "road kill, sprawling messily over the bulges and crevasses of the brain….or regions that are interconnected by fibers that make the regions act as a unit". Pinker (1997:31) also favors the metaphor given by Chomsky of modules composing a '*mental organ'* which, like each other organ of the human body, is specialised to particular functions and integrated into a complex whole. In this way the mind has a heterogeneous structure of many specialized parts. Harth (1982:88) likens the modular brain model to a *hologram*:

> Every piece…says a little bit about every part of the scene, but no piece is essential….one can superimpose any number of holograms on the same piece of film, and then reproduce the images of the original scenes one by one without interference from the others.

Bergland (1985) consistently refers to the brain as a *gland* which is affected by hormones from many parts of the body and that also causes effects all over the body but is tailored to carry out a particular function. He (1985:2) says: "the notion that the brain is driven by electricity, that electricity is the stuff of thought, is accepted by most of the left brains of the world…so my left brain has a tough job if it is going to get the view that 'the brain is a gland' into your head".

Restrak (1994:67) describes how the modular brain uses different modules to access different information about the same entity.

> It's likely that knowledge within the brain is stored not as a unity (a tiger) but according to separate components or modules (the sight of the tiger, its roar, its smell, etc.). Further, some of these modular components may malfunction without affecting any of the others. Thus I may be able to respond to questions about lions based on general knowledge (Is a lion dangerous?) but not questions that would require visual knowledge (does a lion have four legs?) In short, 'lion' doesn't exist in my brain as a unity but as a multiplicity of such different knowledge categories as vision, hearing, touch and general knowledge (a lion is a member of the feline category of animals.) One area may

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be gone while other areas may not be affected. Indeed, the concept 'lion' may disappear as part of the loss of every other creature in the category 'animal'.

Categorizing as a kind of pattern-making or pattern-recognizing is widely held as a descriptor for brain-functioning even though the explanations for describing how the brain detects patterns vary. Restrak (1994:70) says [*italics mine*], "one can hardly overestimate the importance of learning more about the categories and how they are organised within the brain. They form the underpinning to *our understanding of ourselves and the world around us*". Curriculum writers frequently wordsmith outcomes which reflect, in the reality of lives of the learners, their *understanding[s] of [them]selves and the world around them*. As more is learned about how the brain detects and recognizes patterns, educators should be able to set up learning situations in which their learners are enabled to better succeed in categorizing which, in turn, will help the learners better succeed in learning.

The mental task of assigning items into categories would appear to be simple, but Pinker (1997:102) illustrates that categories are not always well defined:

> In many domains people do not have all-or-none convictions about whether something is true. A thing can be a better or a worse example of a category rather than being either in or out. Take the category 'vegetable.' Most people agree that celery is a full-fledged vegetable but that garlic is only a so-so example….Conceptually speaking, we eschew [sic] the idea that something either is or is not a vegetable and say that things can be better or worse examples of a vegetable. Mechanically speaking, we no longer insist that a unit representing vegetablehood [sic] be either on or off, but allow it to have a value ranging from 0 (for a rock) through 0.1 (for ketchup) through .4 (for garlic) to 1.0 (for celery).

Gardner (1987:383) states a presentational shift from the behaviorist era, "few scientists dared to speak of schemas, images, rules, transformations, and other mental structures and operations, these representational assumptions and concepts are now taken for granted and permeate the cognitive sciences". Pinker utilizes a graphic presentation to illustrate how connectivity of modular brain functioning becomes vast. This graphic presentation Figure 2.2 continues on the next page:
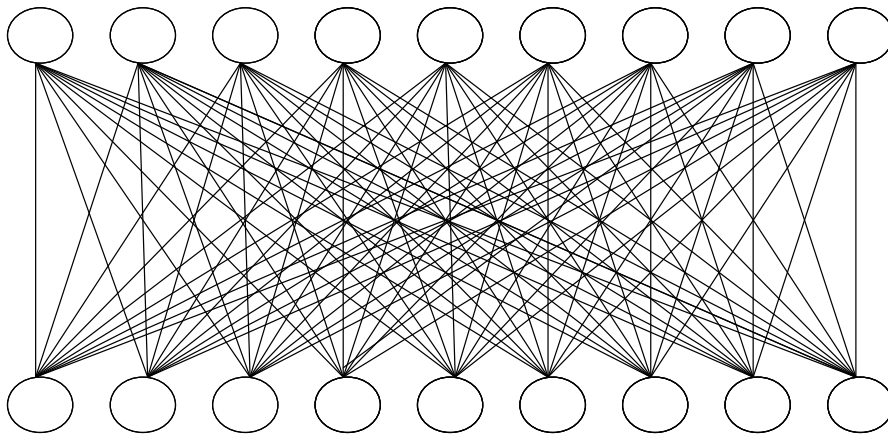

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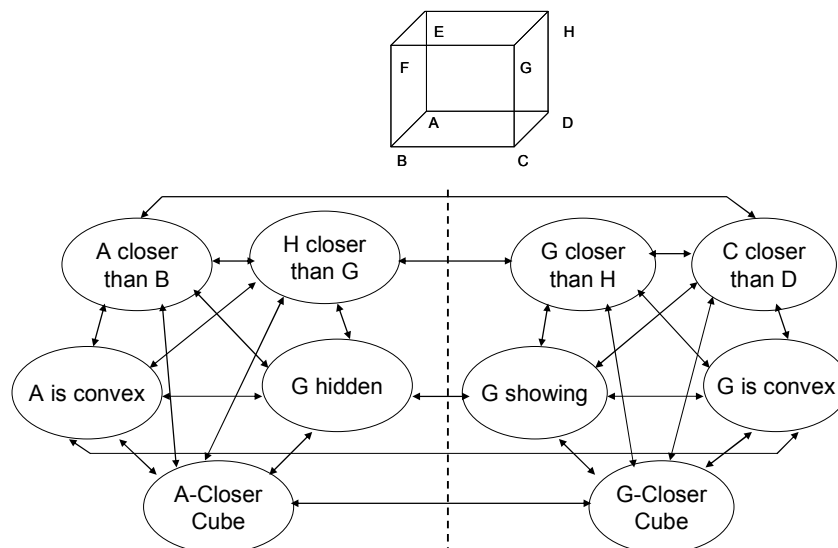
Figure 2.2 Relationships between the points of a cube (Pinker 1997:107)

The three parts of Figure 2.2 are three representations of the same item, a cube. Pinker attributes items or categories as points on a cube which have relationship or connections of differing strengths to many, many other things, such that the design of all of these connections is infinitely interrelated and intricate. Harth (1993:117) says "….the trillions of connections among neurons that define a brain are not specified in all detail by a person's inherited genes. Hence even identical twins have different neural nets, as they have different fingerprints". These could serve as a visual illustration of the verbal example of a lion cited above from Restrak. If the word *lion* is the cube, then our mental "knowledge" of *lion* is the sum of multiple perceptions and interpretations that we possess of *lion*, for example:

> Lions roar loudly and live in zoos or on African plains.
> Lions are furry animals that live in groups called "prides".
> Lions are mammals which carry their fetuses *en utero* and nurse their cubs.
> Lions can smell bad and eat yucky meat that people wouldn't want to eat.
> Lions should be cared for so they don't go extinct but I want them to be
> cared for by other people, and so on, and so on a vast number of times.

The sum of this vast number of overlapping and distinct perceptions which come from different parts or layers of my brain forms the *hologram* (Harth), or the *word* (Vygosky) *lion*. My word *lion* is different than the word *lion* in the brain of another person. My word *lion* is likely to be more similar to the word *lion* in the brain of another person from a similar cultural framework because cultural experience modifies the "weight" (Strauss & Quinn 1997:74) of certain connections (as those in Figure 2.2.) reinforcing them. That "lions should be cared for so they don't go extinct" is stated with conviction in my culture so that connection, the line between *lion* and *needs protection* is reinforced. Discordance between the *brain-conceived naming* of the concept and the *other-brain-perceived interpretation* helps to explain gaps in communication and understanding occur between participants in learning settings.

Pinker continues with the idea that "everything connects to everything" (1997:103,104):

> We can get even more adventurous, and take inspiration from the fact that with neurons, unlike silicon chips, connections are cheap. Why not connect every unit to every other unit? Such a network would embody not only the knowledge that greenness predicts vegetablehood and crunchiness predicts

vegetablehood, but that greenness predicts crunchiness, crunchiness predicts leafiness, greenness predicts lack of mobility, and so on: [103] with this move, interesting things begin to happen. The network begins to resemble human thought processes in ways that sparsely connected networks do not. For this reason psychologists and artificial intelligence researchers have been using everything-connected-to-everything networks to model many examples of simple pattern recognition.

De Bono (1976:95) describes the mind as pattern-creating by his model of the brain acting as *jelly* which

> …allows incoming information to arrange itself into patterns, in other words a self-educating system. Self-educating systems are pattern-creating and pattern-using systems. The patterns are created from the sequence of the incoming information. The first piece of information alters the state of the mind so that the second piece becomes associated with it or linked to it. In this way patterns are built up.

Restak (1994:36) calls this alteration a "modification of modular maps". Continuing to use modularity to explain the brain functioning he postulates that "our sensations, emotions, memories, and thoughts – our most personal mental activities – are the result of the parallel operation of modules throughout the brain".

In the audio domain, Storr (1992), Jourdain (1997) and Altenmuller (2004) maintain that pattern-seeking and pattern-recognition are the sources of intrinsic satisfaction produced when our ears and brain team up to interpret the patterns and categories within music. Storr (1992:176) says

> But when we first discern [in our brain] an unexpected linkage, a new pattern, it brings us intense satisfaction. The attempt to create new wholes, to discover new connections between data hitherto unrelated, is always perceived as a 'higher' mental activity, since it involves something more than an immediate, instinctive response to impinging stimuli.

Storr here refers to pattern-discernment as "higher mental activity". Bergland (1985:109) elevates the pattern-recognition capacity of the brain to the "highest form of thought" [*italics mine*]:

> Pattern recognition is the *sine qua non* of the genetic code, of the DNA/RNA interactions, which provide the blueprints for life; pattern recognition underlies all immunology – the antigen-antibody reactions that recognize and defend 'self'; pattern recognition is basic to all the hormone/hormone receptor interactions of cell regulation; and pattern recognition is the *highest form of thought*. It is the synchrony, the synergism and the spatial juxtaposition of whirling hormonal forces that give life to the human soul.

Whether the modular brain is seen as interconnected *subsets*, a specialized *organ*, a complex *gland*, *jelly forming patterns*, *thinking meat* or a haphazardly distributed *road kill*, as *pattern creating*, *pattern seeking, pattern-recognizing or pattern-discerning* – each perspective considers the brain as a whole so each of the models described is a holistic model of brain organization and function. There are other *whole-brain* models

− the Right brain-Left brain Model, the Triune Brain Model of MacLean model and the Four-Quadrant Model of Herrmann – which are considered in the following sections.

2.2.3 Duality of Thinking and of the Brain

The duality of the brain is a centuries-old perspective, both philosophically and medically speaking. There were plainly the two *forms of knowing* established in classical Greece, the first *revelation* or "man's endowment with an intuition of pure knowledge", the other through observation and the application of logic to what was observed". Bruner (1966:59) also refers to *art as knowing.* Reason (2003) cites Heron (1992,1996) and adds other *ways of knowing*: experiential knowing; presentational knowing; propositional knowing and practical knowing.

Instead of *kinds of knowing* or *ways of knowing*, De Bono focuses on the duality of *kinds of thinking*. He devises strategies and exercises to teach thinking. He (1973:7) delineates between vertical and lateral thinking with the qualification that "there is no antagonism between the two sorts of thinking. Both are necessary". In later writings (1985), he discusses *parallel thinking* and *six hat thinking* but at this point I limit my considerations to his concepts of only two kinds of thinking: vertical and lateral which, he contends, are mutually exclusive (1973:13): "You cannot dig a hole in a different place by digging the same hole deeper. Vertical thinking is used to dig the same hole deeper. Lateral thinking is used to dig a hole in a different place".

The duality suggested by Harth (993:89-90) relates to realms of study: "one of neurons and their interconnections, studied by physiologists, and the other of emotions, thoughts, and images that are the psychologist's domain". Gardner (1987:383) claims: "the triumph of cognitivism has been to place talk of representation on essentially equal footing with these entrenched modes of discourse – with the neuronal level, on the one hand, and with the socio-cultural level, on the other". I take this two-footed position in discussing holistic learning strategies, one that requires a level of basic understanding of both brain functioning and socio-cultural issues.

As he defends the notion of two intelligences, intellectual and emotional, Goleman generates dualities in his description of brain anatomy – limbic and neocortex, amygdala and prefrontal. In building his case for *emotional intelligence*, Goleman (1996:28) toggles between terms − *brain, mind, intelligence, reason* and *emotions* and places them in juxtaposition as parts of the whole.

Another way of considering the whole brain is to examine the functioning of the two hemispheres, right and left. Normal functionality of the two hemispheres is described in the following narrative by Restak (1988: 20):

> Because of its holistic processing, the right hemisphere is better at visual-spatial tasks, such as forming mental maps, rotating geometrical figures in one's head, or recognizing the face of a friend. But the left hemisphere comes into play when the mental map must be converted into verbal instructions – 'Take the first right turn, then make a sharp left' – or when one analyzes distinguishable aspects of a friend's face – 'Is Janet wearing a different hairstyle today?' But it is important to remember that at all times the brain functions as a whole, both hemispheres communicating with each other as well as with other parts of the brain deep below the cerebral cortex.

This functionality is *asymmetrical*. Cabeza (2002) in the model named HAROLD that studies have shown that such asymmetry is reduced by age. This work will be explored later in more detail. Other descriptors of right and left brain function according to several other sources are organised below in tabular form in Table 2.1:

Author and year	Left hemisphere	Right hemisphere
Restak 1994: 127	Language capacity; understands the question and replies	the intuitive apprehension of geometrical properties, copying designs, recognizing faces and reading facial expressions
Bergland 1985:1	verbal and rational;	non-verbal and intuitive;
Bergland 1985:1	thinks serially and reduces its thought to numbers, letter and words; well-taught, well-read, well-spoken;	thinks in patterns, or pictures, composed of 'whole things' and does not comprehend reductions, either numbers, letters or words
Bergland 1985:1	your *savant* brain	your *mystic* brain
Gellatly and Zarate 1999:135	various regions of the LH contribute to verbal working memory tasks	various regions of the RH are involved in spatial working memory tasks
Leonard, Ward and Schipull in Sonnier 1989:111-12	Analytical	Visual
Jourdain 1997:56-7	relations between succession of sounds	focuses on relations between simultaneous sounds
Jourdain 1997:56-7	plays a prominent role in the perception of rhythm and sequences networks of ideas into chains of words	ferrets out hierarchies of harmonic relations and adept at analyzing the highly harmonic vowel sounds of language

Table 2.1 Comparison of Characteristics of Left and Right Brain Hemispheres

Although the major anatomical features of the neo-cortex have been accurately represented since da Vinci in 1504, the radical medical treatment of the *splitting* of the brain into right and left hemispheres is more recent. The surgical procedure severs the structure which normally connects the hemispheres, the *corpus collosum.* Harth (1993:123-4) describes the *corpus collosum* as the "massive cable of some 200 million aons…that makes sure that the left brain 'knows' what the right brain is doing, and vice versa". The absence of the knowledge of what the other hemisphere is doing impacts perceptions about *integrated identity* and *personhood*. Questions surface about *true self*. There are many and divergent positions concerning *true self,* several of which are linked to brain functioning.

Careful scientific observation has taken place on patients with life-threatening conditions which necessitated the surgical process of separating the two halves of the brain, i.e. *split-brain* patients. Experiments on differences in the functioning of the two hemispheres were conducted by Roger Sperry "with his colleagues at the California Institute of Technology [who] devised methods for testing separately the two halves of the brain. These studies were also of epoch-making importance and resulted in Sperry's sharing the Nobel Prize in 1981 with Hubel and Wiesel (Gardner 1987:275)".

Recent research findings by Cabeza (2002) intepreted by Cohen (2006:85) on three groups of adults performing memory tasks suggest that "healthy brains compensate for the depredations of age by expanding their neural networks across the bilateral divide [of the corpus collosum]". Cabeza himself (2002:85) says the model, named HAROLD, is "neutral about whether the change is beneficial or detrimental for cognitive performance", but Cohen (2006:84) observes from the HAROLD model (Cabeza 2002) and his own work that "this neuronal integration makes it easier to reconcile our thoughts with our feelings" and age-related reduction of hemispheric asymmetry "contributes to keeping the elderly sharp and capable of learning".

An older view which challenged the effects of brain bi-laterality was put forth by MacKay and cited in Harth (1993:126) results in another metaphor, the "Y":

> The late English neuroscientist Donald McKay doubted that anything like a radical bisection of mind and consciousness resulted from split-brain surgery. He views the brain as representable [sic] by the letter "*Y*". The upper two branches are the two cortical hemispheres, which are, in the normal brain, connected by the corpus callosum (the broken horizontal bar in the diagram). The lower branch of the Y stands for such deeper brain structures as the limbic system, which are not affected by the operation. It is there, he believes, that a single 'self-supervisory system' is located which confers unity on the individual even with the corpus callosum severed.
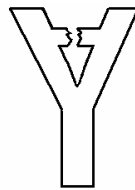

Figure 2.3 The "Y" model of the brain   (MacKay in Harth 1993:127)

The "*Y*" metaphor has three parts, two semi-joined cerebral hemispheres and the limbic brain. The next model is also triune, the model of a triune brain.

2.2.4 The Triune Brain Model of MacLean

For centuries the three anatomical parts of the brain, the neocortex, the midbrain and the brain stem, have been recognized. Twentieth-century proponents of a triune brain model, Zohar and Marshall, (1999) name three kinds of thinking that they tie to three parts of the brain and then name three kinds of thinking – Serial, Associative and Unitive – relating them to three kinds of intelligence: IQ (intelligence quotient), EQ (emotional quotient) and SQ (spiritual quotient). Zohar and Marshall, Gross (1991) and Herrmann (1994) refer to the Triune Brain Model of MacLean. He made significant discoveries about the functions of the midbrain, which he renamed limbic system or limbic brain in 1952. He attached the ideas of functioning as mammals to the limbic system and also attached the term reptilian to the functions of the brain stem, making the model easy to understand and handy for reference. The figure below is a graphic interpretation by Herrmann of the three parts.
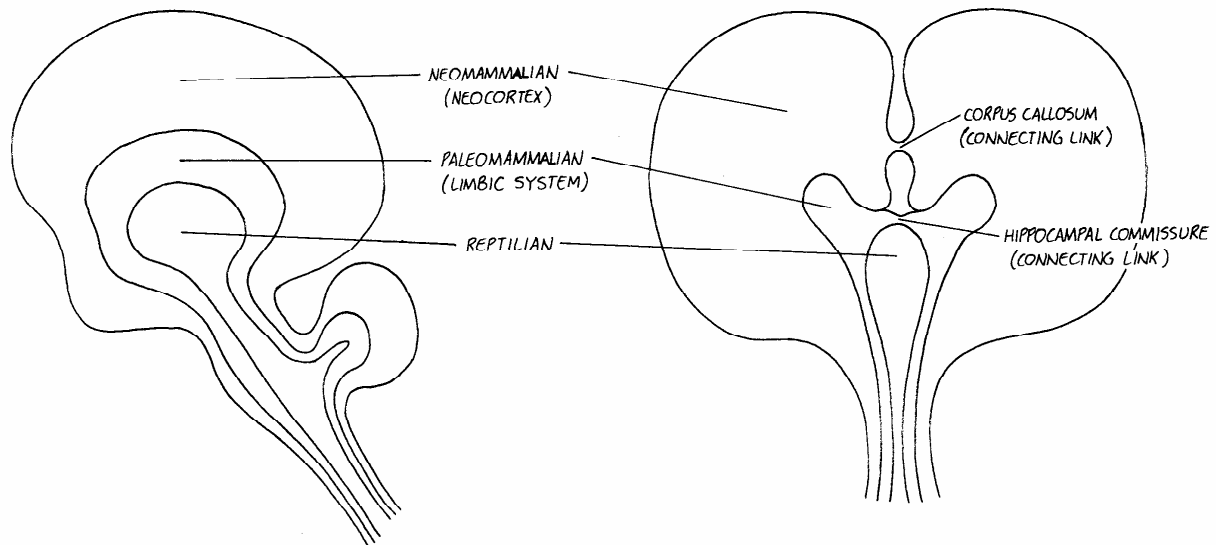
Figure 2.4 Side and frontal view of the triune brain model (Herrmann 1994:62)

The *R-Complex* (or reptilian), according to a description by Gross (1991:22) is "the brain stem, basal ganglia, reticular activating system and midbrain – in the lowest part of the brain, closest to the spinal cord. The "root brain", which MacLean calls the R-complex, deals with instinctive behavior, including self-preservation, claiming territory and status and fighting and mating".

Borrowing from MacLean, Caine and Caine (1991:67) describe *reptilian* behavior:

> the more threatened and helpless students feel, the more we would expect to see behavior that we could characterize as *reptilian.* Deeply entrenched programming relating to territory and identity become so important that group conflicts might degenerate into more primitive or aggressive behaviors.

An example of the effects on behavior that is generated from the limbic system is given by Goleman (1998:14):

> Think back to the last time you 'lost it,' blowing up at someone – your spouse or child, or perhaps the driver of another car – to a degree that later, with some reflection and hindsight, seemed uncalled for. That…was a hijacking, a neural takeover…which originates in the amygdala, a centre in the limbic brain. Not all limbic hijackings are distressing....it is at work also in moments of intense joy…
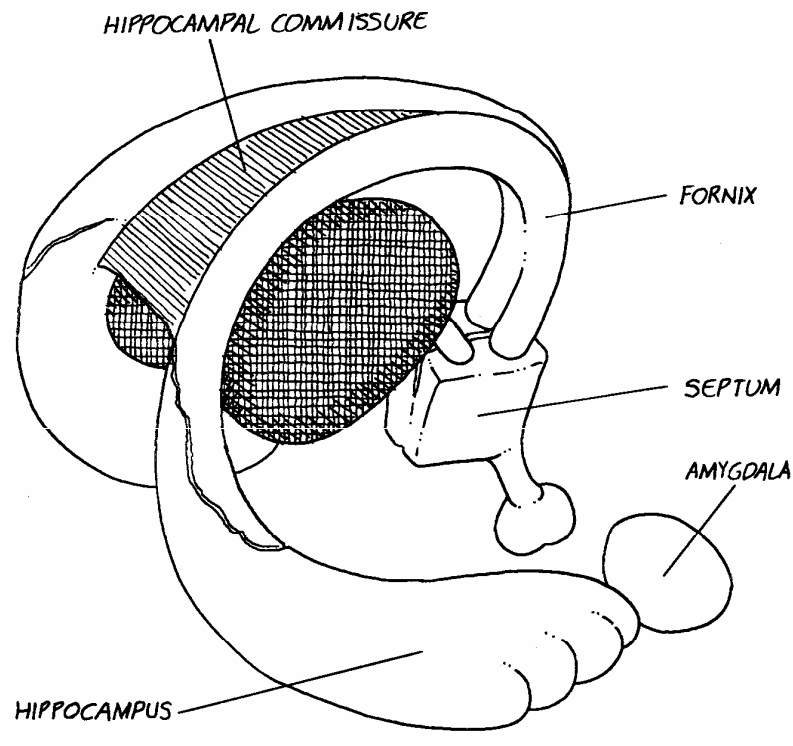
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Figure 2.5 The Limbic System – Left and Right: A complex, linked set of structures (including the hippocampus, amygdala, and hypothalamus) in the forebrain thought to be responsible for the emotions (Herrmann 1994:32).

Goleman (1998:15) also specifies the function of the amygdala which "acts as a storehouse of emotional memory…life without the amygdala is a life stripped of personal meanings…all passion depends on it". Gross (1996:23) notes the great role the limbic system plays in sense perception and memory.

On a socio-cultural level, Nouwen (1977:13) qualifies emotional memories and credits to them the construction of our world view:

> Most of our human emotions are closely related to our memory. Remorse is a biting memory, guilt is an accusing memory, gratitude is a joyful memory, and all such emotions are deeply influenced by the way we have integrated past events into our way of being in the world. In fact, we perceive our world with our memories. Our memories help us to see and understand new impressions and give them a place in our richly varied life experiences.

Among the implications of the Triune Brain Model in the development of adult leaders are the behavior alterations potentially produced by emotional hijacking, variations in perception (including perceived threat not only real ones), in memory and the role of passion. Greater understanding of these implications is relevant to the learning taking place in the lives of adult learners who intend to be leaders. Predictable behavior as free as possible from emotional hijacking, i.e. an improved *emotional quotient,* is desirable in most leaders, including church leaders. Emotions are critical to learning. Armstrong (1994:83-84) challenges educators to create moments for learners to "laugh, feel angry, express strong opinions, get excited about a topic, or feel a wide range of emotions" and to model emotions in their own interaction with learners to make it safe to have feelings in the learning environment. This use of emotions as part of learning strategy is implicit in the Four Quadrant Model which follows.

2.2.5 Four Quadrant Model

The theoretical basis for the "Four-Quadrant" or the "Whole Brain" Model (Herrmann 1994) is a synthesis of MacLean's Triune Brain Model and known research on neocortex hemisphericity. Part of the popularity of the Herrmann model has to do with its clarity which enhances the ease of presentation, unlike the Modular Brain Model. The format of the book (Herrmann 1994) deliberately and alternatively stimulates first left brain then right brain, i.e. to put the whole brain to work, by alternating text and visuals images. Herrmann (1994:63) narrates how he conceived the model:

> THE QUADRANT CONCEPT. Here's how it finally came together for me. One day, while driving the 35 miles between office and home, I was thinking about how to merge the triune and the left brain/right brain theories. Both theories initially appeared in my mind's eye the way they're always illustrated: the left brain/right brain concept I 'saw' was a frontal cross section of the brain indicating two separated hemispheres. The triune brain appeared in a side view crosssection [sic] cut between the hemispheres rather than through them. Then, in my visualization, the triune brain crossection [sic] rotated through 90 degrees, so instead of looking at it from the side, I was seeing it from the back. Eureka! There, suddenly, was the connecting link I had been searching for! When viewed from this unconventional perspective, it was obvious! The limbic system was also divided into two separated halves, and also endowed with a cortex capable of thinking, and also connected by a commissure – just like the cerebral hemispheres. Instead of there being two parts of the specialized brain, there were four – the number of clusters the data had been showing!

Perkins (2000) devotes a whole book to the kind of "Eureka!" moment experienced by Herrmann, describing it as "breakthrough thinking" which can be cultivated by personal practices and in the minds of learners by practices. The experience which is describe by Herrmann below seems to link to a "Eureka! – like" experience.

As it took some time for Herrmann to *see* the brain from the back, the upper two quadrants being the cerebrum, the lower two being the limbic system, it also takes some time for readers or learners to *see* the perspective that gave rise to the model.
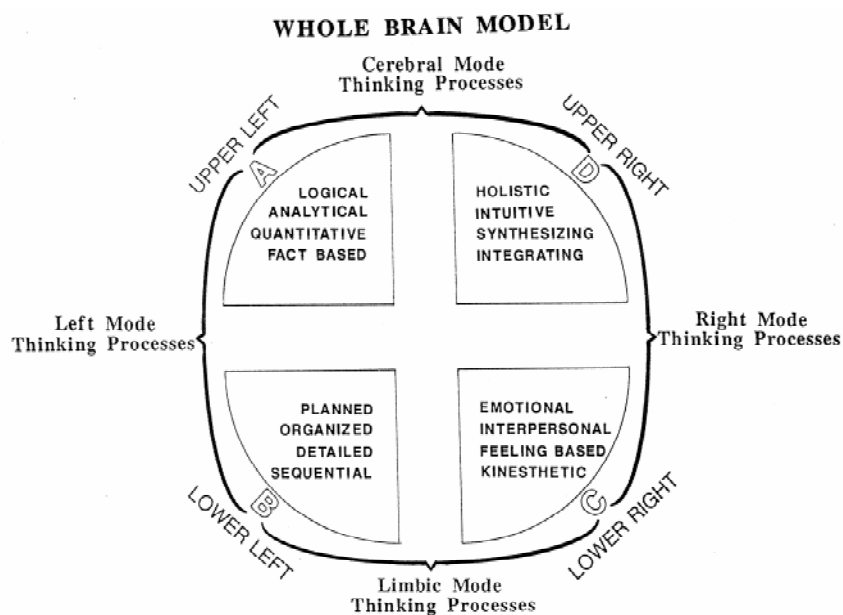

Figure 2.6 Whole Brain Model (Herrmann 1994: Appendix E)

The quadrants are not equal in size as they are pictured in Figure 2.6; the limbic halves appear to be almost equal to each other, but the limbic hemispheres are not actually equal in size to the cerebral hemispheres. The presence of emotions in the right limbic quadrant (C) is congruent with the placement of emotional memory and sensory learning in the limbic brain of the Triune Brain Model. By applying notions of the Modular Brain Theory to Figure 2.6 we might imagine a group of parallel modules organised vertically from the word *quantitative* in Quadrant A to *details* in Quadrant B, from *holistic* in Quadrant D to *interpersonal* in Quadrant C, etc. Herrmann enfolds into his "metaphorical model" the ideas of hemisphericity by applying left-brain and right-brain modes to varying domains of life: thinking, dressing, organizing, management, talking, writing, understanding, and so on. He applies the Four Quadrant Model by developing an instrument to profile the quadrant preference of the learning of an individual, which has been used empirically by De Boer, Steyn and du Toit (2001) and Hulme (1996).
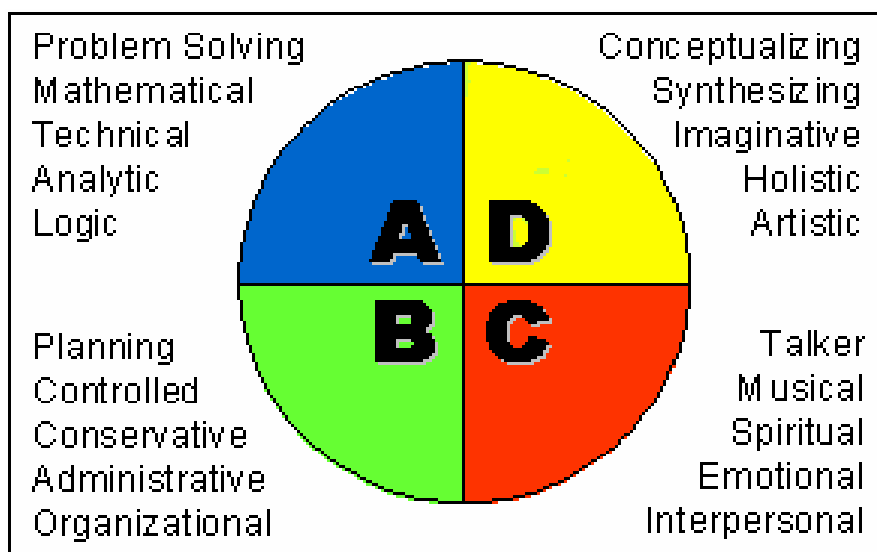

Figure 2.7 Four-Quadrant Preferences (Herrmann International 2002)

A-quadrant learners prefer lectures, measurements, analysis and numbers. B-quadrant learners like to take notes, make schedules, put things in order, etc. C-quadrant learners engage in movement, discussions, and interpersonal actions. D-quadrant learners prefer graphics, models, putting together the "big picture". Educators can think about which quadrant is being activated in the brains of their learning during particular learning events and plan learning strategies which will vary the activity of the brain quadrants so that learners of different preferences may be more inclined to enter into the learning event. These educators also vary the quadrants being stimulated so that more and more of the brain of all of the participating learners may be active in the learning event. Hulme (1996:63) uses the Four-Quadrant profiling to increase the meta-cognition of learners then form heterogeneous groups "with one group member with a primary preference in each quadrant, for discussion, case studies, or presentations". Some learning strategies are categorized by Herrmann as stimulating all four quadrants, so are whole-brain learning strategies which are of particular interest in "holistic learning strategies" which are discussed in Section 2.6.

2.2.6 Whole Brain Models and Holistic Education

Reference to *holism* is used with many other words in the field of education to convey the intent to consider the entirety of the word which follows it, hence, *holistic education*, *holistic teaching*, *holistic learning environments*, *holistic learning strategies*, *holistic methods*, and so on. Some models for holism in education which have given positive results for decades and even centuries come from those who minister (attend to needs of the people) and educate *holistically.*

Definitions of *learning* are relevant for consideration here. Heimlich and Norland (1994) use a definition from Hedges (1989): learning is being "able to do something you have never done before and to remember it so you can do it again". "*Able to do*" implies competencies or results. Heimlich and Norland continue (1994:28) by discussing intentional outcomes in adult learners:

> In addition to skills and knowledge acquisition and affective change (focused on self and on others) learners acquire the ability to purposefully shift from one paradigm to another…Learners facing a new problem realize that their old perspectives do not work any longer…they try on different perspectives and select one that seems to work better than the old perspective. Full transformation requires close association with others who share that new perspective.

Skills, *knowledge*, *ability to shift paradigms*, *try on new perspectives*; *transformation* and *close association with others who share that new perspective* are terms which are very relevant to the learning experience of the population in my research.

"Learning facilitation" says Gravett (2005:ix), "includes all the actions of the educator that have the conscious intention of and potential for assisting, helping, advancing and enabling learning". *Facilitation* has its root in the Latin *facile* which means *easy* (Borror 1960:39), so facilitation is the process or act of making something easy or easier. *Facilitation of learning*, then, refers to process of easing learning or making learning happen more easily or effectively. Adding the term *holistic* to the *facilitation of learning* means, then, the making of learning happen more easily by taking into consideration the whole personhood of the learners.

Brookfield (1986:9-11) identifies six principles of effective practice in facilitating learning in adults:

- Participation in learning is voluntary; adults engage in learning as a result of their own volition.
- Effective practice is characterized by a respect among participants for each other's self-worth.
- Facilitation is collaborative. Facilitators and learners are engaged in a cooperative enterprise.
- Praxis is at the heart of effective facilitation…all are involved in a continual process of activity, reflection upon activity, collaborative analysis of activity, new activity, further reflection and collaborative analysis, and so on.
- Facilitation aims to foster in adults a spirit of critical reflection.
- The aim of facilitation is the nurturing of self-directed, empowered adults.

The principles which Brookfield synthesizes are quite apparent in the *método* (methodology) popularized by Paulo Freire (1998:54) in Brazil in the 1970s and replanted by him and others in several other countries. In direct opposition to the *pedagogy of the oppressed,* he set up "cultural communities of 'dialogical education'" borrowing from the model of "Christian Communities" of the Catholic Church the structure of the method (Taylor 1993:74) in which students teach and learn from each other. Freire considers his students holistically as people who *know, think, talk* and *choose*, and says (Freire, 1996:24-25), "the 'formando' [the learner in formation] knows from the beginning that in the formative experience, he or she is not only to be the subject but the product…of teaching…that creates possibilities for the production or construction of knowledge".

Regarding the notion of 'humanization' Plunkett (1990:74) quotes Freire as…"the process of conscientization, or critical awareness leading to praxis, in which action and reflection are combined (Freire 1985)". The method of Freire is discussed in further detail in later sections of this chapter.

Holistic facilitation of learning is closely related to whole-brain learning and other brain-based learning theories. Facilitators of learning that use brain-based strategies know about the workings of the brain from the technologies developed and employed in the 1990s. About these discoveries, Goleman (1996: xi) wrote,

> The last decade has...seen an unparalleled burst of scientific studies of emotion. Most dramatic are the glimpses of the brain at work, made possible by innovation methods such as new brain-imaging technologies. They have made visible for the first time in human history what has always been a source of deep mystery: exactly how this intricate mass of cells operates while we think and feel, imagine and dream.

The brain cells "talk" to each other electrochemically when they receive impulses from hormonal triggers. This activity is what actually shows up on the sophisticated instruments used during experimentation. Pink volunteered to have his own brain examined technologically. He writes (2005:9-10) of the experience:

> [The] initial brain scan was like sitting for a portrait. I reclined, my brain posed, and the machine painted the picture…What results is a picture of the brain spotted with colored [sic] blotches in the regions that were active – a satellite weather map showing where the brain clouds were gathering. This technique (fMRI) is revolutionizing science and medicine, yielding a deeper understanding of a range of human experience…technicians slide me back inside the high-tech Pringles can. This time, they've set up a periscopelike contraption that allows me to see a slide screen outside the machine. In my right hand is a small clicker, its cord attached to their computers. They're about to put my brain to work.

According to these scientific observation and discoveries, some facilitators of learning set out deliberately and strategically to involve several areas of the learners' brains during learning time so that more of the brain is stimulated; hence, they are sometimes called "brain-based" facilitators. Brain-based learning holds that "the more, the better," e.g. the more of the brain involved in learning the better the learning will be". In reference to the Herrmann whole-brain quadrant model,

holistic facilitators of learning guide learners to an awareness of their learning preferences to enhance the process of their learning and to challenge learners to experiment with learning strategies outside of their own preferences.

Caine and Caine (1991:4) describe what they mean by *brain-based learning*, that it involves acknowledging the brain's rules for meaningful learning and organizing teaching with those rules in mind. Applying his understanding of brain functioning by devising a metaphorical model called *six thinking hats,* De Bono (1985) provides a means to think about thinking which he claims is simple enough for five-year olds to learn to use and effective enough for large-company CEOs to want to use. He maintains (1985:4) that using the *hat* metaphor guides people to engage in *parallel thinking*, the essence of which is that at any moment everyone is looking in the same direction – but the direction can be changed". This approach recognizes the efficiency and power of agreement in a group setting. De Bono (1976:9) furthers that "culture is concerned with establishing ideas. Education is concerned with communicating those established ideas. Both are concerned with improving ideas by bringing them up to date". Improving the way we think should, therefore, improve both culture and education.

There is a wide variety in definitions of what may be considered *holism in education*. Sonnier (1989:25) expresses what I consider to be an inadequate view: "when abundant visual stimulation is supplied simultaneously and concurrently with verbal explanation" that is *holistic teaching*. To me holistic education is more than the addition of visual stimulation. Two South African models, Curriculum 2005 and Copley's *cogmotics,* offer descriptions of holism in education which are far more comprehensive.

In the implementation of the educational reform in South Africa which included Curriculum 2005, South African Qualifications Authority (SAQA) establishes eight learning areas for learners in the country. The eight, called Life Orientation, is clearly holistic in its intent and establishes a comprehensive framework to undergird curriculum development. The rational for Life Orientation follows:

> Life orientation is fundamental in empowering learners to live meaningful lives in a society that demands rapid transformation. It is an integral part of education, training and development. It is central to the holistic unfolding of the learners, caring for their intellectual, physical, personal, social, spiritual and emotional growth, and for the way these facets work together. It locates its vision of individual growth within the quest for a free, democratic and stable society, for quality of life in the community and for a productive economy (Van der Horst & McDonald 1997:63).

Copley (2000a:1) who coined the term *cogmotics* describes it as follows:

> a holistic learning system…derived from the Latin words *cogitare* (think or know) and *motare* (move or do). Cogmotics ensures that all five major faculties (the big 5) which accord us status as human beings, namely the mental, physical, social, spiritual and emotional, are stimulated, developed and actively integrated.

Copley (2000a:3) calls attention to the *carpe diem* (seize the day) philosophy and practice of the teacher, John Keating, in the 1989 award winning film *Dead Poets*

Society. Keating's role is that of an educator who facilitated learning holistically, involving learners in the "integrative and synergistic functioning of the physical, mental, emotional, spiritual and social facilities" which Copley uses in *cogmotics.*

Jensen (1998:38) and Grandpierre (1999:107-127) speak of other physical human aspects – food, drugs, chemicals, attention cycles, fatigue – which must be included in the discussion of holism in education as they certainly affect learning. Jensen says, "All learning is mind-body". Every educator surely has had experiences with the truth of the mind-body connection. How many stimulating discussions are undermined by tea time or the lunch time bell or a wash-room break? How many learners drag sleep-eyed into the learning setting? On the other hand Armstrong (1987:74) makes note of centuries of practices which capitalize on the mind-body connection for learning

> For thousands of years, humanity passed on knowledge from one generation to another through a mixture of chanting, singing, dancing, and drama. Even with the development of written language, this unity of mind and body remained intact for hundreds of years. Dom Jean Leclercq, a Catholic scholar, suggested that monks in the Middle Ages saw reading as a physical activity…like chant and writing, requires the participation of the whole body and whole mind.

Eating can be added to the list of holistic activities that Armstrong has composed. One example is the Passover feast of the Jewish people which is composed of foods that symbolize aspects of Jewish history. As the foods are shared the stories are told to the children, year after year, to teach history.

The whole brain models are contained in physical bodies which operate physiologically and include cognitive and emotional functions. Learners are people who live in social and spiritual spheres. Holistic education promises a good fit for African learners: "The holistic frame of reference for Africans…calls for a holistic approach in education to accommodate the African perspective" (Mkabela & Luthuli 1997:39). Holistic education takes into account each of these aspects of the personhood of the learners.

2.3 Holistic Formation of Identity and Personhood

Adult learning is frequently described as "transformational" in consequence. So the title of this section "Holistic Formation of Identity and Personhood" merits comment. It might have been "Holistic **Trans**formation"; however the intent of this section is to look at the whole process of selfhood, of identity, of personhood, so I use the term "formation".

2.3.1 Identity

Selfhood or identity or personhood is the sum of what constitutes a human being. Theories and theologies abound as to what a person *is* and how he or she got to be all that he or she *is.* This section can only provide a drop of water in an ocean of literature about *identity* which floods in from psychology, neurology, philosophy, theology, sociology, medicine and even economics, starting with the brain.

Experiments conducted on split-brain patients by Gazzaniga, reported in Restak (1988) included one patient who was instructed to draw a car with his left hand and he did so, then, when asked why he did it, he could not explain why. The right side could not explain what the left side did. Restrak reports the theory of Gazzaniga on consciousness is that the brain is organised into vertical modules and that there exists one integrating module which synthesizes and gives meaning to other modules of the brain. This would correspond to what Restak (1988:23) himself calls the integrated consciousness, the true self, which makes sense out of the other modules. However, six years later he observes (1994:121):

> One part of us wants desperately to do something while another part resists with a ferocity that leaves us feeling disappointed and conflicted. At such times we wonder if more than one person occupies our bodies. Brain research on consciousness carried out over the past two decades casts important doubts on our traditional ideas about the unity and indissolubility of our mental lives.

Others make reference to aspects or parcels of self naming them *sub personalities*, *little selves* or *subselves* (Armstrong 1993:132), *the inner family – the people who live within us* (Wilks 1998:39) or *strands* (Gellatly & Zarate 1991:72)*: "*Many strands go to make a sense of self. The social self is the sum of the groups to which a person belongs". Burgess (1991:58) names this plurality a "*'digest of selves'* (namely father, son, Muslim, football fan, brother, lover, colleague, friend) [which] responds to situational cues and often without conscious thought". The less identified with any single aspect of the separate self against another, say Dass and Gorman (1985:48), the freer is the person to know which…is most appropriate for a given situation. They (1985:74) also refer to *costumes* we put on "hundreds of times a day" to fit appropriate roles.

As mentioned previously, Wilks (1998:41) calls the *ego, the public front that we have constructed, our showcase* which usually speaks for others of the *inner family* which we do not "want to acknowledge, or haven't been able to accept about ourselves…almost any situation that arouses our emotions in a painful way points to an inner figure that needs our healing". Also aligning with the concept of multiple parcels of *self,* Morley (1989:318) says that our *real* identity is in our secret thought life: "Each of us leads a secret thought life, an invisible life known only to us…very different from the visible you – the you that is known by others. Yet it is the real you, the one that is known by our God".

S*elf* or *real self* may be the identity of a person within or in connection with others in his or her social context. Armstrong (1993:130) contrasts two positions held by psychologists. The first suggests that the self is "nothing more than a very complex mental map or system of schemas that allows us to organise information about the world more efficiently". The second, held by other psychologists: "a *real self* … develops out of interactions with the environment and with significant others". The second interpretation of *real* identity is interesting to compare with the expression "Umuntu ngumuntu ngabantu" interpreted as *Ubuntu* by Van der Horst and McDonald (1997:148): "a person is a person through his/her interactions with other people….Importance is placed on every person as an integral member of humanity – but equal importance on working for the common good of the group or society". O'Sullivan (1993:22-23) similarly contends: "We are persons not in

ourselves but in community. This deep relational quality of all of reality is referred to by indigenous peoples as 'all my relations'".

From the viewpoint as a constructivist, Bruner (1986:130) explains:

> Just as I believe that we construct or constitute the world, I believe too that Self is a construction, a result of action and symbolization… I think of Self as a text about how one is situated with respect to others and toward the world — a canonical text about powers and skills and dispositions that change as one's situation changes from young to old, from one kind of setting to another. The interpretation of this text *in situ* by an individual *is* his sense of self in that situation. It is composed of expectations, feelings of esteem and power, and so on*.

So *self* may be severed by separating brain hemispheres or explained by vertical modules in the brain. S*elf* may be understood as a plural schema, the invisible, interior identity known by God or the one in community or three dimensional which is later explored in this chapter.

2.3.2 Memory

The terms *memory* and *forgetting* are so commonly tied to experiences of learning that this section might be straightforward; however, that is not the case. Instead, *memory* may be explored from perspectives that are vastly divergent in their terminology, epistemology and functionality, yet each has genuine relevance to holistic learning. Therefore, the considerations of *memory* present in this section are intertwined neurologically, practically and psychologically because separating them into categories is artificial.

A *memory* is "anything that happens and does not completely unhappen" as defined by De Bono (1973:29). "The duration of the remembrance involves changes in the nerve cells that form the memory surface. The result is some trace which is left. The trace may last for a long time or it may only last for a short time".

Several modifiers are commonly applied to *memory* − *short-term* memory, *long-term* memory, *working* memory, *poor* memory, etc. To Brennan (1997:59) "short-term memory is the place you put things you're going to need in a moment, but certainly don't want to keep permanently". To Jourdain (1997:54-5) the "auditory cortex is active during short-term memories in which aspects of auditory percepts are prolonged". Brennan (1997:60-61) says scientists who study expert translators who are able to simultaneously listen to a speech and translate it have measured their natural memory span as 10-15 seconds. Gellatly and Zarate (1999:134) describe *working* memory as, "what we currently 'have in mind" [and]… what is used to add up a bill in your head and keep track of the sub-totals, to remember where you are in a sentence or an argument or to switch back and forth between a game of chess and preparing a meal".

Byrnes (2001) informs that the concept of *working memory* has increasingly replaced the older concept of *short-term memory*. Gellatly and Zarate (1999) and Byrnes (2001) identify in neurological terms the three functional parts of working memory which briefly stores and processes information before sending it to long-term memory storage areas. These are (1) the central executive or decision

maker, and two slave systems – (2) the *visuo-spatial sketch pad* which deals with visual images and (3) the *phonological loop* which stores and rehearses speech-based information and is necessary for the acquisition of both native and second-language vocabulary.

The functioning of the two slave systems is described by Gellatly and Zarate (1999:135): " The visuo-spatial system represents limited information about spatial relationships. An audio system allows you to hold on to a limited number of words while you re-arrange them into more intelligible phrases, or work out their meaning". Apparently each of the slave systems consists of surfaces onto which awareness of past experiences and/or past patterns are brought together with new input stimuli (audio or visual), to be linked (or not) and then sent to storage areas according to other conditions present, particularly the emotional value of the set of experiences.

Caine and Caine (1991:5) describe how current, past and future connect in the brain: "Every complex event embedded information in the brain and links what is being learned to the rest of the learner's current experiences, past knowledge, and future behaviour". It is these linkages which are being forged in the two slave systems, visuo-spatial system or in the phonological loop. Restak (1988:29) says that "for experience, thoughts and behaviour to become conscious, a link must be made between mental representations of these thoughts and feelings and some mental representation of the self as experiencer".

The brain is always seeking and detecting patterns, seeking and detecting links. Brennan (1997:69) comments about the effect of emotion in this process of linking *old* experience to *new* stimuli:

> As far as we know, *all* memories are filed by association, but some memories are more strongly associated than others. What strengthens the association is emotion. If something amuses you or gives you joy or scares you witless, it will be more strongly associated with its fellow memories.

This phenomenon has obvious application in the facilitation of learning. Herrmann (1994) and Brennan (1997) maintain that we forget because we have weak accessing systems or connections. Brennan builds the argument that there are two parts to *remembering* – filing away information by transferring it from your short-term memory to your long-term memory, second, recalling the information at a later time. Brennan continues by advising that the time to make effort to *remember* is when the information is being filed away, not when you're trying to recall it. He (1997:106) says "most people don't forget – they just never take the trouble to remember". He (181) suggests deliberately tagging or labelling the thought, especially with visualization techniques, so that "when we need to pull up the thought again, we remember the visual image which is attached to the memory, and out comes the memory we wanted".

Educators can identify channels in the brain which lead learners to the memories by guiding them to make a conscious effort to remember something just learned. Jensen represents them as six *memory pathways* and Sprenger as five *memory lanes.* Whatever the nomenclature of these memory channels, knowledge about

them may be employed strategically by facilitators for their learners to be better equipped to retrieve the learning that is stored in their long-term memory.

Semantic memory Sprenger says (1999:65) "operates word by word, therefore, each learning experience should be organised to present a short chunk of information. The brain must process the information in some way after the presentation of each short chunk". Brennan (1997:101), Russell (1979:230), and Byrnes (2001:144), Jensen (1997:1998), refer to the importance of organizing information in small chunks, and then having the learner reorganise the information or reformulate the material soon after receiving it the first time. Interpreting such activity in terms of the Four Quadrant Brain Model, the reorganization or reformulation of the material is a B-Quadrant mental activity, so the educators above are guiding their learners to move the *chunk* of learning from the cerebrum to the limbic modes, from Quadrant A or D to B.

To guide learners to utilize the procedural memory lane of their brains Sprenger suggests (1999:75):

> Try anything that provides movement—for example, role-playing, debate, dance, marches, monologues, and games...these procedures not only reinforce semantic knowledge, but they also represent memories that can be stored through those **procedural memory** 'muscles". Have students stand up as you cover specific material. Ask them to walk as you review it, jump when they think they understand a particular point, and clap when they know it all.

According the four quadrant brain model, the learning strategies Sprenger suggests would encourage the pathway of impulses in the brain from analysis in quadrant A to motor movement on the other side of the brain.

What works best to store learning in memory so that it may be recalled? Brennan maintains (1997:182) "Making pictures in your mind is the most important key to a mega memory. Anything filed visually is much, much easier to remember". He suggests visualizing big, no huge, abstract things like fantastically coloured animals doing funny movements on which to hang labels of the items to be remembered. Linksman (1996) combines brain hemisphericity and learning styles to identify and describe "superlinks for learning," then advises, "The key to remembering what we learned is to store it according to our best learning link. (158)". Specifically, then, Linksman (1996:158) correlates learning styles with types of memory links:

- Visual people would *see* what they read and heard as a movie in their minds.
- Auditory people would *hear* what they read and heard as the sound track to a movie in their minds, complete with words, music, or sound effects.
- Tactile people would *experience or feel* the sensations and feelings of the movie in their minds.
- Kinesthetic people would *act out* the events of the movie in their minds.

Both Jensen (1998:60) and Sprenger (1999:64) refer to the positive connection between the number of memory channels utilized in facilitation of learning and the

degree of recall. Jensen (1998:61) says, "For maximum recall, store learning in multiple pathways AND follow up with review 10 minutes, 2 days, and 1 week later". The considerations about memory of the brain-based facilitators open windows of understanding about how knowledge constructed in learning settings other than formal classrooms may be deliberately conditioned by the learner for more effective learning. However, depending on the theory, application is modified.

Gardner (1987:395) refers to the PDP (parallel distributed processing) approach which views memory as "the set of relationships that obtain among various aspects of facts or events as they are encoded in groupings or patterns of units. What is stored are the connections and strengths among units which allow the patterns to be subsequently recreated". Thus, reinforcing existing neural connections, however they are arranged, and strengthening coded units in the facilitation of learning would become another wording for a "brain-based principle" for brain-based educators to utilise.

Remembering information is definitely a part of learning. Bloom *et al* (in Anderson & Sosniak 1994:16) comment that knowledge is

> the primary, sometimes almost the sole kind of educational objective in a curriculum. In almost every course it is an important or basic one. By knowledge, we mean that the student can give evidence that he remembers, either by recalling or by recognizing, some idea or phenomenon with which he has had experience in the educational process…a justification for the teaching of knowledge that it is quite frequently regarded as basic to all the other ends or purposes of education. Problem solving or thinking cannot be carried out in a vacuum, but must be based upon knowledge of some of the 'realities.'

Knowledge, know-how, experience, emotional and sensory memories are all constructions or productions of the learning process. We arrived on the planet with very few of them.[1] If our brain continues healthy we may continue to be changed by what we learn day after day. Restrak observes (1988:69), "Contrary to popular opinion, the older person, at least up to the mid-seventies, doesn't show much change in intellectual performance. Older people still know what they knew decades ago, and if you're willing to wait a bit, will get the information to you". Freud and Piaget were among those who "misconstrued the aging process", according to Cohen (2006:82), and that the mature mind "gets better at reconciling thoughts and feelings" (83). Gravett says simply (2005:6) that "in general…older adults need more time to learn new material". She makes reference to "new 'forms of intelligence'" which "emerge during adulthood and old age, such as wisdom, practical intelligence, and the development of expertise, and says (2005:4) "if tests used items related to deductive reasoning and long-term working memory to assess fluid intelligence, they would show an increase during adulthood instead of a decrease".

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[1] *During the 1980s and 1990s, scientific journals around the world began publishing studies proving that music literally alters the structure of the developing brain of the fetus; that infants recognize and prefer music first heard in their mothers' wombs (Campbell 1997:3).*

"Magnified tremendously, the brain of a mentally active 50-year-old looks like a dense forest of interlocking branches, and this density reflects both deeper knowledge and better judgment," Cohen observes (2006:84). He states the obvious, that sometimes is overlooked, "older brains have learned more than young ones". Restak (1988:258) describes how the human brain practices "graceful degradation" which is the fuzzy functioning system of memory, unique, non-linear, and non-logical:

> Our brain, over our lifetime, works as a self-assembling structure whose functional capacities are distributed. That means, in practical terms, that when one part breaks down, another part can often be recruited to take its place. 'I can't remember the name of the store where I bought this coat but I can tell you exactly how to get there from here,' we may say to a friend when we can't come up with the name. 'Graceful degradation' is the intriguing term for this loss of clarity and precision. We exhibit it – or rather our brains do – but computers don't. A computer either comes up with the specific information requested or it doesn't.

Most of our individual identities are defined by *memory* as Restak (1994:76) summarizes below:

> At the most basic level, we know who we are and maintain our sense of personal identity and integration of the basis of our ability to remember our past experiences. None of us remembers everything, of course – indeed, who would want to? – but most of us remember enough from events over the years to provide ourselves with a sense of our own unity as a single, reasonable well-integrated person. Memory thus forms the underpinning for our personal sense of identity. But brain studies carried out over the past few decades cast doubt on this cheeky confidence in memory as the substrate for our own personal integration

Research suggests that at 40 years old, the best years of the brain are still ahead (Cohen 2006:82) yet, personhood

> is more than the brain,
> is more than the whole brain,
> is more than holistic learning,
> is more than memory and
> is more than the sum of its parts.

The "something beyond" or "more than the sum of" is frequently referred to as *spirituality.*

2.3.3   Spirituality

Holism, by definition, treats the totality of the subject, thus, holism in personhood treats mental, social, emotional, physical, **and the part of personhood which is identified by several different names** *spiritual* and/or *cosmic* and/or *transcendental*. Spirituality has a wide variety of interpretations. Hoffman in Brown, Farr and Hoffman (1997:10) uses the term *spirituality* quite pragmatically as he applies it to situations as distant as "school principals and boards of

education in America and Britain wring their hands over a lack of 'spiritual' development (by which they often mean appropriate conduct or better English-language skills)". If definitions of *spirituality* can be so broad as to include policy implications and better language skills in school situations, then the concept certainly needs to be well examined and defined for the context of adult learners in my research.

There are several variables in these interpretations, but none is more important than the *locus of the source* of the spiritual improvement of an individual. Spirituality was once the domain of "Western monastics and Eastern mystics…to remind us of…ancient cosmologies and anthropologies" (Brown, Farr & Hoffmann 1997:9) but now it is common that those who write about the brain or the mind include arenas that used to be considered "unscientific".

As mentioned previously, Zohar and Marshall are proponents of improving the spiritual quotient of all people. They (2000:7) describe the Spiritual Quotient (SQ) as holistic and **within**: "SQ … facilitates a dialogue between reason and emotion, between mind and body. It provides a fulcrum for growth and transformation. It provides the self with an active, unifying, meaning-giving centre [sic]". They (2000:6) link the SQ to "one of the three basic neural systems in the brain", so they assert connections from holism to spirituality and also from intelligences to neural systems and tell us that our society has become *spiritually dumb* as a result of the loss of the "*human soul*…[meaning] we have lost our sense of fundamental values − those attached to the earth and its seasons" (2000:22).

Goleman (1996:xii) describes the problem of societal shifts in terms which are basically parallel to *spiritual dumbness* but he maintains focus of the havoc caused by emotional inabilities and the importance of emotional empowerment to social order and ethics. He ties complex traits, usually associated with the character, like *selfishness, violence* and *meanness of spirit* to emotional capacities. He also connects societal quality, *the goodness of our communal lives* and behaviour within society, *ethical stances in life* and names *emotional capacities* as the point within us from which these aspects *stem.* This stance qualitatively adds *emotional capacities* to the list of titles of *spirituality.* Other titles would fit into the sentence if written by other theorists. For example there is growing evidence that all these things stem from *watching violence on the screen* or from a *lack of prayer in the homes* or from *eating junk food* or from *not knowing the real true God* and so on. However open the interpretation of the source of these character and societal aspects might be, the position of Goleman regarding the importance of emotional capacities is supported by *growing evidence* as he has stated. He then describes how to develop emotional capacities in oneself. Brain-based educators in Section 2.3.2 suggest developing emotional capacities in learners by teaching to the right-brain, especially to Quadrant C. Learning strategies which contribute to the development of *emotional capacities* and *emotional empowerment* are important to my research.

Some proponents of holistic education or holistic learning like Wilson (2003), Zohar and Marshall (2000) and Miller (2003) include "spirit" as a special inner connection within the individual. Wilson (2003:2) comments:

> Deep teaching and the learning associated with it is steeped in imagination, emotions, and ideas. Minds are captivated. Ideas soar. Such learning

touches and enhances the soul of the student. The result is a level of learning that goes far beyond definitions and facts. At times, it brings about a change or *transformation within the student*.

The change comes from within; Wilson (2003:3) also calls this transformation "self-realization". The source of this spirituality and transformation is within the person.

Mouton (1993:90) also identifies transformation at the core of critical social science and uses transformational terms as relating to self-transformation and production/work:

> the aim of a critical social science is to liberate human beings from their state of alienation through the process of self-reflection…to transform or change the human condition through a critique of those alienating or repressive factors which sustain his/her alienation/self-deception/false consciousness. The core concept of the critical paradigm is therefore to be found in the idea of transformation: human beings who *transform themselves* and their environment through production/work.

The work of Freire is an example of this position. According to Taylor (1993:105) the ten drawings of commonly found life situations that Freire used in his *método* includes a drawing, number "6" entitled "Man transforms the material of nature by his work" and number "7" – "A vase, the product of man's work upon the material of nature". The drawings are the visual focal point for the social, communal dialogue carried out as

> a three-stage investigation…there is a NAMING stage where one asks the question: what is the problem, what is the question under discussion? Second, there is a REFLECTION stage: why is this the case? How do we explain this situation? Finally, there is the ACTION stage: what can be done to change this situation? What options do we have?' (Taylor 1993:73).

Dass and Gorman (1985:27) speak of the motivational impact that *self-transcendence* has on those who experience it, drawing them into further exploration of what they call *the higher Self*. The resultant opening of appetite to further experience is also referred to by Campolo, who locates the source of spirituality as God, the all-knowing, almighty God. He says (1994:144): "Those who have tasted transcendental reality can never again be convinced that this world and the society that regulates them can satisfy their needs... they know there is...something…beyond anything that the rules of the system can provide".

Still in consideration of the source or locus of spirituality, Armstrong (1993:223) holds that it may be found "outside of ourselves…in a transpersonal, religious, or celestial realm" or in the "soul of the earth" or "in ourselves – but in our hearts rather than our minds". Continuing, he describes this *supraordinate intelligence* in terms of the MI Theory, contending that it "may be important, even essential for the survival of the planet, that…somehow guides the other seven, making sure that their use is directed toward the common good of humankind".

Spirituality, as described by O'Sullivan (1999:259-260), "refers to the deeper resources of the human spirit and involves the non-physical, immaterial dimensions of our being; the energies, essences and part of us that existed before and will exist after the disintegration of the body". He is one of many who separate spirituality from institutional religions and points out that the result of such identification has been that contemporary education suffers. In attempts to put back what was left out, private sectarian and non-sectarian institutions are logical results of public institutions divorcing spirituality from education.

There are proponents of modern holism like Plunkett (1990), Campolo (1994) and Copley (2000a) who consistently refer to a point outside of self, to a "transcendence" or a "transcendent one" or "God". Plunkett (1990:82) says: "We may know more than we can express. Spiritual intuitions are formless, though they may still refer to a reality with features much sharper than the ones known through reason or the senses".

Plunkett (1990:84) clarifies further:

> The spiritual represents a mode of access to a realm of being which is *outside time and space* [italics mine] but is not subjective. The spiritual reality is transcendental, and gives humanity a personal link to god [sic], that is to the Absolute in goodness and truth, so that there is no conceivable human aspiration that can take us any further.

Although Bruner frequently speaks of our creating our own *worlds* by our words and by our perceptions of ourselves, he locates transcendence beyond ourselves and ties transcendence to meaning and to creative arts (1986:153):

> The transcendent is an unshakable, axiomatic acceptance of 'meaningfulness,' like Descartes' axiom that God will not falsify our perceptions of the world or Einstein's that He will not play dice with us. It is incarnate, a real presence − as truly sacramental as the faith, say, of a Rashi or a Nicholas of Lyra that the word of god could always and inevitably be found in the literal text of Scripture once it were properly explicated philologically, historically, and with a view to its function as theology. It is faith in meaning incarnate in the work of art, meaning that captures the 'immensity of the commonplace,' that changes our very construction of reality: 'poplars are on fire after Van Gogh.' So Matisse could proclaim after completing the murals in Venice, 'I am God,' or Picasso speaks of 'God, the other craftsman'.

Gardner also emphasizes the importance of expressions of human creativity by saying that (1987:391-92) the goal of cognitive science should be to figure out how humankind how creates wonderful products of the mind (*italics mine)*:

> The ultimate goal of cognitive science should be – precisely – *to provide a cogent scientific account of how human beings achieve their most remarkable symbolic products*: how we come to compose symphonies, write poems, invent machines (including computers), or construct theories (including cognitive-scientific ones).

This research project resonates with this position as it seeks to *provide a cogent scientific account* of how one set of human beings, those who live scattered across Mozambique, come to achieve, against many odds, a relatively *remarkable symbolic product* – the construction, in community, of knowledge quite pertinent to their lives. If empires in the age of Alexander, the Great, or Ancient Rome or Bill Gates are remarkable social inventions or achievements, then communities of real learning should also count. This knowledge is not concrete, and it may not be recorded in writing by the communities, but it may be passed on to others who listen to and interact with them by their verbal expressions recorded in this project.

Csikszentmihalyi (1993:239) gives six distinct values for what he calls *spiritual activity*:

> 1) harmony among conflicting desires,
> 2) meaning among the chance events of life,
> 3) reconciliation between human goals with the natural forces that impinge on them from the environment
> 4) an increase in complexity by clarifying the components of individual experience such as good and bad, love and hate, pleasure and pain
> 5) expression of these processes in memes that are accessible to all
> 6) integration of these processes then with one another, and with the external world.

It might be inaccurate to label Bruner, Gardner and Csikszentmihalyi as "theologians" (although at least one distinguished educator holds that everyone is a "theologian" because everyone has a knowledge of God[2]) but the thinking demonstrated in each of the quotations above resonates with major tenants of incarnational theology. Foster (1998:272) holds that all people are called to the living out of such theology which he calls "*sacramental living*, a life that makes present and visible the realm of the invisible spirit". Foster further maintains that through sacramental living people "experience God as truly manifest and notoriously active in daily life…everywhere we go is 'holy ground'".

Therefore, even though most all who identify themselves within *holism* will refer to the spiritual aspect of the learner, there are at least three very different loci of this spirituality – within the self, outside of the self in some indefinite cosmic sense or in God with a capital *G,* the Supreme Being.

Csikszentmihalyi (1993:242) discusses the contemplation of God:

> These days the quest for truth may not lead one to a contemplation of God, as it did Aquinas, but rather to the comprehension of the underlying causes of reality, of the organic relationship between the various forces and processes in the universe, including the minds of men and women. Some may still prefer to give the mysterious power that binds all these processes into a fabric of incredible complexity the name God

Csikszentmihalyi, like Gardner, uses phrases very relevant to this PAR study. He opens the possibility that the quest for truth may lead *one to contemplate God*, as

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[2] Dr Jerry Lambert frequently makes such a claim in addressing Nazarene educators so he distinguishes between "theologians," who everyone is, and "academic theologians".

did the Catholic Father, Aquinas, in order to better *comprehend the underlying causes of reality*. He says such quest *may not lead* one but does not exclude the possibility that, in fact, it *may lead* one to a contemplation of God. Though this stance may be an unpopular one, this is the one I take. The teachings from other Catholic thinkers like St. Ignatius de Loyola as well as other Christian and non-Christian thinkers come to bear on my research. That the *contemplation of God* will also lead to *better understanding* about the *relationships* that Csikszentmihalyi named and also better understanding about *the minds of men and women* is central to my research as it seeks to understand if and how learning takes place in the minds of men and women in Mozambique and it asks if there is improvement in relationships in the lives of the learners because of the holistic learning strategies employed.

Csikszentmihalyi admits that contemplation of God may help to comprehend the causes of the organic relationship between the various forces and processes in the universe *including [the forces and processes of] the minds of men and women.* I borrow this perspective; I believe that contemplating God, including Him in the study by various means, may help to understand the causes of the organic relationship between Him and the minds of men and women and the forces and processes therein [their minds]. And among those who still prefer to acknowledge God as the mysterious power binding all the processes into an incredibly complex fabric, I stand.

My study does not set out to give evidence of God or to argue the validity of such stance or to proselytize for others to join me. With scientific rigor in this study, I use the term *God* to refer to the relationship of inclusion the learners take to the Supreme Locus of Spirituality outside of themselves. So I name *God* as the locus of spirituality that I repeatedly use in this study. I choose to employ the term *tri-dimensional* coining the term in an attempt to eliminate ambiguity as to the source of spirituality in the life of the learners. By definition the three dimensions of *tri-dimensional* are, therefore, the following:

> 1st: the person
> 2nd: other subjects and objects
> 3rd: God

In like manner *tri-dimensional practice* or *3-D practice* assumes that the third dimension, which is *spiritual learning environment* puts God into the setting; *spiritual environment* is not spiritual in humanistic or secular senses. *Spiritual learning environments* include God.

2.3.4 Tri-dimensionality

Models and concepts of *self* from varying psychologists have been introduced. The term *self* tends to attend to the personal interpretation of each individual of her or his identity. To speak of *self* in relation to others the term *social self* is usually used. *Personhood* also refers to *self* but connotes a less inward-turned perspective of the individual so each term provides fitting terminology for the current discussion. In the figure below both terms occur. The inner *selves,* particularly as related to the mind or thinking, are frequently interpreted as *triune* and have other names in diagrams of other writers. Johnston (1996:21) refers to Piaget 1952, Jung 1923, Plato cited by Keefe 1992, Snow and Jackson 1992 and

Keefe and Languis 1983. In holistic or whole-brain manner, Johnston makes a diagram of the triune components of the mind, naming three types of learning which she discusses as *cognition, conation and affectation.* This diagram follows as Figure 2.8.
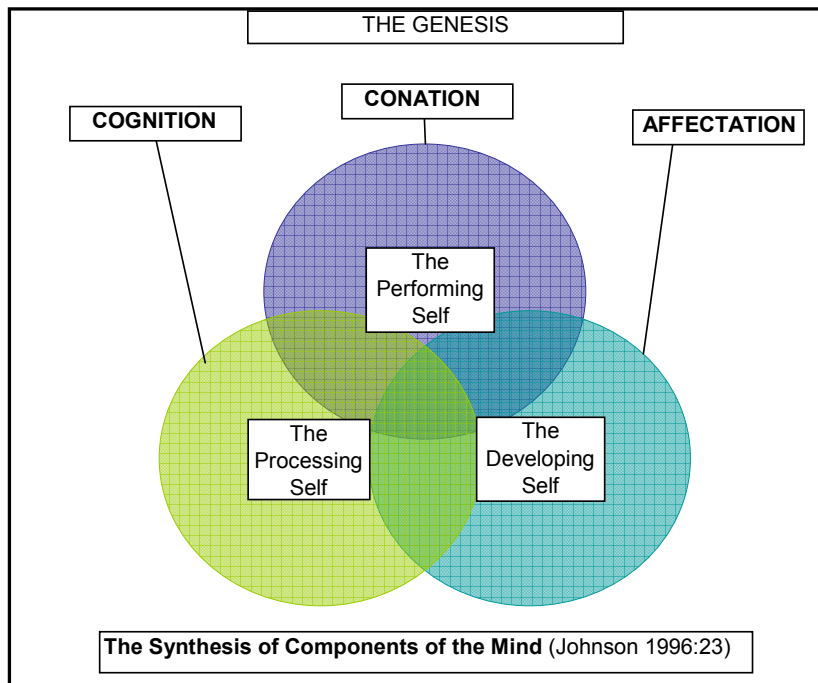

Figure 2.8 The Synthesis of Components of the Mind (Johnston 1996)

Cognition is a commonly used term which refers to mental activity in the domain of facts and knowledge. Johnston (1996:22) explains that the less frequently used term *Conation* has been given "a variety of names including 'purposeful striving,' 'persistence,' and 'the behavioural action'". Those working in brain-based learning trace conation to the earliest development of the human brain. *Affectation* implies emotions, affective learning, emotional memory, probably includes *emotional capacities* as supported by Goleman.

Her major thesis deals with the *will to learn*. She explains (1996:27):

> Modern day psychologists refer to *will* as the drive to act that is uniquely our own. *Will* is that force that is derived from our sense of deep meaning – our sense of purpose – our drive to have meaning. Meaning arouses our energy. The energy of meaning is our passion. The energy to act on what is meaningful forms the very heart of our will,

Johnston uses strong terms – *force, sense of deep meaning, sense of purpose, drive, energy, passion, heart*. The terms themselves denote important human issues of great importance which, quite logically, are of importance in this research project. Each of the three selves apparently work on both sides of the brain so are whole-brain selves even though one quadrant or another may be the dominant thinking mode of the self.

Another trilogy tangential to this discussion is the citing of three kinds of exit level outcomes from South African curricula may seem to be a disconnected subject[3], but the way Killen describes the competencies targeted for the lives of South African learners resonates with the goal of Johnston to motivate learners *persistently* – for the long run. *Persistence* is part of Conation. *Persistence* is necessary to exit an educational programme in South Africa. Hence, the point of contact of the two subjects and inclusion here of the three kinds of exit level outcomes (Killen 2000:iv):

- **Practical competence** is the demonstrated ability, in an authentic context, to consider a range of possibilities for action, to make considered decisions about which possibility to follow, and to perform the chosen action
- **Foundational competence** is the demonstration of an understanding of the knowledge and thinking that underpin the actions taken
- **Reflexive competence** is the demonstrated ability to connect performances and decision making with understanding and with an ability to adapt to change and unforeseen circumstances and to explain the reasons behind these adaptations

"Foundational competence" clearly relates to "Cognition" of Figure 2.8 and "Practical competence" to "Conation". Less obviously, "Reflexive competence" may relate to "Affection".

Another diagram which presents a learner holistically is presented as Figure 2.9. In it the *selves* are named the *Social Self*, the *Whole-Brain Self* and the *Spiritual Self* for convenience in this study. The *Social Self* has several roles as the image and behaviour of *self* is modified by the presence or expectations of other people and of objects as discussed in Section 2.3.1. The *Whole-Brain self* includes affective, behavioural and cognitive, all aspects of any of the Whole Brain models discussed above, but particularly that of Herrmann (1994). The Spiritual Self, like the other two selves, undergoes process and development, is not static so is also subject to learning. Each parcel of self of the whole self is enhanced by God, as the external source of spirituality, hence, the word *God* within the diagram of the whole person. Memory is also present because, as discussed in Section 2.3.2, memory is an integral aspect of personhood. The three dimensions of personhood are the holistic self relating to others, to self and to God, hence the term *tri-dimensional* personhood. The diagram in Figure 2.9 synthesizes most of the discussion to this point in the chapter. Because it pulls together many points which have been discussed textually, and is also graphic, it clearly appeals to the D-quadrant in the minds of the viewers. Some will be pleased to see it because they are visual learners, others with left-brain preferences may not appreciate it. The oval representation of the whole self contains three figures which represent, as labelled, the *social self* surrounded by several points of social contact, the *real* or *spiritual self* in the centre, and the *whole-brain* self as the model for the *mental* self of *tri-dimensional personhood*. All three selves have varying facets and all are affected by the presence of God, and are interpreted through functional memory.

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[3] Perhaps this is an example of *lateral thinking* (de Bono) which is non-linear and has holes or jumps that get filled in subsequently.
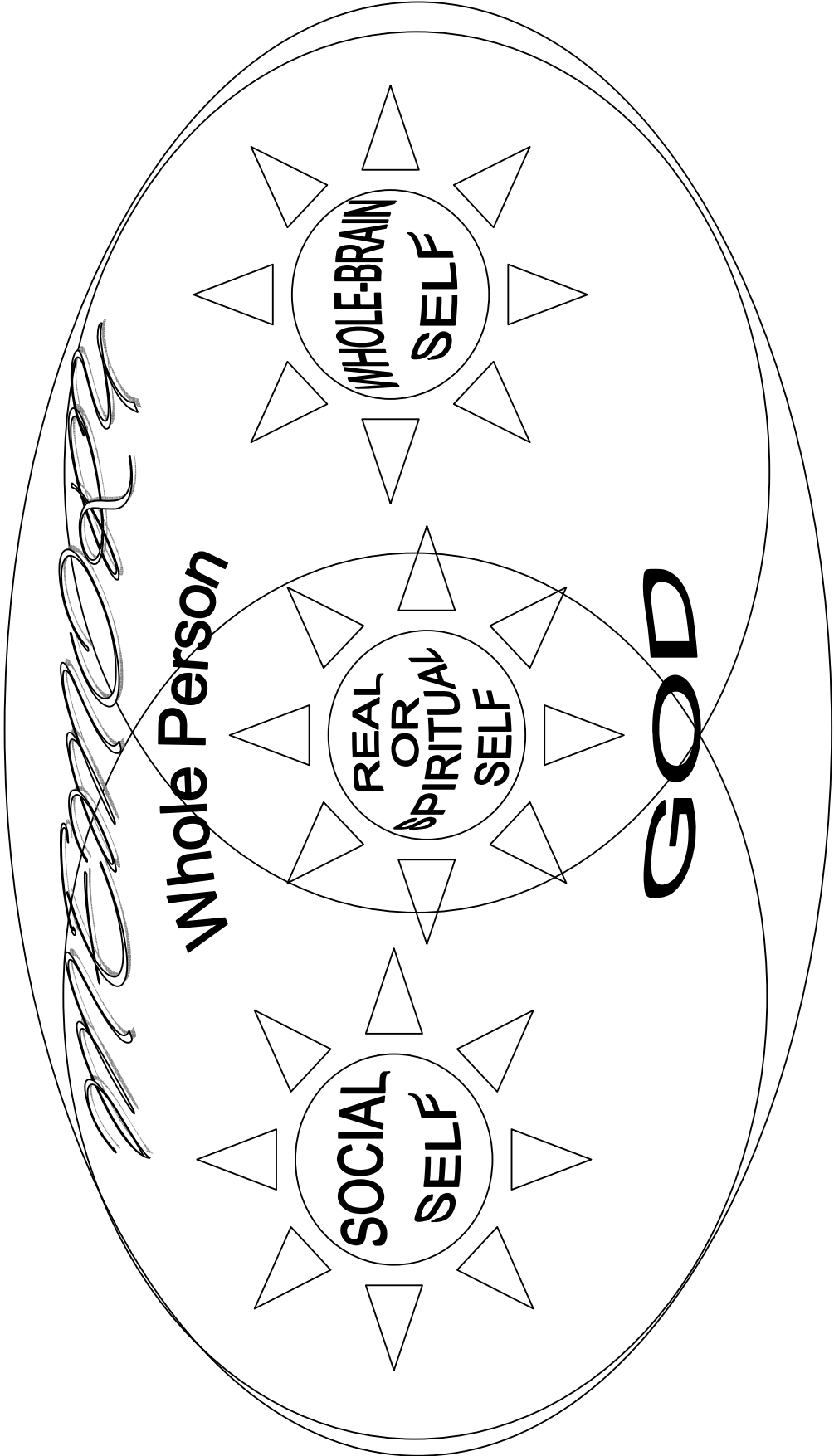
44

Figure 2.9 Theoriogram on Tri-Dimensional Personhood

45

2.4 Spiritual Learning Environments

2.4.1 What are aspects of learning environments in general and spiritual learning environments for adults in particular?

Although the phrase *learning environment* almost automatically brings to mind several physical considerations of the physical settings where teaching/learning encounters take place, *learning environments* include other aspects besides the physical setting. These are the learners themselves, the facilitators of learning and the relationships between all of them as participants within the physical setting. These aspects are named separately but, in reality, each impacts the other, and it is artificial to consider them independently. Yet this is the nature of reflection on the parts of a whole, the whole being defined here as *learning environment.*

Physical aspects of the *setting* include the lighting, temperature, acoustics, seating, ventilation, instructional equipment, wall space, room size, shape, colour, flooring, windows, etc. These aspects do influence learning. Educators like Cranston (1992:130) encourage the creation of an environment which "provides for [both] the comfort of the participants and also makes clear the role of the educator". She implies that the comfort of the participants has both physical and emotional considerations. In this study the physical aspects of learning environments are called *settings*. Because of financial and geographical restraints currently implicit in the context of our PAR project, there is very, very little potential to improve the physical setting of any of the learners. *Comfort* is a term rarely used in the whole of the Mozambican context; *wellness* is the usual question in Mozambique, so, while I ascribe to the usual importance of physical aspects of the learning setting as they are named here, I proceed to aspects of the learning environment which are clearly more within the control of the research. The emotional aspects of learning environments are included in what some call *climate* which is conditioned by many decisions regarding the learning activities as well as the emotional baggage from past learning experiences which the adult carries into the learning setting which colours the new learning experience, especially at the outset.

Broadly experienced adult educator, Laubach, says (1960:39) "sixty percent of the success in teaching adults lies in the manner of the teacher". The terminology used by Laubach dates his comment; a current rephrasing of his intent might read, "sixty percent of the success in *learning* among adults lies in the manner or skill of the *facilitator".* Brookfield (1987:71) speaks of the importance of facilitators modelling openness and critical analysis. Skillful facilitators of learning manage aspects of power, gender, age, and other diversities within the environment to condition it for conduciveness to all of the learners present in the environment.

Frank Laubach developed a literacy movement formally known as "each one teach one" for "the silent billion" because of their lack of voice in affairs of their societies and the world (Foster 1998:47). He started in the Philippines to teach Maranao adults to read, then to teach adults in…Singapore, Ceylon, India, Egypt, Palestine, Syria, Turkey, Afghanistan, Nepal, Dutch New Guinea leading to the founding of the world literacy committee which would reach an estimated sixty million people (Foster

1998:47) in 100 countries of the world (Laubach, Kirk & Laubach 1991:195). Laubach and his colleagues repeatedly taught people to teach others. Laubach, and colleagues Kirk and Laubach, formulated principles for the facilitation of learning within these populations which focus on characteristics of the adult learners themselves, based on their extensive experience. An abbreviated version of their ten *Principles of Teaching an Adult* (Laubach *et al* 1991:43) follows:

1. An illiterate adult should be treated like any other adult.
2. An adult knows the meaning of many spoken words.
3. An adult likes to read about things which relate to his experience or which will give him new experience.
4. An adult likes to teach himself as much as possible.
5. The teacher must be careful to maintain the self-respect of the student.
6. An adult's time is valuable. Every minute of the lesson should count.
7. An adult should see the relation of what he is learning to the problems he faces every day.
8. The size of the type in the first lesson should be large enough to prevent eye strain. The teacher should speak distinctly and loud enough to be heard without shouting. The chair and desk should be large enough for an adult.
9. An adult should have the feeling of success from the first lesson.
10. The adult should have an opportunity to read something besides his textbook.

Imel (1995) labels such a learning environment as Laubach recommends as *inclusive*. Two suggestions that she makes about the creation of such an environment among adults are for facilitators to

- Acknowledge that all individuals bring multiple perspectives to any learning situation as a result of their gender, ethnicity, class, age, sexuality, and/or physical abilities and to

- Recognize that since identification with social groups is multiple and complex, [a learner's] claimed identity will be in response to many contextual factors that position the individual politically (Imel 1995:3).

The first series of learner aspects cited above are basically those present at birth: *gender, ethnicity, class, age, sexuality,* and *physical abilities.* Then Imel alludes to social groups to which the learner may belong by birth but mostly by choice. Together the aspects result in numerous factors which constitute the context of learners.

As to be expected, there are many similarities between the characteristics of adults identified by Imel and those by Laubach. Freire (1994:107) gives important place to religiosity and to partying (*festas)* in articulating his description of the *progressive educator.* According, therefore, to Freire, the list of recommended skills of facilitators includes the abilities to *read the world of the learner* with its religiosity and celebrations (*festas)* and *perceive the indispensability of their tomorrows.*

Facilitators of adult learners take into account that adults are already *formed* as they enter the learning environment. This is not a static *formed.* If it were then entering the

learning environment would be in vain. The frequently-cited position by Cranston (1992:145) says "one of the primary differences between education for adults and education for children is that children are 'forming' and adults are 'transforming'" acknowledges the experiences, mindset, value system and basic worldview which adults already possess, which may be *transformed*. This potential of transformation is a given in every environment where learning will take place; it is a belief that facilitators and learners hold in common.

From "a *mountain of information about the way the brain develops in adulthood* from in-depth interviews with the 'excellent elders' nominated by journalists, lawyers and counsellors in their thirties and forties" Donovan and Wonder (1994:38-40) affirm (1994:38-40) that they identify "what it takes to be happy, sharp, secure and admired in old age...their stories show that you are never too old to change, to learn, to grow; and, that, in fact, changing and learning are the keys to an exciting, fulfilling life".

The adult years are called the time to "master the art of self-renewal" according to a book title by Hudson (1991). Taylor (in Marienau, Taylor & Fiddler 2000:12) phrase adult learning as reframing *life themes* which "interpret and bring order to the myriad of perceptions, thoughts, actions and feelings that constitute an individual's interactions with her environment". Such reframing results in "a more complex, self-construction, and the possibility to be some other way" (Taylor in Marieau *et al* 2000:12)". Phrases like these – "adults being *transformed"*, "adults *never too old to change"*, "adults *learning to think critically" and "adults reframing life themes towards the possibility of being some other way"* – all point optimistically toward potential change in the learners of the population of this PAR study*.

The *learning environment* of my study in Mozambique includes more than the *learners* themselves; it includes more than the *learners in their multi-faceted personhood and their multiple contexts.* A critical aspect in my study are the "monitors" who are graduates of the Nazarene Bible School in Maputo trained to be facilitators of learning in the system using holistic learning strategies to facilitating learning. My research question regarding the extent that learning is facilitated by holistic learning strategies is conditioned by the fact that the learning to be analysed in the whole research proposal is the learning facilitated by these monitors. Such a situation does not preclude the potential of learning as per Brookfield (1986:149) who comments that

> [Because of many research studies on self-directed learning in the decade of the 1970s] there is now much less likelihood that educators will presume that valid and valuable adult learning can occur only in the presence of an accredited and professionally certified teacher. Knowles, Tough, and others have helped to dispel the false dichotomy whereby institutionally arranged learning is seen as rational, purposeful, and effective and self-directed learning in informal settings is viewed as serendipitous, ineffective, and of a lower order.

For the particular population of learners of my study, access to "accredited and professionally certified teachers", as named by Brookfield above, to facilitate their

learning is only rarely possible. Many schools across the country were devastated or destroyed during the years of civil war and reconstruction and re-equipping the educational force has been slow. The access to the learners is through these minimally-trained monitors who meet with them periodically.

The relationships between the varied objects and subjects which compose *learning environments* are interpreted by attitudes. What are the attitudes of one learner to another and of the facilitator to the individual learners? What are the attitudes of the facilitator and of the learners toward the setting? Some learning settings are, in normal terms, very uncomfortable and unlikely to facilitate learning, but they become environments where learning takes place because of the attitude of the learners and facilitators toward them.

The subject of attitudes appeared several times in a personal interview I conducted about learning to survive difficult situations with a man who conducted training for survival to US Armed Forces for 20 years. Floeter (2004) says that the most effective training is "experiential, built on a broad yet thick foundation of knowledge, lots of kinds of it, then skills to be a good survivor". He refers a point of time in which people make a decision to either involve themselves in surviving or view it passively as spectators and says surviving is 10% knowledge, 10% skills and 80% attitudes.

An example of a survivor is Wurmbrand (1982:12,14) who describes his experience in a very unique learning environment:

> I lived many years in an isolated subterranean prison cell, in timelessness, something akin to the weightlessness experienced by astronauts. Just as they know no difference between heavy and light, I knew no distinction between past, present and future. For years we were individually isolated in solitary cells, where we heard nothing, not even a whisper. We had no books or writing materials, much less a Bible. We never saw a child, and seldom a woman. We saw no colours: our world was gray. The walls were gray, our uniforms were gray, even our faces were an ashen gray. We soon forgot that blue, green, red, violet exist.

And then Wurmbrand describes his learning experience (1982:9):

> The outward circumstances, the complete silence, the situation of not being distracted by either sight or sound – all were highly favourable to deep thought…I think much in images, not in propositions. With me in my cell were the Bible characters of old, as well as the saints of all ages – that 'cloud of witnesses' mentioned by Paul, I also saw, as in a theatre, Shakespeare's characters…I did not waste time, between beatings and tortures, thinking about how badly I had been beaten or fearing that I would be beaten again. Instead, I recited verses of Scripture, Shakespeare, and other poetry. I even composed poetry….I thought about God and the Bible, about its words, its letters, even the blank spaces between the letters.…. I believe God sent me there, to allow me to delve more deeply into the truths concealed within His words

Similarly, from a prison cell in Germany in 1943, Bonhoeffer (1953:36) writes, "[For] those who hold fast to values of which no man can deprive them…there is nothing peculiarly difficult about Christmas in a prison cell". The attitudes of Wurmbrand and Bonhoeffer are not the only aspect at work in their extremely bleak learning environments in which deep learning is facilitated. Motivation, human relationships, prior knowledge and faith are also parcels of their experiences. Knowing about extreme cases like these may give hope to others in less dire situations. Others can aspire to transcend circumstances; they can acknowledge a truth which leads to the question which will be explored in Section 2.4.2.

2.4.2 How do spiritual learning environments differ from general learning environments?

In the brief discussion above of *learning environments* in general, aspects of the *settings*, the *learners*, the *facilitators,* and *the attitudes between the other three* were introduced. What, then, makes a learning environment *spiritual?* A *learning environment is spiritual* when transcendent realities and dynamics are acknowledged, encouraged and included in the learning event by means of activities like prayer, and spiritual development of the learners is intended as well as their mental, social, emotional and physical development. As previously defined, the locus of spirituality for making the environment *spiritual* in the context of this research is God.

There are centuries of models from which to choose of spiritual learning environments which are considered successful because of the change in the learners who participated in them. The models chosen which are briefly described below are of those of 1) Moses, 2) the synagogue system, 3) Jesus Christ, 4) the Apostles, 5) St. Augustine, 6) Martin Luther and St. Ignatius of Loyola, 8) John Wesley, and 9) the designers of Theological Education by Extension (TEE). Attention is given to the aspects of the learning environments which make them specifically *spiritual*.

2.4.2.1 Moses

Moses began teaching leaders in the post-Egyptian era according to the instructions ascribed to Jethro who was both his father-in-law and "the priest of Midian" (Exodus 3:1). According to the account given in Exodus 18, Jethro goes to meet Moses in the desert after the ten plagues of Egypt and Moses led the Israelites out of Egypt. Soon after the miraculous crossing of the Red Sea, comes to meet Moses; he watches Moses listen to person after person, and judge, by himself, their civil and religious disputes. Jethro critically assesses the methods that Moses uses to judge the nation and suggests a five-point modification which would still get the task of settling disputes accomplished but much more efficiently, allowing Moses to judge only the most difficult cases allowing him more time to be the spiritual leader, the representative of the people to God (chapter 18, verse 19). Jethro suggests that Moses: a) instruct in the Law, b) show them how to live and how to perform the duties expected of them, c) select leaders which have certain characteristics, d) appoint the leaders over groups of different sizes and e) share the responsibilities of guiding the people of God to know the will of God (verses 20-22). Exodus 18:23 says that Moses did everything that Jethro suggested.

Several aspects of this model predispose the environment to be *spiritual*. First is the quality of the instructor, Moses, who is to be "the representative of God" (18:19). Second are the criteria of selection of the learners (18:21); they are to "be trustworthy" and "hate dishonest gain" which both are related to social behaviour but they also are to "fear God," a spiritual quality. The content base for the learning is to be the "Law of the Lord". And finally there is the inclusion of God in the learning system in several ways – all the people coming to Moses, Moses himself and the learners he teaches are *seeking the will of God,* Jethro also conditions his suggestions with the phrase (verse 23) "if you do this and God commands*".

Grayzel (1968:21) comments that Moses was "centuries ahead of his times…[so] only the great men among the Hebrews, the prophets, truly understood Moses' teachings". Grayzel (1968:45) calls Ezra "the Restorer of the Torah, second in importance to the Jews only to Moses". The public reading of portions of the Torah and the Prophets was an occasional feature of Jewish public life would lead to the Synagogue schools. Several public readings of the Law are recorded in the Old Testament, but, in the time of Nehemiah and Ezra the readings were institutionalized – the reading of the Torah every Sabbath, Monday and Thursday. Around these readings, which were, of course, public gatherings other structures grew – services and synagogues?

2.4.2.2 The Synagogues

Besides the institutionalization of the public reading of the Torah during the time of Ezra, the professional of *scribe* was also instituted during his time. Because of the work of the scribes, more scrolls of the Law came into existence which made possible reading in groups other than those in Jerusalem. The knowledge that the scribes acquired of the Torah and prophetic literature made them natural teachers as well as readers on the days of assembly which happened on special occasions. The scribes were not priests so could not perform sacrifices but they could read the passages of Scripture which accompanied the sacrifices and then describe, in a teaching mode, the activities that the priests were conducting in the Temple. Therefore, the public readings on Saturdays, Mondays and Thursdays became services. Grayzel (1968:49) further describes the impact of the scribes: "The scribes…strengthened personal character; they created literature; they formulated laws. They derived from the sacred books those ideas which were to guide their own people, and in time, inspire others".

The formalization of Synagogue Schools came with the passage of *The School Law* in 76 BCE when the Pharisees came into power. Grayzel (1968:89) speaks of the context:

> The Scribes had always insisted that every Jew must be acquainted with the sacred books. Ever since Ezra, scribes, like Joshua ben Sirach, had conducted schools where any man could go or send his children. These, however, had been schools of the upper grade; we should call them colleges. Elementary instruction was given at home by the father, upon whom the Bible imposed this as a duty, or by a teacher engaged for the purpose by those who

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could afford it. This limited the educational opportunities, since few fathers are good pedagogues, even if their knowledge suffices, and fewer still can afford the luxury of a private teacher. Gradually, to be sure, lower schools, too, had begun to come into existence. The Pharisees, however, were not satisfied with this haphazard educational system. Now that they had a chance to legislate, they, under the presidency of Simon ben Shetah, decreed that every young man be in duty bound to seek an education. Of course, farmers still did not have the opportunity to do so, and eventually come to be looked down upon by the rest of the population. But at least from the larger villages, towns and cities a literate, informed Jewish people could be expected to come.

A major motivation for attendance at the Synagogue services, three times a week, and at the Synagogue schools was a theological stance. The Pharisees believed and taught that "holiness could be approached, if not achieved, by a human being if he regulated his every action in accordance with biblical commands as interpreted by the scribes…" (Grayzel 1968:123). If holiness was going to be approached, then, the individuals had to know the biblical commands so study of the sacred scrolls was of extreme importance. Such importance led to the founding of more and more community houses which subsequently came to be known by the Greek word *synagogue.*

The reading of the Holy Book in the synagogue became more and more popular because of what Grayzel (1968:120-21) calls the "two fundamental principles":

> 1) each man must come in close and direct touch with God, and 2) knowledge is the road to piety…a constant reading of the sacred books would encourage good actions and good thoughts. Such thoughts and actions constantly repeated would become habits; and good habits result in good character.

The aspects of learning environment of this model which are *spiritual* include, the use of the Holy Book as the base for content, as in the Moses model, and the spiritual motivation that both the learners and the scribes possess to know more Bible in order to be more holy. The environment also included remembering events of God's kindnesses, reciting and singing Scripture passages. Private praying in public meetings became part of this model.

The careful attention of Mary and Joseph to Jewish traditions such as the presentation of the baby Jesus to the Temple at eight days (Luke 2:21-38), and the yearly journey to the Temple, – "Every year his parents went to Jerusalem for the Feast of the Passover" (Luke 41:42) – implies that they followed the cultural/religious norms. These norms would have included the regular participation of Jesus in synagogue services, and, probably, synagogue school since they lived in the village of Nazareth, not out in the rural parts of Israel, and he knew how to read. Grayzel (1968:131) imagines that, as Jesus got older, "he learned his father's trade, but he never abandoned his studies, and continued to fill his mind with the words of the ancient prophets as well as of the apocalyptic writings". The learning environment which was established by Jesus Christ is the next model to be considered.

2.4.2.2 Jesus Christ

From the years of synagogue schooling, readers, other than the scribes, could read from the scrolls in the synagogue system. In St. Luke 4:15 says that Jesus "taught in the synagogues, and everyone praised him". Continuing, St. Luke describes a session of teaching that Jesus conducts in the synagogue of Nazareth, town in which he was raised. He reads from the Prophet Isaiah (St. Luke 4:18-19), rolls up the scroll (v. 20), makes claim to his being the fulfilment of the prophetic passage (v. 21), then, in response to the amazement of those congregated, he quotes from the Old Testament books of Proverbs, I Kings and 2 Kings (vs. 23-27). By that time the people "were furious (v. 28)" with him and tried to expel him from town. In the next scene recorded (St. Luke 4:31-32), he teaches again, in another town, not Nazareth, the people "were amazed at his teaching, because his message had authority" (St. Luke 4:32). Neethling, Stander and Rutherford (2000:106) say that it is "risky to challenge the existing order…for the opposition is usually fierce". They (2000:107) point out that new paradigms generate emotions and behaviour like "hate, anger, disappointment, disapproval and opposition" and that Jesus was such a powerful example of "an 'out of the box' thinker [that] he shocked the people of His time".

Several allusions to the authority of the teaching and words of Jesus appear in the New Testament, and many times it precipitates responses like Neethling *et al* describe above, i.e. hate, anger, disappointment, etc. The physical settings vary greatly for the teaching/learning encounters of Jesus with his followers, but whether in the synagogues, or in the fields, on fishing boats, at the table or any of the many other settings, the authority of his words is consistent. He describes this authority to his disciples, and one of them records his words (Matthew 28:18): "all authority in heaven and on earth has been given to me". The teaching that the disciples should continue is based on this authority; his disciples should "make disciples of all nations, baptizing them…and teaching them to obey everything I have commanded you".

So the words of Jesus, recorded by Matthew, describe an aspect of the learning environment which was not identified in the models from the Old Testament, specifically, the spiritual presence of God in the process of learning his teachings. Another disciple, John, captures another description Jesus gives of the spiritual presence of God promised for the processes of learning (John 14:25-26): "All this I have spoken while still with you [disciples]. But the Counsellor, the Holy Spirit whom the Father will send in my name, will teach you all things and will remind you of everything I have said to you". Jesus here speaks also of the role of the Holy Spirit in assisting with remembering previously learned "things". Since memory resides in the brain, as discussed in Section 2.3.2 of this chapter, the logical implication is that the Spirit of God works in the brain. Recently scientists have made inquiries into the relationship between God and the brain and initiated a science called "neurotheology" (Newberg, D'Aquili & Rause 2001).

The primary spiritual aspect of this model environment is the presence of God in the facilitator, Jesus. But this spiritual presence and operation within is also promised to the learners, who, after Jesus become teacher/facilitators for other learners in other generations. The Holy Spirit does not just visit when the learning of the words of

Jesus is taking place. According to Jesus in John 14:23 and 14:26, He takes up residence in the life of those who love and obey Him. Jesus uses all the Old Testament, plus his own authoritative words, as spiritual bases for the learning environment. Discussion follows of the learning environments established by the disciples of Jesus who came to be called the *Apostles*.

2.4.2.4 The Apostles

The Bible records the names of twelve male disciples in Matthew 10:2-4, three women – Mary Magdalene, Joanna, wife of Cusa, and Susana (Luke 8:1-3) – and many other disciples remain largely unnamed. On one occasion Jesus sends out "seventy-two others" two by two, and one-hundred twenty are gathered together waiting in Jerusalem, according to Acts 1:15. The term *Apostles* is applied to the eleven male disciples, excluding Judas Iscariot, and to Paul of Tarsus who does not meet Jesus physically but meets him spiritually in a dramatic encounter which Paul describes in the New Testament[4].

Coleman (1973) reviews the socio-political background of these men seeking commonalities which would qualify their selection by Jesus as his followers. Coleman (1993:28-29) identifies no socio-political factors common to all of those of the group but cites four characteristics aspects of their attitudes: they were 1) open to learn, 2) possessed a sincere yearning to know and be moulded by God, 3) disillusioned with superficial religion, and 4) seekers of a Saviour. These aspects surface in the writings of the four Apostles whose writings are New Testament canon: Matthew, John, Peter and Paul and contribute to the transformations in their lives which they cite.

Matthew, the scoundrel who cheated people out of their money as he levied taxes becomes a follower with such careful attention that he records the Gospel of Matthew as a faithful journalist. Matthew tucks a clear statement an important moment of personal faith into his account of Jesus and Peter walking on the water. When the two climb into the boat where Matthew is sitting and the wind dies down, Matthew says" "Then those who were in the boat worshiped him, saying, 'Truly you are the Son of God.'" Coleman says the men were "seekers of a Saviour". Perhaps this is the moment when Matthew found his. Matthew shows his readers ten ways or methods that the disciples used to learn from Jesus which are presented in a later section but he also carefully records, as an eye-witness, the Sermon on the Mount which Webber (1986:116) identifies as the root of his spirituality, the completion of the Old Testament in the new teachings of Christ:

> It calls, as did the OT law, for poverty of spirit, for mercy, for a desire for justice that practices the holiness of God. It is this spirit, this action, this approach to life that will issue forth in the knowledge of God and peace. This active aspect of spirituality is clearly indicated in the sermon…The three essential practices of Jewish piety – almsgiving, prayer, and fasting – are urged on the believer. They are to be acts that come from the heart.

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[4] *Paul writes accounts of his conversion occur in Ephesians 3:8-20, Philippians 3:3-14 and 2 Corinthians 11:21b-12:5 (Scott 2002a:44).*

John, the young fisherman, who arrived before Peter in their run to see the tomb of Jesus but waited for Peter to go in first, becomes John, the Ancient, the Beloved, the venerated Elder, (Scott, Scott, Chambo, Mirashi & Mahalambe 2003:12). He says he was in the empty tomb when he "saw and believed (St. John 20:8)", and he writes five books of the New Testament as a faithful witness to what he saw (Revelation 1:2) and experienced (I John 1:2) and heard (I John 1:5). The writings of John appear to focus on love and relationships, including the relationships between the persons of the Trinity, but he also uses forms of *to know* and *to understand* with frequency; they are used sixteen times in the five short chapters of his first letter (Scott 2002a:35-37). To John *knowing* in general and *knowing God* specifically are the bases for love and for relationship. He says, for example (*italics mine)*, "Everyone who *loves* has been born of God and *knows* God. Whoever does not *love* does not *know* God, because God is love" (I John 4:7-8). John ties knowledge to relationship.

From the beginning of his career, Peter seems promising as a leader but, during the three years of discipleship, he makes blunders and real failures. Three encounters in Peter's life seem to result in the transformation of his life (Scott 2002a:24): "1) his profound repentance after denying Jesus Christ; 2) the profound forgiveness by the loving, risen Jesus on the beach after the resurrection, 3) the baptism of the Holy Spirit on the day of Pentecost". When Peter preaches on the day of Pentecost, as recorded in Acts 2, he was able to synthesize the teachings which he has read and heard. The teachings from the synagogue and from Jesus, his own life experiences of failure, repentance and forgiveness come together.[5] Peter, the fisherman turned preacher, says (Acts 2:14), "let me explain this to you…" He then articulates deep understanding of the Old Testament prediction from the prophet Joel of the out-pouring of the Holy Spirit, the wisdom and truth of Davidic poetry, the culmination of Scripture in the life of Jesus and the role of personal repentance as he had experienced. The authority of his words is great as evidenced by 3,000 people (Acts 2:41) "accepted his message".

The formation, transformation and preparation of the Apostle Paul are vastly different from the experiences of the other Apostles. He defends his apostleship several times in several sermons which are recorded in Acts,[6] and in each of the thirteen epistles which contain his "signature".[7] In his letter to the Galatians (1:11-12) he relates the contrast between his current way of life with his life before he "received the gospel by revelation from Jesus Christ". He describes his pre-conversion intent to "persecute the church of God…to destroy it" and says he was "extremely zealous for the traditions of my fathers" which were Pharisees. He continues his personal account of preparing for Apostleship; right after conversion he went "immediately into Arabia", then to Damascus and waited three years before he went to Jerusalem "to get acquainted with Peter and stayed with him fifteen days. I saw none of the other

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[5] *This seems to be a "eureka-type" moment like Herrmann (describes when he "sees" the four-quadrant brain model, pulling together learning from different parts of his learning and experience.*
[6] *The sermons of Paul are found in Acts 9:3-19, Acts 22:1-21 and Acts 26:9-23 (Scott 2002:44).*
[7] *These are Romans, I Corinthians, II Corinthians, Galatians, Ephesians, Colossians, Philippians, I Thessalonians, II Thessalonians, I Timothy, II Timothy, Titus and Philemon. The fourteenth epistle -- that to the Hebrews -- is sometimes attributed to Paul. There are various bases, both external and internal, for disputing him as author, including the lack of "signature", i.e. the author does not identify himself as Paul does when he writes the other letters.*

apostles – only James, the Lord's brother (Galatians 1:18-19). Pauline writings clearly describe how he taught, where he taught, who he taught as well as what he taught. So the letters of Paul not only consist of theological constructs which underpin great works of Christian theology but they also are woven together from the thorough knowledge of Scripture which he possessed before conversion, his emotional zeal first for Jewish tradition then for the edification of the Christian church, his years away from the other Apostles, which included time alone with God in the Arabian desert, and, of course, his own "disorienting dilemma" which was the dramatic conversion experience itself.

Paul serves as an example in many of the roles of which he writes, but he does not write directly about the years he spent in the desert. However, he was the first of many, says Grave (1916), in the role of the *recluse* and the *monk*. The model of St. Augustine is discussed in the next section. Graves (1916: 6-7) writes of both Paul and Augustine:

> The first recluse was Paul, who was followed by Anthony and hosts of others. Before long, however, these monks began to live together, and the first monastery was founded by Pachomius about the middle of the fourth century…This form of monasticism was extended into Europe by Basil, Athanasius and Jerome, and there, under Augustine, Cassian, and Benedict, it turned toward more active pursuits. The codes of Pachomius and Basil were replaced by those of St. Augustine and of Cassian in the fifth century and of Benedict in the sixth.

When the Apostles become the teacher/facilitators of the learning process of their followers, they bring the experience of their own transformed lives as the spiritual ambient of these learning environments. Evidence is found in the Scriptures to document the changes in the lives of Matthew, John, Peter and Paul. They seem to be examples of successful adult learners. In current terms of adult learning the men might be characterized by different terms like Payette (2002:5) borrows from Mezirow:

> Perspective transformation is said to be triggered when an adult experiences a significant personal event, a personal crisis, an internal search for meaning, labelled by Mezirow as a *disorienting dilemma.* This triggering event may be a swift experience one encounters or a singular significant occurrence over a long period of time.

The *disillusionment with superficial religion* which the Apostles found commonly when they came into contact with certain religious leaders may have been the *significant occurrence over a long period of time* which made them *open* to other *frames of reference*, which consist of "*habits of mind wh*ere broad generalized, taken for granted beliefs and assumptions exist and…*point of view,* where feelings, attitudes, beliefs, judgments, and criteria for evaluating create clusters of *meaning schemes* (Payette 2002:5)". If new experience, information and / or impressions pass through our *frame of reference*, with its two parts, and the new input has more meaning or makes more sense then we are willing to modify, change or even substitute our

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frame of reference. A schematic representation of the process here describes follows as Figure 2.10:
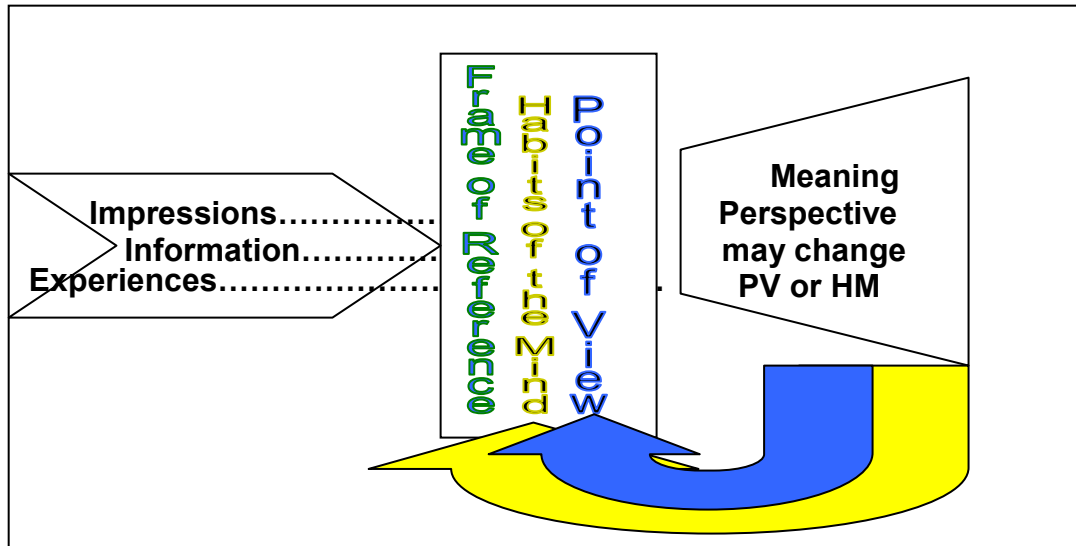

Figure 2.10 Diagram of Theory of Mezirow (based on Payette 2002)

Figure 2.10 displays "impressions, information and experiences" entering the life of the learner, and these pass through the filter of interpretation that is already constructed and present in the life, made up of "frame of reference" made up of "habits of the mind" and "point of view". According to the impact or value of the filtered input, the "meaning perspective" may change the individual, as in the case of the Apostles, and alter the "PV" (point of view) or "HM" (habits of the mind).

The twelve Apostles were willing to leave their occupations and follow Jesus. Many times in the Gospels there are incidents which cause some followers to turn away from Jesus because of his teachings. Payette (2002:8) explains, "Teachers attempting to reveal unbiblical assumptions and values can create an emotional experience that becomes threatening to adult learners. Asking learners to take action on reflective Spirit led insights can be a threat to psychological security that transformational learning imposes".

Matthew, John, Peter and Paul seem to respond with positive changes in their *frames of reference* to various *disorienting dilemmas* that are presented to them in their experiences with Jesus and his teachings. They each also seem to have what Palmer (2000:6, 19, 2001:1) calls "breakthrough thinking" at points in their lives when many things come together. Palmer also speaks of the "Eureka effect" of discovery or creativity. In the lives of these Apostles, the discovery is the answer to the long-sought solution to their lives. They found it! They write about finding it – for Matthew it was in the boat after Peter walks on the water, for John it was in the empty tomb, for Peter on the day of Pentecost, for Paul when he is blinded on the road to Damascus. In terms of the four-quadrant model, the *eureka effect* may be explained as the instant at the end of a mental volley between the left-brain and right-brain: first left-brain (A-quadrant) information and analysis, then right-brain (D-quadrant) synthesis, more left-brain (A-quadrant) measuring, then some right brain (D-quadrant) "what-if-

ing" and imagining, left-brain (B-quadrant) reorganizing, right-brain (C-quadrant) reflecting, discussing, A to D, C to B, back and forth, back and forth until – aha! The brain makes sense of the patterns and goes limbic! an emotional lightning bolt to both right and left limbic hemispheres, to the amygdala itself. An emotionally engraved life event takes place in the whole brain which converts the frames of reference with its accompanying beliefs, values, attitudes and behaviours of the individual and it is exciting. "Any breakthrough worth its salt is worth an exclamation Most of us would probably say "Aha!" but we might say "Eureka!" (Palmer 2000:6).

The Apostles also bring the spiritual content of the Old Testament, the words of Jesus, and the words of the other Apostles as already having Scriptural value. Webber 1986:189) says:

> The [Christian] church existed for decades before the NT documents were written and for several centuries before the NT was organised into the present canon of Scripture…the earliest authorities in the church were the apostles. Christians gathered around their teachings (Acts 2:42) and treated their interpretations of the tradition as authoritative (2 Thessalonians 2:15)…initially apostolic teaching was handed down in the oral traditions of preaching and worship. The book of Acts, for example, contains several sermons of the apostles, such as Peter's sermon at Pentecost (Acts 2). The Epistles contain early Christian hymns (Philippians 2:5-11), catechetical material (Galatians 5:16-26), creeds (Romans 10:9), doxologies (Romans 11:36), and benedictions (1 Corinthians16:23). All these materials were in existence in oral traditions and possibly the written traditions that predate the NT writings.

The writings of the Apostles Matthew, John, Peter and Paul comprise much of the New Testament. Beside that the principle personalities of the book of Acts are Peter and Paul and, the Gospels of Mark and Luke are, according to tradition, based on accounts by the Apostles. Throughout the writings, the Apostles repeatedly underscore the spiritual quality of the written word: Peter in I Peter 1:23: "You have been born again...through the living and enduring word of God" and 1:25: "the word of the Lord stands forever… this is the word that was preached to you". Peter in II Peter 1:20 also describes the production of Scripture: "no prophecy of Scripture came about by the prophet's own interpretation…but men spoke from God as they were carried along by the Holy Spirit". John says (I John 1:3-4) "we proclaim to you what we have seen and heard, so that you also may have fellowship with us. And our fellowship is with the Father and with his Son…[so] we write this". Paul also declares "The word is near you; it is in your mouth and in your heart…the word of faith we are proclaiming (Romans 9:28)", and so they write repeatedly. The Jewish position of knowing Scripture as tantamount to "being holy" is personalized by the resident presence of the Spirit of God in the life of the believer. Paul calls this a "mystery" three times: Romans 16:25, Colossians 1:26 and I Timothy 3:16. Therefore, integral to the model of the Apostles is 1) the experience of spiritual transformation resulting in the habitation of the Spirit in the life of the teacher/facilitator and the learners, 2) the same Spirit who works harmony between them and works in their brains to teach and to bring the word to remembrance, and 3) the eternal, spiritual, authoritative "God-breathed" (2 Timothy 3:16) quality of the written word. It is no wonder that

Christians became commonly known as "the people of *the book".* That book (the Bible) and the indwelling habitation and operation of the Holy Spirit are the spiritual ideals which became increasingly obscured during the next centuries, resulting in several solutions from the lives of some who kept seeking that ideal, including each of the next models. Graves (1916:4-5) describes the period between the Apostles and Augustine:

> By the third century Roman society had become most corrupt...Christianity was no longer confined to small extra-social groups meeting secretly, but was represented in all walls of society and mingled with the world. It had become thoroughly secularized, and even the clergy had in many instances yielded to the prevailing worldliness and vice. Under these circumstances there were Christians who felt that the only hope for salvation rested in fleeing from the world and its temptations and taking refuge in an isolated life of holy devotion…Hence there grew up within Christianity that form of solitary living known as monasticism, with its 'asceticism' or discipline of the body in the interest of the highest spiritual life.

Gatimu *et al* (1997:3) point out that, "Theological education is one of the major functions of the [Christian] Church. It is for the preparation of the whole people of God, some for the special ministry of the Word and Sacrament, and others for the general priesthood of all believers". Each of the subsequent models are variations of this task – to prepare all the people of God, especially, but not exclusively, the leaders whether they are called "monks" or "priests" or "lay preachers" or "pastors". The Church in Africa is no exception. The next three models start in monasticism: St. Augustine comes from the monastic model and stays within it; Luther comes from monasticism and then takes theological education to the general public as well as to pastors of the Protestant Church who, contrary to those in monasticism, marry and live in the general public. Loyola comes from monasticism and takes theological education to priests, to other monks and to youth. His disciples extend the system to other continents. Wesley comes from life in the general public and educates in the public sphere all who would hear, as well as preparing and discipling hundreds of pastors across England. The TEE model is a creation which responds to the needs of the Church in places where access to options of formal education are very limited.

2.4.2.5 St. Augustine

The life and work of St. Augustine form the last and most distinguished chapter in the tale of outstanding contribution of Roman North Africa to Latin thought and letters. His full name is Aurelius Augustine, and he was born in A.D. 354 on the Ides of November in the small town of Tagaste in the Roman Province of Numidia Proconsularis (Howie 1969:1). Walker (1959:160) states that "in Augustine the ancient church reached its highest religious attainment since apostolic times. He was referred to as the father of medieval Roman Catholicism…His theology, though buttressed by the Scriptures, philosophy, and ecclesiastical tradition was largely rooted in his own experience".

Augustine was a teacher by profession. The reputation he acquired as a teacher of rhetoric speedily led to his appointment as a public orator and a teacher of rhetoric at Milan (Howie 1969:140). Upon his conversion to Christianity he laid down his secular teaching duties, but did not abandon the vocation of teaching (O'Mearg 1965:105). He clearly states in the *confessions* that he was merely putting aside the work of formal instruction in the techniques of oratory in favour of a more challenging and significant task (Howie 1969:140). In the months immediately following his conversion, this task was begun, near Milan, where Augustine spent some months discussing with a group of his friends and young pupils in the implications of Christian involvement. On his return to North Africa and his native Tagaste, Augustine realized the need for the spread of education among Christians, both priests and laymen. Thus at Tagaste and later at Hippo he established communities, whose purpose was the preparation of well educated Christian teachers for the North African Church (Howie 1969:140).

Following his consecration when he was preoccupied with the need to produce better educated leaders and teachers for the African church, he wrote *Christian Education* and *The Instruction of the Uninstructed*. These writings of Augustine are the rich sources of practical advice on teaching methodologies (Walker 1908:299). All the recommendations he makes in these works derive from the commandment which he sees as the basis for all personal relationships: "You shall love the Lord your God and your neighbour as yourself". The personal relationship with God enables people to advance in understanding, and so live the good life, must be reflected in the association of teacher and learner, since this association is designed to affect exactly the same purpose. Thus, according to Augustine, in the instruction of his pupils the teacher must co-operate with the purposes and methods of God; his teaching must be founded on a personal relationship rendered productive by love.

Webber (1986:193) holds that those who place Augustine as a metaphysical theologian are not reading from him or "Justin Martyr, Irenaeus, Tertullian, Clement, Origen, Athanasius, Basil, or Jerome" because it soon becomes apparent that these fathers are "steeped in the Scriptures". Polman (1961:40-41) states that Augustine, together with the entire church of his day, was firmly convince that the Bible was divinely inspired. He simply took it for granted. He adds, "To him the Holy Scriptures were the work of God's fingers, because they have been completed by the operation of the Holy Ghost who worketh [sic] in the holy authors" (Polman 1961:42). The aspired relationship of love between learners and teacher contributes richly to the spirituality of the learning environment in the Augustine model. Four centuries after the Apostles, the centrality and primacy of Scripture in method, content and relationship is intact, all of which enhance the spirituality of the learning environment.

2.4.2.6 Martin Luther and St. Ignatius of Loyola

Contemporaries, Martin Luther, 1483 –1546, and Ignatius Loyola, 1491– 1556, both sought the purity of the Church, dedicated their lives to the knowledge and teaching of the Scriptures and were forthright leaders who fathered, respectively, the German Reformation, and the Jesuits, integral to the Catholic Counter-Reformation.

Martin Luther, an Augustinian monk, brought about the German reformation, a protest against the Roman Catholic Church system. "He is responsible for the fact that a purified Christianity; a Christianity of the reformation, was able to establish itself on equal terms with the Roman tradition" (Tillich 1968:227). He protested against the Roman practices such as the selling of indulgencies, the issue of purgatory, the celibacy of the priests and nuns. "Many Christians realized that the Church was simply not serving the spiritual needs of the time. It had become corrupt, and abuses were widespread. At the same time Christians were becoming more literate and articulate, so they expected more of the Church (Spickard 1994:171)". The reformation was a complex, multi-faceted response to the political, economic, academic, social, and ecclesiastical atmosphere of the fifteenth and sixteenth centuries. This exploration in this study of the model of Martin Luther focuses on the spiritual learning environment he fostered so is limited to Luther himself and the aspects of spirituality of his model and does not extend to the reformation.

Martin Luther was the first child of the seven children. His parents were devout. They taught their child (Martin) to pray and nourished him on legends of the saints and the superstitions of the German peasants as an informal method of teaching theology, Bible and "things of God" (Gifford 1946:340). They also taught their children "things of God" through music or hymns.

Luther took his Bachelor's degree in 1502 at Erfurt, Germany's greatest university, and three years later his Master's degree (Walker 1959:303). In the monasteries and convents, both formal and informal methods of teaching were employed in teaching those young men and women for ministry. In pre-reformation Germany, there was a very large number of monks and nuns who peopled the innumerable monasteries and convents. The number of churches was enormous in Germany for the population. Almost every tiny village had its chapel, and every town of any size had several churches (Lindsay 1941:45).

Luther was the first to make full use of the value of printing as a medium for propaganda and to write with the printed page in mind (Gonzalez 1985:15). The invention of the movable type printing press gave his writings a widespread audience that they otherwise would not have had. He translated the entire Bible from Latin to the German language and printed it so that everyone could have access to the Word of God and read it on his or her own contrary to the Roman Catholic Church position that only members of the clergy could possess the Bible. Luther treated the entire Bible as the inspired Word of God (Tillich 1968:244). The spiritual quality of the learning environment which Luther created was enhanced by his participatory strategies – translating Scripture to the vernacular so the people could read it directly, putting theology into hymns which were printed and distributed to the populace. These strategies are based on a theological position of participation, *the priesthood of all believers*, which became basic to Protestantism.

His contemporary, Ignatius of Loyola, also was deeply devoted to the teaching of Scriptures but also to the Roman Pontiff such that he founded the Society of Jesus, the Jesuits, which resulted in an international system of Christian education, an important aspect of the Counter-Reformation.

The members of the Loyola family were always loyal servants of the crown of Castile and were very important in Guipozocoa as they were distinguished from others by the service that they offered to the kings of Castile. They were also a religious people. "Religious matters played an important role in the family life of the lords of Loyola, above all because their condition as patrons of the church gave them the right and the obligation of intervening in the church affairs of Azpeitia" (de Dalmases 1985:3). The religious life of the family was closely related with that of the parish however this did not succeed in shaping Ignatius. He was a man given to the vanities of the world. He tried an apprenticeship, then military service. In the siege of Pampelona by the French army he was badly injured on both legs. While in bed still recuperating from the injury, he read a book by Ludolf entitled *Life of Christ* which inspired him in such a way that he made a choice to commit himself to the service of God. He said, "Sanctity and chivalry are both types of perfection, and both are to be reached only through sacrifice and training and both present challenges" (Foss 1969:68). Sanctity was the sensible and practical ideal which challenged him supremely and led him to conclude: "A man can have no foundation other than Jesus Christ…Therefore, whoever wishes to escape the damnation due his sins and to be corrected in spirit, must not forsake that foundation" (Foss 1969:68-69).

Then beginning his spiritual education, he set out to Manresa and stayed in Barcelona for a year. "In those days God was treating him like a boy in school, teaching him, and that was because of his rudeness and gross mind" (Foss 1969:73). He spent several hours of the night in prayer, and disciplined his body, eating no meat and drinking no wine. During the day he tramped the street for alms and listened to his inner voice. His devotion moved more and more to helping others which was a giant step towards the foundation of the Society of Jesus. After this experience with God, he went on a pilgrimage to Jerusalem, but was not successful as he realized that little could be achieved without education (Graves 1910:209).

In 1524, he started on his formal education journey in a grammar school, at the age of thirty-two[8]. Later he undertook a university education at Alcala and Salamanca and managed to have a group of people live around him (Foss 1969:79). While studying at Paris University, he managed to convince and convict six fellow students to join hands with him in devoting themselves to missionary work and to maintaining the papal authority (Graves 1910:209). Later that year August 15, 1534, the group took their vows. In 1540, after considerable opposition, Pope Paul III approved the *Society of Jesus* as the monastic order of the Jesuits. This order went on a campaign of converting the heathen and combating Protestantism. The subsequent founding of schools, teaching and lecturing publicly were ways of supporting this order and strengthening the papacy. The schools of the education system consisted of lower colleges, upper colleges, religious education and university. The Jesuit training took from twenty-one to twenty-three years, including the years of novitiate and teaching (Graves 1910:212).

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[8] *The fact that Loyola, who would subsequently build up an international system of education of great importance, went to grammar school when he was already thirty-two (or thirty-three from other sources) years old should make him a meaningful example to adult populations like mine, who return to schooling or start schooling when they are already mature adults.*

The Jesuits adopted the three vows of poverty, chastity, and obedience, and a fourth special vow placing them at the service of the pope. This community was founded principally for the advancement of the soul in the Christian life and doctrine, and for the propagation of the faith by the ministry of the word, by the spiritual exercises, by works of charity, and expressly by instruction in Christianity of children and the uneducated (Olin 1990:83). In the practics, daily office was to be said individually rather than in choir, as was with the practice of other orders. The order did not sing in mass, but every Jesuit exercised himself faithfully in practices deemed to be necessary and useful for growing in faith. This left the members free to perform whatever task they were called upon to do.

Pilgrimage was one of their most important practices. Life was viewed as journey fraught with obstacles and difficulties through this world. By pilgrimage they meant a search, essentially an interior journey, toward some goal or ideal, which would affect inward growth or change or transformation towards spiritualisation. It involved a pursuit of meaning or mission for one's life (Olin 1990:83). So they committed themselves to reading spiritual writings, the manual of Benedictine monks, studied scripture deeply and worshiped God through service to others. How much this resonates with practices from adult learning today: *critical reflection, critical thinking, applied learning, establishing meaning perspectives,* etc.

In addition to the spiritual environment for learning that was carefully created by Loyola by means of the varying aspects already mentioned, he also devised *spiritual exercises,* series of devotional meditations and activities, which he taught and used extensively from the time he was at university and throughout the Jesuit educational system. In preparing learners or colleagues for the spiritual exercises, he expounded on the articles of faith, the mortal sins, the five senses, the three faculties of the soul and other good things concerning the service of God to come out with the spiritual exercises which are considered in a later section on holistic learning strategies.

2.4.2.7 John Wesley

Although John Wesley may not be as well-known as those involved in the other models which have been discussed so far *Christianity Today* places the conversion experiences of John Wesley and Charles, his brother, on the list of the twenty-five most important events in the history of the Christian Church (Miller 1990:4). Other superlatives are also attributed to them. Kimbrough (2002:11) sites their volume *Hymns on the Lord's Supper* (1745) as "without question one of the most significant collections of Eucharistic hymns ever published in the English language". Charles wrote "approximately eight thousand hymns" (Foster 1998:374). "[John] Wesley's efforts – travelling over a quarter-million miles to preach over forty-two thousand sermons, publishing over two hundred books, pioneering or participating in most of the social causes of the day – helped save England from the chaos of a revolution like the one that devastated France" (Foster 1998:374). "Some eighty denominations worldwide regard [John] Wesley as ecclesiastical ancestor" (Tracy & Ingersol 1998:28). He was short and "never weighed over 135 pounds, but the 'little giant' led England in a revival of religion that has been called the Methodist Revolution" (Tracy & Ingersol 1998:31).

The Wesley brothers, John (1703-91) and Charles (1707-1788), were two of the nineteen children of an Anglican preacher. Their mother, Suzanna, is frequently cited as having significant influence on their spiritual formation as she met with each child for one hour a week. Kivett (1995:2) speaks of the impact of this meeting: "These were not cold and formal times, but rather warm and intimate. John's turn came on Thursdays and he looked forward to it with positive feelings. He was able to remember these intimate times of conversation with his mother years later while a student at Oxford". Both John and Charles studied at Oxford University. They sought personal piety with fervour. One means they employed within a small group which met four times a week to study and read from Scripture. Wesley himself from his Works VIII:348 in Hulley (1987:8) says the readings were chiefly from the Greek New Testament. Kivett (1995:3) says that when John took over the leadership of the small group, he realized the need for there to be accountability within the members of the group for them to be able to reach their spiritual goals. Kivett (1995:3) continues: "berated by other students who called them 'Methodists' or 'the Holy Club' [they] gave themselves to periods of prayer, fasting, discussion, communion, and opportunities of practical ways to help the sick, elderly, imprisoned, and poor. With 'the Holy Club', Wesley incorporated expectation of behavioural change through the group process".

John is considered to be the founding father of the Methodist movement. The volume of readings and writings which John produced is remarkable: Outler (1975:6-7) in Hulley (1987:53) says John "recorded most of his reading after 1725…which runs to more than fourteen hundred different authors, with nearly three thousand separate items from them (ranging from pamphlets to twelve volume sets – including many huge leather bound folios". Foster (1998:174) reports that he published over two hundred books and preached over forty-two thousand sermons. Baker reports (in Hulley1987:48) that "in the nine years from 1782 to 1791 Wesley wrote between five and six and a half thousand letters. In his old age his letters tended to be shorter". All of this is beyond the hymns that they composed which "related the central teachings of the Christian message to his own experience [of spiritual conversion], and therefore to the living experience of those who sang the hymns" (Hulley 1987:35).

Yet, none of this activity is considered to be the most outstanding legacy of the ministry of John Wesley. Freeborn *et al* say (1994:146): "Many believe the class meeting was Wesley's greatest contribution to Christianity…among them D. L. Moody and Henry Ward Beecher". While *militaristic* is the term sometimes applied to describe the style of Loyola in establishing the system of Jesuit schools, *methodist* is the term applied to the style of John Wesley. The network of societies, classes and bands across England which Wesley established, including the training to his leaders, became a formidable system of informal education. McKenna describes (1999:21) how class meetings were populated, the network of which became the educational system of Wesley:

> After nonbelievers were convinced by Wesley's preaching, they were invited to a class meeting where they could learn more about the gospel and also see if Methodists practiced the faith and love they professed. Once converted, then, even the poorest were expected to give a penny a week to those who were poorer still. As these new believers grew in grace, social holiness had two

dimensions; increasing spiritual accountability to the Body of Christ and great social responsibility for the needs of the poor. Maturing members of the methodist class meeting were expected to reach out in ministries to prisoners, widows, the aged, the sick, the hungry and especially to oppressed children.

John established several kinds of small groups which Kivett (1995:4) summarizes:

	Size	Open/ Closed?	Fre- quency	Objective
The Society	50 or more	Open group	Weekly/ Sun. pm	For instruction and evangelism
The Class	12	Open group	Weekly	For personal accountability, self-examination & evangelism
The Band	5-8	Closed invited/ screened/ accepted Peers of same sex, marital status, and age or maturity	Weekly	For confession of temptations, mutual love and encouragement
Select Band	Small	Invitation only For leaders	Weekly	For stimulation to inward and outward holiness, and training in leadership
Penitent Band	Small		Weekly	For counselling, exhortation and restoration to full fellowship and service following backsliding

Table 2.2 Types and Characteristics of Wesley Bands (Kivett 1995)

The aim of the small groups was "to conserve the converts, to reform society and to renew the church" (Kivett 1995:4) and "to help people in the pursuit of Christian perfection" (Tracy and Ingersol (1998:28). The leaders of the class meetings became the "preachers" or "assistants" of the Wesley model. Lawson says (1963:106) there were "intricate rules for their candidature, laid down in the 1747 Minutes", that they were to be "extraordinary messengers to provoke the others to jealousy". They were to consider themselves "learners rather than teachers", "for whom therefore a method of study is expedient in the highest degree. Learners they were! Five hours of study per day was prescribed for them".

The consequent social reform which took place in the nation was not because of the structures themselves but because of the spirituality carried through the structures in the transformed lives of the leaders and members. Kivett (1995:1) describes the process:

> While he did not mount a formal crusade against the institutions of oppression in English society, the reformation of that society occurred just the same – from the inside out, from the bottom upward, one by one, group by group. The spiritually awakened were organised into small groups whose primary goal was to develop the behaviors and virtues of a Christian lifestyle. As the leaders of these groups taught sobriety, industry, cleanliness, and Godliness,

the lower class became the middle class. Society was transformed, and the small group lay at the centre of the transformation society.

As John Wesley preached to public citizens in open air and taught his parishioners in churches and in societies, he urged them to *holiness,* a term which authors of other models also use. In a letter to his father, cited by Baker (1980:399) in Hulley (1987:18) Wesley explains:

> By holiness I mean, not fasting, or bodily austerity, or any other external means of improvement, but that inward temper to which all these are subservient, a renewal of the soul in the image of God...a complex habit of lowliness, meekness, purity, faith, hope, and love of God and man.

This essentially is the bottom line of the Wesley model: an *inward temper* which governs, *a complex habit* composed of godly attitudes and spiritual attributes.

"John Wesley was convinced that holiness is discovered in the practice of our faith in the practical and everyday routines of life" (Job 1997:9). Because of this burning conviction, "He fashioned for himself a way of living that included time for reading and reflecting upon scripture and other spiritual works and methods for putting into practice what he believed and what he heard God calling him to do".

2.4.2.9 Theological Education by Extension (TEE)

Theological Education by Extension or TEE is a model of adult learning which started in Guatemala and rapidly was adopted by many churches in many countries of the world. Ferris (1990:13) says

> The faculty of the Presbyterian Seminary in Guatemala did not set out to develop an alternative model of theological education. In 1962 …they were faced with a desperate situation in their church and in their seminary…the pattern for training which came to be known as TEE evolved through a series of *ad hoc* experiments aimed at improving the effectiveness of the Seminary.

One of the faculty members, Winter (1969:83) states that the programme they launched was based on two assumptions: "that you can find leadership gifts in the specific subcultures of a church…and that you can train them where they are. Such a programme treats the subcultures seriously, yet is unified in a single institution".

The "desperate situation" the Presbyterians faced in Guatemala in 1962 presents several similarities to the conditions of the Church of Nazarene in Mozambique at the outset of this research in 2000. One similarity was the quantitative factor, i.e. that the rapid growth of the church had over-extended the capacity of the existing, residential educational system to provide an adequate number of trained ministers for the number of churches which had sprung up. Mozambique was not the only candidate setting for use of the TEE model. Ferris (1990:15) estimates that by the date of his

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[13] *I have chaired Africa Region COSAC since its formation in 2002.*

writing in 1990 "thousands — perhaps hundreds of thousands — of Christians in the 'Third World' [sic] have received ministry training [through TEE] which otherwise would have been inaccessible to them".

Many African countries utilize the TEE model. "According to the TEE database maintained at the Christian Learning Material Centre, there are at the present approximately 341 TEE programmes in Sub-Saharan Africa" (Gatimu *et al* 1997:3). It was first introduced in Africa in 1970 (Ferris 1990:14). Holland was involved in bringing the model to Africa. As he and his wife were experiencing in their church in Zambia faster membership growth than leadership training, and they read about what happened in Latin America, they believed that it "would open new possibilities for training more men for the ministry in Africa".

The Committee to Assist Missionary Education Overseas (CAMEO) of the World Council of Churches collaborated with the Association of Evangelical Bible Institutes and Colleges of Africa and Madagascar (AEBICAM)…to produce TEE texts from 1970 onwards (Gatimu *et al* 1997:12). Holland and Holland headed up development of the lesson materials called the TEXT Project of the Theological commission of the A.E.A.M. The books of this *Text-Africa Project* are published by Evangel Publishing House in Nairobi, Kenya, facilitating the spread of TEE in Anglophone Africa, and to a limited degree, Francophone Africa (Gatimu *et al* 1997:12). The books have been written by interdenominational teams of writers, used in sixty-two countries in Africa and have been translated into over one-hundred twenty African languages (Thornton 1990:92). In Mozambique, where Portuguese is the official language the Sociedade Internacional de Missões (S.I.M. Mission) purchased the right to translate the books into Portuguese in 1997 (Interview Hanna 2000). In 2000, the groups in Mozambique using the Text Africa books included S.I.M., the African Evangelical Fellowship, Swedish Alliance, the Baptist Union, the Southern Baptists and other smaller groups (Hanna 2000).

According to Winter (1996:429-431), one of the initiators of the programme in Guatemala, features of the TEE model are 1) the daily study of each learner with a carefully written text book, 2) weekly face-to-face contact session [with a facilitator] and 3) spiritual and intellectual fellowship with a small group of students.

These facets are well-known among those who have used TEE (Smith & Thornton, Holland & Holland, Gatimu *et al*). Each of them will be considered in more detail other sections of this research report. Ferris (1990:14) observes that "after 1973, TEE shifted its attention and support to experiments in dialogical learning, modelled on Paulo Freire's programme for literacy and "conscientization" in Brazil". The juncture of these two models is not surprising due to the congruence of their intended learning outcomes and circumstances of their populations of learners.
Thornton (1990:13) describes the weekly learning session as "a time for increasing understanding, explaining, asking questions seeing how the lessons relate to life". Gatimu *et al* (1997:7) comment that educators appreciate the importance of face-to-face contact between the learners and the tutors". Bruner and Brookfield are two esteemed educators who speak of this importance. Reiterating Bruner (1986:127) that "most learning in most setting is a communal activity, a sharing of the culture",

the weekly learning session of the TEE format brings adult learners to a "table" of free interchange of perspectives based on common texts, as they experience similar challenges and hopes in the daily lives. Brookfield (1995:8) says "Learning is a collective process involving the cultural formation and reproduction of symbols and meaning perspectives".

2.4.3 Summary of Spiritual Learning Environments

In the models of spiritual learning environments considered above, those who established them evidence the capacity to think critically. Whether this was a natural ability or culturally honed competency or a skill developed in practice or intentionally developed by learning experiences of their choice, they possessed the capacity to critically reflect. In each model much time is spent reflecting on Scripture and applying the Word of God to the dilemmas the learners faced and realities in which they lived. Some, from the time of Moses, were judges; in other instances they were educators. They reflected on the cases of others to encourage alignment with the Word of God. They reflected on their own lives as they considered themselves on the road to biblically-based *sanctity* or *personal piety* or *moral wholeness* or *holiness* – whatever they called it. In their reflections on the example of Christ they found perfection and congruency and so they constructed the concepts of "Christ-likeness", "Christ-centeredness", and "the mind of Christ". These reflections are also explainable in psychological terms as Kelsey (1984:41) formulates:

> The psyche is brought to an entirely new level of reality. Far from entering the void of nirvana or losing itself by seeking to be transcended, the ego is transformed. It is made a harmonious part of a total human psyche, which now has a new center and focus. The old center and the new remain in relation, a new relationship of wholeness.

The spiritual self, as the central self and eternal self, worships and emulates God as the ultimate Hero, submits to Him, freeing the tri-dimensional self, to be a joy-filled, peace-full person, free from conflicts, to the measure that their words, thoughts, attitudes and relationships match the Word of God. *Being* is the result of finding personal relationship with God. The place given to the Bible in each of these models is not to be under appreciated. The Bible is replete with explanations, observations and instructions about the formation of selfhood. In his letter to the Philippians, Apostle Paul states what he was, what he once thought, what he once perceived as significant, he now considers as "dog dung" compared with *knowing Christ…firsthand* All that he *was* he lets go of to *know, experience and be* and also to go with Christ to death.

> "Philippians 3: **I was**…an Israelite from the elite tribe of Benjamin; a strict and devout adherent to God's law; a fiery defender of the purity of my religion, even to the point of persecuting Christians as a meticulous observer of everything set down in God's law Book… all the ***things I once thought*** were so important are gone from my life. Compared to the high privilege of ***knowing*** Christ Jesus as my Master, firsthand, ***everything I once thought*** I had going for me is insignificant – dog dung… I gave up all that inferior stuff so I could

> *know* Christ personally, *experience* his resurrection power, *be* a partner in his suffering, and *go all the way* with him to death itself" (Pederson 1993:416).

Paul experienced transformation. He faced death frequently. An eminent American gerontologist, Cohen, recently reports (2006:84) his research findings on what he calls the "myth of mid-life crisis" saying: "What sparks this series of changes? Why, after finding our places in the world, do so many of us spend our 40s and 50s re-evaluating our lives? The impulse stems partly from a growing awareness of our own mortality….we gain new perspective on who we are and what we really care about". Paul seems to have a full-blown awareness of his mortality and he is ready for it; he is ready for knowing, for being and for dying.

From the model of Moses through each other model considered, in the lives of the learners and the creators of the educational models, life goals surface which have commonality but are expressed in different terms. Besides the clearly articulated wording in each model, a global indication is given by the popularity for six centuries of *The Imitation of Christ* by Tomas á Kempis (1418). Christians come from different perspectives and positions but they aim at the same goal, they are deeply interested in imitating Christ, emulating Christ.
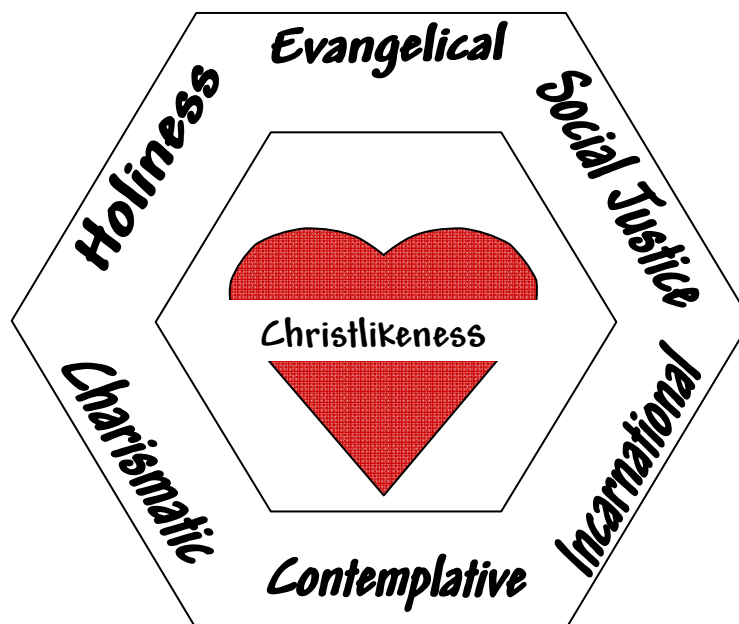
Figure 2.11 Diagram of the Six Great Traditions of the Christian Faith

The six great traditions of the Christian faith, as named by Foster (1998), are incarnational, contemplative, evangelical, holiness, charismatic and social justice. The goal of each tradition is the same – *Christlikeness*, *becoming like Christ,* the *image of God* – which occupies the centre of the illustration in Figure 2.11. Each tradition encourages spirituality in different ways; each tradition has multiple examples of ways to make learning environments spiritual.

The nine models which are briefly described in this section serve as rich resource for understanding some of the aspects and dynamics of learning environments which are *spiritual*. Later sections of this chapter refer back to these models in respect to aspects they display of cooperative learning and holistic learning strategies which are the subjects of the next two sections 2.5 and 2.6.

2.5 Cooperative Learning Groups among Adults

By the working definitions of this research project, holistic identity or personhood is *tri-dimensional* composed of the whole-brain self, the spiritual self and the social self, all influenced by God and all perceived or interpreted by the health of the memory. In cooperative learning groups each individual has this tri-dimensional identity of a whole person. The community itself of the learners is another "whole" which is explored in this section entitled, "Cooperative Learning Groups among Adults. These considerations include contextual perspectives of the population of learners in this study, pragmatic considerations, especially as related to some of the models in the previous section on spiritual learning environments, and scholarly observation about learning in community. Implicit in these considerations is also the presence of God in the workings of the learning community. Community can be viewed through many lenses.

2.5.1 Scholarly and Pragmatic Issues of Cooperative Learning Groups

From the perspective of adult learning, Brookfield (1987:215) puts social learning at the top of adult learning: "Forming and living within relationships are, arguably, the most important of all our adult learning efforts, and the ones to which we ascribe perhaps the greatest significance". He invites argument to this stance, but, for now, I want to agree with it, and proceed to his next point: "Assisting people to be able to think critically within these relationships must be one of the most important functions helping professionals and educators can perform". He identifies *critical thinking within relationships* as a most important help that facilitators can bring about in the lives of their learners.

Another renowned adult educator, Mezirow (1998:72) in Mezirow (1999) describes how ideal communities function according to the theory of transformational education by citing five characteristics of an ideal learning community which are 1) "cemented by pathic solidarity", 2) "committed to participatory democracy – social and political", 3) "informed through critical reflection", 4) "acting collectively in reflective action", and 5) "responsive to human need". Adding to these five the descriptors specified above by Brookfield, "capable of critical thinking within relationships", results in six characteristics of an ideal community of learning. Cooperative learning groups among adults functioning optimally exhibit these characteristics of ideal communities.

Yet, there is a factor of culture which greatly impacts each learner in each cooperative learning group; that factor is the basic societal organization of the society in which the learner was born: "Is her or his society *individualist* or *collectivist?"* Hofstede (1997:50-51) defines the two terms with clarity:

> *Individualism* pertains to *societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism* as its opposite pertains to *societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty.*

This "basic societal organization" influences every aspect of the society so it influences every individual who is born into the society and every community within the society, including the communities of learning. Different levels of *individualism* and *collectivism* exist, have been measured and are published because the affect they have on behaviours of individuals and groups has impact on all cross-cultural interests: business dealings, marketing, counselling, education and so on. In Table 2.3 Hofstede presents key differences between the *basic societal organisation:*

Collectivist	Individualist	
People are born into extended families or other in-groups which continue to protect them in exchange for loyalty	Everyone grows up to look after him/herself and his/her immediate (nuclear) family only	1
Identity is based in the social network in which one belongs	Identity is based in the individual	2
Children learn to think in terms of 'we'	Children learn to think in terms of 'I'	3
Harmony should always be maintained and direct confrontations avoided	Speaking one's mind is a characteristic of an honest person	4
High-context communication	Low-context communication	5
Trespassing leads to shame and loss of face for self and group	Trespassing leads to guilt and loss of self-respect	6
Purpose of education is learning how to do	Purpose of education is learning how to learn	7
Diplomas provide entry to higher status groups	Diplomas increase economic worth and/or self-respect	8
Relationship employer-employee is perceived in moral terms, like a family link	Relationship employer-employee is a contract supposed to be based on mutual advantage	9
Hiring and promotion decisions take employees' in-group into account	Hiring and promotion decisions are supposed to be based on skills and rules only	10
Management is management of groups	Management is management of individuals	11
Relationship prevails over task	Task prevails over relationship	12

Table 2.3 Collectivist / Individualist Adapted from Hofstede (1997:67)

It seems probable that half of these differences, the ones which I numbered 2, 4, 5, 7, 8 and 12, are likely to affect considerably the dynamics of what happens in cooperative learning groups. A colleague of mine, another American, facilitator of learning communities in Africa, Reed (2003:4) makes note of collectivism: "In Africa, we say, 'I am because we are'". This community-based philosophy of life we must apply to our educational endeavours and shun the individualistic 'private property' model that we have seen develop in America". Reed and I hear Letseka say (2000:181) "The importance of communality to traditional African life cannot be

overemphasized. This is because community and belonging to a community of people constitute the very fabric of traditional African life". My study must take into account the basic societal organizational factor of *individualism* vs. *collectivism*.

Copley (2000c) defines community as, "group of 3 or more people who, regardless of the diversity…have been able to accept and transcend their differences, enabling them to communicate authentically and effectively and to work together towards common goals". The "community" which Copley describes is not a community in the deep, societal sense of Hofstede, such that the rules or norms for community function should not be expected to apply. Groups can "communicate authentically and effectively" and "work together towards common goals". The use of the term "team" seems to promise more accuracy.

The establishment of "personal, Christian community in the midst of a hostile environment" is identified by Easum (1993:45) as "the primary task of the first-century Christians". He says the biblical term for this personal community was *oikos* which translates in English to "household". In the face of political/social/spiritual hostility like Christians experienced in the first century and others experience in subsequent centuries due to prevailing ideologies of their native culture, "Christian community" probably has all twelve characteristics that Hofstede defines for a collectivistic society. Outside of such contexts there is more freedom of choice so the Christian community may be collectivistic or individualistic with all the levels in between the extremes.

Regarding the establishment of communities of learning, Gravett (2005:23) speaks of the two important functions of "negotiation" first "to establish norms of interaction that may govern how members of the group relate to one another" and "to help learners, by means of reasoning together, to move towards the view of reality shared by those who are viewed as experts...making 'private' learning 'public'". Negotiations in the establishment of a new community of learning, especially one in which there is cultural diversity, might include aspects of collectivistic and individualistic societies so that the ground rules for the group may be the first construction of the group itself.

In relation to several models of adult learners which have been introduced in this study, the nature of the groups which come together for the purposes of learning vary from individual group to individual group. In the Freirean model, which Emge (1988) and Taylor (1993) say that was on the base-level ecclesial communities or "CEBs" of the Brazilian Catholic Church, the educator presents to the learning group one of a number of specifically chosen audio-visual pieces, then the educator…

> asks a series of open-ended questions about these [audio-visual] materials that encourage students to elaborate upon what they see in them. Ultimately, this questioning process leads the students to define the real-life problem being represented, discuss its causes, and propose actions that can be taken to solve it (Freire 1970, 1973; Wallerstein, 1983). Ideally, the solutions evolving from the group's discussion will entail actions in which reading and

writing skills are required, thus giving learners a concrete purpose for the literacy they are developing (Spener 1990:2).

The model stimulates motives for learning, motives which are deeply embedded in the reality, including the esteemed values, of the learners, which are reinforced by the group discussion which seems to act as a "vote of approval" or a taking of "group consensus". The group discussion effectively approves (or disapproves) and authorizes (or not) the action of each learner learning to read and write since such action benefits the common cause. It is easy to see how this fits into a collectivistic notion of identity as "based on the social network in which one belongs" and also the notion of "in-groups" (Hofstede 1997:67) to which being loyal results in continued protection to the individual, and which have a defined hierarchy which play a role "in regulating the behaviours of its members in order to maintain harmony, which may include subordinating personal goals to achieve group goals" (Burgess 2002:33). If the learner is supported by the community to learn it is because the learning behoves the community to which he or she belongs.

Power distance is another sociological term which comes to bear on group dynamics so is pertinent to considerations of cooperative learning groups; it is "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede 1997:262). The factor of *power distance* involved in the group discussions in the Freirean model is discussed by Freire in his book of instructions, so to speak, for facilitators who use his methodology. He comments (Freire 1994:118):

> The dialogue between the teacher and the students does not make them equals, but defines a democratic positioning between them. Teachers are not like the students for *n* number of reasons among which because of the difference between them makes them what are they are. If they were equal, one would become the other. Dialogue has meaning precisely because the subjects in dialogue maintain their own identity, but defend it and, in this way, each grows with the other…Dialogue…does not *level*, does not reduce to the other…nor does it favor one over the other…but implies a fundamental respect of the subjects involved, that authoritarianism shatters or does not allow to be built.

Mezirow (1995:54) in Gravett (2005:30) characterizes the ideal situation for dialogue, in which the participants have "all the necessary information at their disposal to enable informed participation" and "equal opportunity to participate, including the change to challenge, question, refute and reflect, and to hear others do the same". Furthermore the participants are:

- free from coercion and distorting self-deception,
- able to weigh evidence and assess arguments objectively,
- open to alternative points of view and to care about the way others think and feel,
- able to reflect critically on assumptions and their consequences,

- willing to accept an informed, objective and rational consensus as a legitimate test of validity until new perspectives, evidence or arguments are encountered and are subsequently established through discourse as yielding better judgments.

Several aspects cited by Mezirow are definitely within the control of the facilitator of the group learner, even in Mozambique. Most dialogue is not ideal as most environments are less-than-ideal, but facilitators who know the characteristics of such an ideal certainly enhance the probability of success of the learning experience. Freire (1996) has other advice to facilitators which is pertinent to the creation of an environment conducive to learning [The translation is mine; digits between parentheses, like (24-25) indicate page numbers]:

> There are some indispensable truths for teachers...one being that you become convinced, definitively, that teaching is not the transfer of knowledge but is creating of the possibility for its production or its construction (24-25).

> To teach requires...methodical rigor (28), research (32), respect for the knowledge of the learners (33), criticality (34), aesthetics and ethics (36), the embodiment of words by example (38), risk, acceptance of the new and rejection of any form of discrimination (39), critical reflection on practice (42), recognition and assumption of cultural identity (46), consciousness of incompleteness (52), good sense (67), humility, tolerance and fighting for the rights of the educators (74), job and hope (80), conviction that change is possible (85), curiosity (94), trust, professional competence and generosity (102), commitment (108), understanding that education is a form of intervention into the world (110), liberty and authority (117), conscious decision making (122), knowing how to listen (127), recognition that education is ideological (141), availability for dialogue (152) and good intent toward learners (159).

I include this advice by Freire because it reflects the breadth and specificity of the attitudes and beliefs which he considers essential for facilitators to have in order for knowledge to be constructed in the cooperative learning groups. It is not just the coming together in a cultural circle, showing drawings and asking carefully chosen questions which make learning happen. Knowledge construction is dependent on the formation of the facilitator.

The impetus for the creation of CEBs according to Emge (1988:33) was "a shortage of Brazilian clergy and calls from the Vatican for greater spiritual development among the people led to the development of prayer and education groups led by laypersons". This same combination of factors, i.e. the shortage of clergy and desire for greater spiritual development of the laity, was also impetus for many of the other models cited of biblical education, those of Moses, Jesus, Apostles, Luther, Loyola, Wesley and TEE. Freire adapts the CEBs to the ends of literacy and calls the groups "cultural circles".

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Sitting in a circle has come to be orthodox practice of adult learning settings, hence strategic for cooperative learning group. Indeed, the circle facilitates communication, in general, is a non-verbal statement of democratic equality of all in the circle, and signals that group dynamics like openness and honestly are expected in the setting. Brookfield (1998) critically evaluates the practices of sitting in a circle as well as the practice of using discussion. He does not recommend abandonment of the practices, but he points out that regarding as "best" the discussions in which the facilitators rarely speak may allow "the reinforcement of differences; of status existing in the wider society (1998:290)" because learners who are members of minority groups, or who are introverts, or those who need more time to reflect before speaking may not speak if the facilitator does not intervene skillfully to "create a structured opportunity for all group members to say something".

In the experience of TEE trainers (Thornton 1990:27) group members over a period of time will take roles within the group. Thornton names twelve predictable roles like the "initiator", "information seeker", "classifier", gatekeeper", "elaborator", "consensus tester", and, of course, "chairman". By knowing this normal phenomenon, facilitators can give the group more effective leadership. Dass and Gorman (1985) would discourage role-assumption or role-maintenance since it can interfere with the openness of the group to meet simply as people. This seems to agree with the critical position of Brookfield cited above.

In relation to sitting in a circle, Brookfield recognizes that "no practice is more beloved of adult educators…it is a thoroughly moral seating arrangement" (1998:290). However, he explores the existence of "a much more troubling and ambivalent reality"… that the circle can be a "painful and humiliating experience" for students "who are shy, aware of their different skin colour, physical appearance or form of dress, unused to intellectual discourse, intimidated by disciplinary jargon and the culture of academe, or conscious of their lack of education". With this reality exposed, he now explains to students that he is aware of the fact that sitting in a circle is "sometimes experienced as an oppressive mandating of participation". He tells students that they can choose, without consequence of being considered uninterested or hostile, the right not to speak. This poses a counterstance to, as Copley (2000c) calls it, the circle as an "ancient form of gathering in which people connect, communicate, celebrate, hold council and create community".

Hasbrook (2002:1) speaks the concept of "praxis" in reference to the Freirean approach:

> Students and teachers critically think about the conditions of their realities, for the purpose of constructing and attempting solutions, referred to as "action" by Freire. Reflection-action is possible through collaboration, or dialogue-interdependent and concurrent processes to enact praxis. The key in praxis is the ongoing partnership between action, reflection, and dialogue.

Certainly in the Nazarene educational context "students and teachers" are endeavouring to "critically think about the conditions of [our] realities" and such thinking is "for the purpose of constructing and attempting solutions". According to

these specifications Nazarenes around the globe are engaged in "praxis", and will continue to be until the educational systems better fit the multiple realities. "Praxis" is also used with frequency in relation to teaching Bible and/or theology. It is not always used to mean "the partnership of action-reflection-dialogue" in this full sense. Sometimes it seems to be used to mean "theory-into-practice", which does not specify discussion, particularly culturally relevant discussion or reflection as part of the process. Lai (1995:1) has a definition for "praxis cycle" in which he says, "teachers/facilitators use dialogue required to help students/disciples develop the competencies required to become biblically literate, critically conscious, and actively involved Christian citizens". Praxis, in the fuller sense, and/or praxis cycle is seen in several of the models discussed.

Regarding Jesus with his disciples, Maxwell (2001:87) comments, "Jesus' greatest miracle….was the result of countless hours of training and modelling for his twelve disciples…he got those relative failures to replicate his miraculous ministry in such a way that they reached all of Asia within two years". The disciples were successful in praxis. Praxis is also seen in the model of Paul with his disciples, Augustine with his norm of using "Socratic questioning", Wesleyan classes and bands, and the TEE model with the 3-question cycles of "face-to-face sessions" which are discussed below in more detail.

The dynamics of meetings of Wesley "classes" and "bands" also merit attention. The weekly meetings of the bands were characterized by "a high degree of frankness about oneself and the other members of the band...before anyone questioned another, they had to speak of themselves" (Hulley 1987:23). The subject matter of what they were to speak was prescribed by five questions which each participant of the small group (5-8 people) answered, questions which probed their integrity, morality and spiritual condition (Freeborn *et al* 1994). Wesley *classes* were slightly larger than *bands*. Classes had 12-15 people and the format was more instructive and inspirational than confessional. Members of classes carried cards and were expected to participate weekly in the class, which encouraged responsibility. Classes disciplined members according to rules of societies which were published by Wesley.

Another kind of group which Wesley established was his meetings with the class leaders. Accountability for the spiritual state of the members was ever encouraged:

> Whenever Wesley arrived in a town where there was an established society he would summon the leaders to enquire from them about the spiritual state of the class members. The Leader's Meeting therefore became the institution which enabled Wesley to keep his finger on the pulse of the work in every Society in the Methodist connexion [sic]. As such the meeting fulfilled a vital function in the growth of the Methodist movement…The class system also provided the first level of pastoral care for Methodists, seeing to their immediate needs and monitoring their spiritual growth (Hulley 1987:25).

The TEE model has not been static during the thirty years since its inception. Besides the ten weaknesses cited by Kornfield and referred to in the rationale of this thesis,

the model has been contextualized and improved. Features which have persisted are cited by Snook (1992:34) and include:

> the periodic discussion class, students purchase their own textbooks, modification in the styles of independent study materials, different academic levels studying together, block scheduling of seminars, flexible time periods for the completion of studies, and yearly convocations.

Winter (1969:428), one of the founders of the programme in Guatemala, calls these constants, "The Four Foci of Action", i.e. daily study, weekly centre meeting, monthly seminar, and annual graduation programme. The TEE model is generally considered to be a positive solution to much of the negative criticism of contemporary "theological education" in general, which is usually aimed at institutional training in Bible schools and seminaries. Schirrmacher (1999:4), in an annual meeting of German missiologists, says:

> One characteristic emphasized in the Bible, the ability to teach, includes both knowledge and the ability to share it. Theological education tends to disregard other qualities (self control, maturity through testing, exemplary family life), for seminaries fail to provide either counselling or cooperative practical training by instructors in everyday church life.

Noeliste (1993), Schirrmacher (1999) and Pluddemann (2004) seem to concur that biblical leadership qualities are exemplified by the model provided by "Jesus and Paul", which also serves as the base for the TEE model. In the TEE model the learners do not leave their ministry contexts, so have the possibility of the *praxis cycle* ever available. They continue to live in their home contexts, a fact which provides potential for more continual assessment of their maturity, family life and example as their lives are open to their parishioners, peers and moderators. Gatimu *et al* (1997:18) considers the choices which are inherent in the model, i.e. choice of place and time of study, choice of subjects, part of an authentic "democratisation of learning opportunities"…as opposed to "the restrictions of a normal classroom and timetable that is associated with conventional learning".

The written materials of the TEE model are discussed further in the next section but it is pertinent to note that the discussions which take place on a regular, usually weekly, basis in the centre meetings are guided by the facilitators on the content of Bible-based programmed learning books which are "designed precisely for this kind of study," according to Winter (1969:430). Such practice follows the guidelines for excellent discussion, i.e. that each participant have all the necessary information at their disposal to enable informed participation (Mezirow 1995:54 in Gravett 2005:30). One of the text writers explains (Holland 1992:23): "It became clear that practical questions and assignments should be written into the lessons so that students could think about them before the sessions and then enlarge on the applications as they discussed issues together".

The regular meeting in the church or home or under the tree chosen to be the "TEE centre" of a group of learners is a time of cooperative learning which is described by

writers very familiar with the dynamic: Snook (1992:53) says "The weekly discussion seminars buzz with practical contextualizing which comes right out of the experience of the student…The mortar of contextualization is the discussion group; the pestle is the Word of God". Gatimu *et al* (1997:18) claim that in these discussions learners are able to "discuss the challenges of Christian life and relate these to biblical truth and Christian conviction….[and] share experiences they have gone through and how these experiences could be used to strengthen the church both spiritually and numerically". These descriptions give evidence a deliberate platform for the critical reflection and critical thinking that is taking place in these sessions.

Change and/or learning are always volitional. Learners will to change. Gatimu *et al* (199:26) reflect the clearly collectivistic stance in relation to the learning which may or may not take place in a TEE session:

> [The adult learner] may refuse to change his attitudes and behaviour if such a change is not accepted by his peers and cultures. Adult learners are very sensitive to ridicule, and scorn from his peers. He would not accept changes that may make him to be isolated by their peer groups or local community. This is more true [sic] in Africa where we find that every individual is part and parcel of the whole community and his decisions are influenced by community norms and values.

Frequently cited causes for breakdown of TEE programmes in Africa are the following "lack of church acceptance and approval" (Snook 1992:53-57). This problem has the potential of casting the deciding ballot in collectivistic settings. Other shortcoming cited, "lack of finances, lack of programme structure, lack of trained leaders, preconceived ideas about TEE [as an inferior form of Bible education]" are failures related to external, administrative features of the programme, not related to the internal workings nor the spiritual worth of it. They are weaknesses which can be addressed in refining the TEE models.

2.5.2   Cooperative Learning Groups in Mozambique: Contextual Issues

2.5.2.1 Multiple Contexts of Nazarene Adult Learners in Mozambique

I refer earlier to many expressions which relate to the multiplicity of *identity* as *self* or *selves.* Accordingly, in this section, I explore the several subsets of identity to which the learners in my research belong. These include *African*, *Mozambican,* and also member of a particular tribe. Each of these subsets is conditioned by the birthplace of the learner. Then by choice the learners also belong to the subsets *Christian* and *Nazarene*. The learners also belong to subsets of different types of learners including *bilingual* or *multi-lingual* will be discussed in this one. The reason that these particular learners constitute the population being studied is because of the ready access to them I have by virtue of my position as trainer of their trainers as Field Education Coordinator of the Church of the Nazarene in Lusophone Africa and because both professionally and personally, I have vested interest in their learning. Learning strategies which may or may not be effective with them are the variables of the

research project itself. Their contextual identities are some of the invariables in my study.

As adult learners come into learning environments they bring with them their "world" of experience. This "world" is a composite of the varying contexts to which they belong. In this chapter, I examine the subsets named in Figure 4.1 as some of the varying contexts of the learners in my study. Burgess (2002:7) comments that "basing one's understanding of others on their social identity…assumes that people have many different identities, which are activated by situational cues".
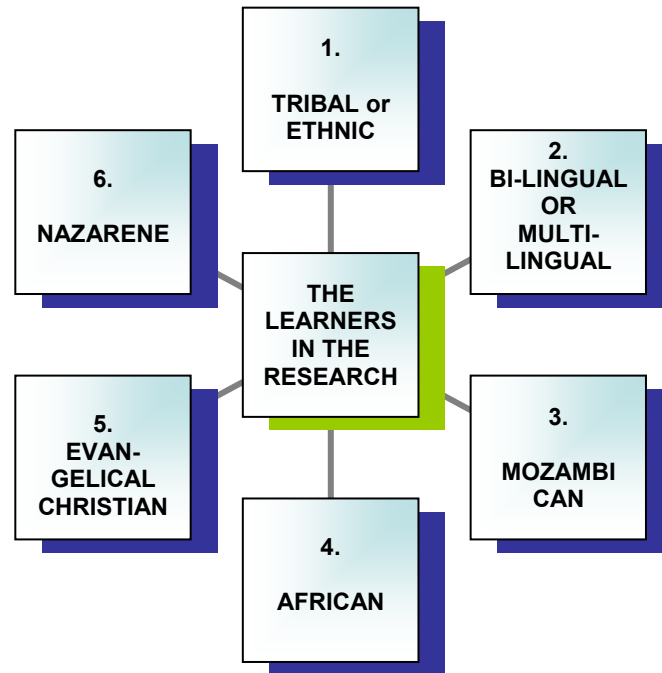

Fig. 2.12 Contextual Subsets of Identity of the Learners in this Research

The contextual subsets of the learners in this research project have connections with the framework of Arboric Research described in Chapter 3. The soil in which the research takes place is composed of the subsets determined by birth, i.e. Tribal/Ethnic, Linguistic, Mozambican and African. *Evangelical Christian* and *Nazarene,* subsets of choice rather than birth, are also structures which have formed in the same soils in which the learners were born. The formation of an Evangelical Christian in Mozambique is different than the formation of an Evangelical Christian in Namibia, Togo or France because the *soil* of the cultures in which the Evangelical Christian grows modifies the worldview, the expressions of faith and the philosophy of education, resulting in differences which learners bring into their learning environments. Nazarenes around the world have in common many values, structures, and even cultures; however, Nazarenes in Mozambique are linked together by a commonality of experience proceeding from their shared contexts that is a yet stronger link than the one between the Nazarenes in Mozambique and those in Swaziland.

Each of these subsets are like root structures of a tree that grow, bend and have form. Roots facilitate the flow of the experiences in learning examined in the lives of the population of study. Learning is the movement, the change occurring within the roots.

2.5.2.2 The Cultural Contexts of Nazarene Adult Learners in Mozambique

The *cultural context* of learners takes into account the ethno-historical, tribal, linguistic, cultural aspects of their settings, which are conditioned by the geographic background of the particular group of learners and also overlap with each other. Mozambique has ten provinces. The provinces of Maputo, Gaza and Inhambane are considered the "South". Sofala, Manica and Tete are "Central". The "North" may mean all four provinces above the Zambezi River but sometimes the province of Zambezia, just north of the river which is crossed by barge, is considered "Central" leaving the "North" to include Nampula, Niassa and Cabo Delgado (Restrick 2000, Fillmore 2000, Walker 2000, A. Banda 2000, Questa 2000, and Perkins 2000).

Relating to the learners in my study, those who were born in Central Mozambique, as a group or ethnos, clearly have different historical, political, tribal, linguistic and cultural aspects of their context than those of Southern Mozambique or Northern Mozambique, etc. Carefully comparing the maps numbered as Figures 2.13 and 2.14 the tribal variances within the province of Tete (northwestern Mozambique), for example, are easily identifiable. These regional variations within each of the ten provinces Mozambique can be identified by cross-map comparison and shows diversity within each province.

Each tribe which settled Mozambique spoke a different language so the list of names of the tribes and the languages is long. Early on in my research I was *very* fortunate to interview a missionary from SIL who gave me hard copies of the most recent linguistic maps of Mozambique and told me that in 1999, SIL International identified thirty-nine languages in Mozambique (W. Gardner personal communication, May 15, 2000). According to SIL (2004) all of the languages are considered "living languages" and are categorized as "narrow Bantu". Electronic copy of one of the maps Gardner which he had helped to compile and he gave me in 2000 is found below as Figure 2.15 in which the distribution of thirty-six languages is represented in an "ethnologue".

Figure 2.14 Provincial Map of Mozambique (Worldmap.org 2004)

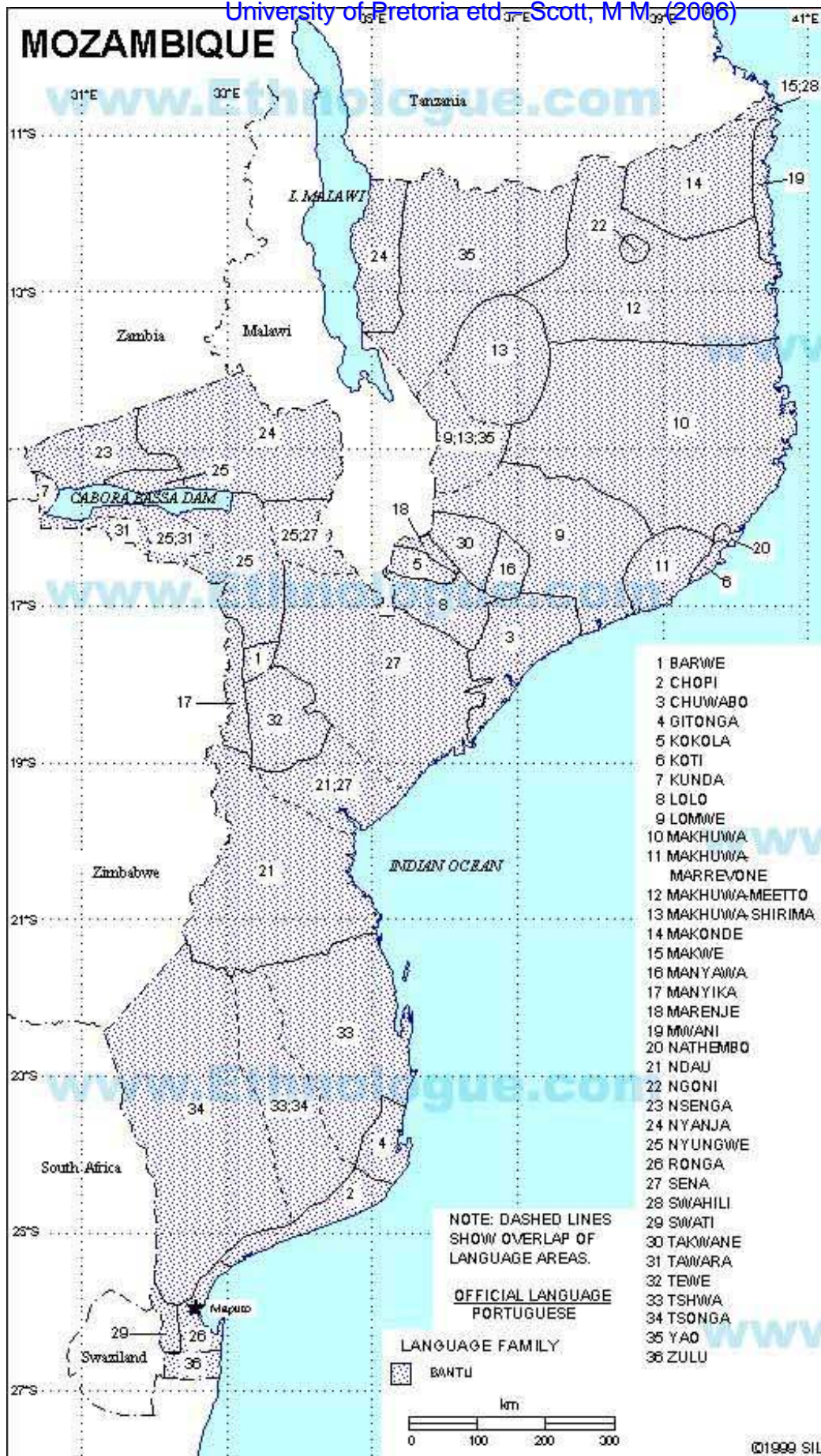**Figure 2.13 Ethnic Map of Mozambique (Perry-Castañeda Library Map Collection 2004)**

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Figure 2.15 Ethno-linguistic map of Mozambique (Gardner 2000, SIL 2004)

Adding to the difficulty of learning about the languages spoken by Nazarene adults in Mozambique is the fact that they all have dialects (SIL 2004). Continuing to use the Tete Province as an example, *Nyanja* is one of the major languages of Tete. Information given about *Nyanja* that SIL (2004) publishes includes many details about it. The dialects of Nyanja include: "Chewa, (Cewa, Chichewa, Cicewa), Ngoni (Cingoni), Nsenga (Cinsenga), Nyanja (Cinyanja)" (SIL 2004).This knowledge helps those of us in the South to understand why learners from Tete will give several answers to the question, "What language do you speak?" They answer with the name of their dialect.

The maps show that the eastern part of Tete shares ethnic and language groups with Malawi, specifically Nyungwe and Chewa, and shares none with the southern Mozambican province of Inhambane (see figure 4.2). In missiological terms the people who share ethnicity and language are called "people groups" (Sterns & Sterns 1991:40) which frequently spill across political boundaries like those between Tete and Malawi. Hiebert (1976:417) borrows Boas' term "cultural area" defining this as a group of tribes within a single geographic area that share a great many culture traits…in contrast to other such groups nearby". Hiebert continues by saying that those who speak dialects of a language "have more in common linguistically…than they have with others who may be nearer to them in space but speak a different language". Mkabela and Luthuli (1997:56) describe language as "a major carrier of culture".

The groups in which the Nazarene adults are learning are organised primarily by space because they must walk to their centres (geography) not by culture, however, aspects of space and culture overlap. Therefore, the learners within a group share many significant identity aspects with others in the group. This contributes to a sense of belonging and enhances the collegiality and trust level of the groups. Connections between language, identity and learning are foundational for everyone.

The learners in my study do not need to know or discuss the influence of their culture on their identity for the influence to exist. From research conducted in South Africa on what is named "new cultures", Burgess (2002:31) says: "People are often very unaware of the influence of culture. This is because it is effortlessly internalised from birth". Hall (1962:viii) links "internalized culture" with "what is thought of as mind*"* and further connects it with "the organization of 'information' as it is channelled (and altered by the senses) to the brain". Acculturation is holistic learning. Vygotsky (1962:39) says the "basic characteristic of words… [is] a generalized reflection of reality". As each [person] gathers perceptions of reality, that is as he or she responds to the world surrounding him or her, as impressions in the brain are being imprinted then reinforced, linguistic expressions are then formulated. With this concept Vygotsky ties words to reality; words as products of the reality perceived, i.e. within culture.

Restak (1988:221-222) quotes Dr. William S.Y. Wang:

> Language is the best window through which we view mental life. But it's probably even more than that. I think how we relate to others, how we see things, how we represent reality within ourselves, to ourselves, are all very

critically influenced by the choices that our language makes available to us. 'Another language, another soul,' as language teachers sometimes like to repeat…

Restrak (1988) goes on to give an insightful example of the interplay between culture and language:

Interviewing native Hopi speakers in the American southwest, Dr. Ekkehart Malotki explained the idea that the reason the Hopis have no perception of time is because they have no vocabulary for it. When one Hopi said that they 'went to pray to the sun with cornmeal,' for instance, Malotki caught a particular phrase and asked, 'Does this mean the time when you do this?' 'Yes,' was the answer. 'Barely sunrise.' As Malotki points out, 'They are living with time in every point of their lives. But not necessarily in the way we perceive time today (222) Malotki…people are not different because of their language; they are different because of their experience in this world and whatever becomes important to them (224).

Of course, *different* must not be construed in any way as *inferior* or *deficient*. Armstrong (1994:160) reminds us that intelligences are multiple, and learners from every culture have and use "all…intelligences….and that educators would be making a great mistake it they began to refer to specific racial or ethnic groups only in terms of one intelligence".

The constructs of Armstrong, Restrak, Wang, Vygotsky, Hall, and Burgess introduced in the last few paragraphs interweave *culture*, *language*, *identity* and *learning* as threads of the same tapestry or fibers of the same root system. However, the object which is in formation is not a tapestry or a root; it is a person, a dynamic selfhood, the self or multiple selves-under-construction, a tri-dimensional learner. What is the impact then of learning in a second or third language? The perception of and expression of reality is altered, so is the reality itself altered? Is one social self the one that speaks the maternal tongue and another social self the one that speaks the colonial tongue? Can those two selves meld? What melds them? My study will not answer these questions, but I have just raised them.

There are political and economic variances within every ethnic group or tribe. Each Nazarene adult learner has been nurtured in a context with all of these aspects as influences on his or her learning. An educator who lived in both the South and the North comments: "The Chewas [in Tete] were a different tribe with customs and language unlike what we had in the south among our Shangaan people [with whom] we had worked…for almost 20 years (Stockwell 1992:44)".

Evidently there was not as much tribal diversity in the sixteenth century in the area which would come to be known as Mozambique in subsequent years to the present. Newitt (1995:32) comments:

When the Portuguese first described east central Africa, they clearly distinguished three African peoples. North of the Zambesi [sic] were the Makua [sic] while to the south there were Karanga and Tonga. The great

Dominican ethnographer, João dos Santos, made it clear that the classification was essentially linguistic.

Portuguese is the official language and the language of instruction. Portuguese is the first language of only 30,000 of 18,880,000 (1.6% of the population) while 27% speak it as second language according to the 1980 census (SIL 2004). This implies that most instruction in Mozambique requires the learners to be bi-lingual at least and that learning take place in a far-from-desirable second or third language. As designated in Chapter 3, the basic language of my research is Portuguese so its use continues to be a limiting factor of the research.

However, both Portuguese and the maternal languages are used in the centres where learning is facilitated in this study. Discussion in the maternal languages takes place freely. In their learning centres, the adults of my study are thus free to interact in the cultural context of their hearts, an extremely significant aspect since the formational programme targets outcomes of moral integrity and characteristics of identity. If Mkabela and Luthuli are right when they say "emphasis on an African language will create a consistent African value system (1997:56)", the use of the maternal languages in the learning centres of our educational system should enhance the construction of the value system of the groups of learners. They may access Biblical passages in Portuguese or their mother tongues, and then discuss the application of the passages to their daily lives in their mother tongues.

2.5.2.3 The Societal Context of Education in Mozambique: History, Politics and Economics

The word "societal" is used in this section to describe the intertwined aspects of the history, politics and economics which come to bear on adult Nazarene learners in Mozambique as other significant elements in the context in which they live and learn.

When the Portuguese captured the Moroccan port of Ceuta in 1415, the country started explorations intending to find a route to the gold which they had found in Ceuta and to establish a spice route to India. They underestimated the size of the continent, but in 1498, Vasco da Gama stopped at Mozambique Island, off the coast of present day Nacala, on his way to India. In 1505, the Portuguese decided to occupy the East African coast. The first permanent Portuguese settlement was on Mozambique Island which became the centre of Portuguese operations (Briggs 1997:8). The Mozambique created in 1891 was not a piece of random map-drawing but an attempt to make sense of the history of the region, grouping within the borders of a single colonial state the major ports between Cabo Delgado and Delagoa Bay…attempting to summarise five hundred years of the experience of the societies that existed within the area".

During the subsequent colonial period, 1891-1975, Briggs (1997:14) notes that only four of the present ten provinces of Mozambique were administered by "direct rule" of the colonial authorities. These were three found in the area south of the Save River − Maputo, Inhambane and Gaza – and the area around Mozambique Island which was called Nampula. The rest of the country fell under "indirect rule" (Briggs 1997:15) since the control was in the hands of *prazeros*, foreign

companies developing trade. So, except for the area near Mozambique Island, Mozambique above the Save River was less influenced by the Portuguese and more by Britain and the Yao from Tanzania.

Whether *Portuguese-colonial* or only *colonial* in Mozambique, this period reaches deep into the 20th century. In 1960 in South Africa "180 black Africans were injured and 69 killed during demonstrations in an incident which became known as the *Sharpeville massacre* (Boddy-Evans 2004). Also in 1960, in Mozambique the "Massacre of Mueda" took place. First says (1983:xxii) "villagers asking for better working conditions are gunned down by Portuguese troops in the northern province of Cabo Delgado". Mueda, in Cabo Delgado, the northernmost province, was one of the areas which had been under the "indirect rule" described above.

In subsequent years, wars took place in Mozambique. The first war is called the "Colonial War" or "War of Liberation" depending on who is writing about it. A Nazarene missionary (Stockwell 1992:46) says,"In the early 1960s a communist party had been formed…with headquarters in Dar es Salaam in Tanzania. FRELIMO (Front for the Liberation of Mozambique). In 1964 the first shots were fired in Mozambique". Ten year passed. On April 25, 1974, a military coup in Portugal overturned the Caetano/Salizar regime. Within two months of the *coup d'tat* the new government in Portugal entered into negotiations with Frelimo. On September 25, 1974 the two sides signed the Lusaka Accord; "Mozambique would be granted independence after a mere nine months of interim government, and power would transfer to Frelimo without even the pretence of a referendum or election" (Briggs 1997:17).

The second period of violent strife is not commonly identified in writing as *civil war*; however, it is frequently called civil war in conversation with Mozambicans. This strife took place between Renamo and Frelimo, political factions which today have become the major parties to provide candidates for election. Briggs (1997:19) says "From 1987 onwards, Renamo warbands roamed through the Mozambican countryside, supporting themselves with random raids on rural villages in what an official of the US State Department described as 'one of the most brutal holocausts against ordinary human beings since World War II". Despite the enmity between the two parties during the war years, the two parties still co-exist in the country. Adherents of both parties are members of the Church of the Nazarene and among the learners in my research population.

A Mozambican friend says that before the war the people lived in family units that were scattered, not in villages as today (Mahalambe 2002). The "villagisation" referred to by Roape (internet comment, para 2) is this societal grouping of extended family units in villages which was encouraged for protection. "Mozambique has been at peace since 1992…[and] Renamo's relative success in the election [to parliamentary seats] came as a surprise to many, considering its history" (Briggs 1997:20). This may be an indication of the determination or even the tradition of the Mozambican people in general to forgive and forget.
All of the learners in our educational system were affected directly or indirectly by these wars. Some were soldiers or refugees or party members or prisoners. All are the worse for the destruction which occurred during those years which resulted in tremendous devastation of infrastructures – human, natural, social,

technological and commercial throughout the country. One case in point is the lack of roads; the only road in the country which connects north to south is a narrow two-lane highway, asphalted now between Pemba, the northernmost provincial capital, and Maputo, the southernmost, except for two sections, a 40-mile stretch still dirt or mud (depending on the season) and the above-Pemba road which leads to the frontier with Tanzania. The mighty Zambezi River bisects the county; the only way to cross the Zambezi on the north-south highway is by barge; a bridge is under construction. Presently the only two-lane bridge across the Zambezi is in the town of Tete, 800 miles from the north-south highway. A one-lane railroad bridge allows cars to cross to the north every 30 minutes, then to the south in the next 30-minute period. Trains do not circulate because the tracks were blown up during the wars and are still not repaired. The lack of infrastructure for transportation has obvious negative impact on the distribution of goods, on communication and on many aspects of development, including tourism.

In post-colonial education in Mozambique under Frelimo Mrs. Samora (Graça) Machel was appointed Education Minister in the new government and "worked tirelessly for 10 years to resuscitate an education system that had never been great, and had ground to a halt during the war years" (Maytham 2002:12). Maythan reports that she brought "the illiteracy rate down from 93% to 72% and taking school enrolment from 400,000 to 1.5 million". In this period, "primary school attendance doubled and enrolment at secondary schools increased sevenfold and [Frelimo]…sought to undermine the problem [sic] of ethnicity by spreading the use of Portuguese as a common language" (Briggs 1997:18).

More recent observations about public education in Mozambique are not as positive. From a recent study, conducted by Mario, Fry, Levey, and Chilundo (2003:17):

> All forms of education are a scarce resource in Mozambique, with a drastic funnelling at each successive higher stage in the educational system. The 1998 United Nations Development Programme (UNDP) Human Development Report estimated the adult literacy rate in Mozambique at 40.1 per cent, with the rate among females (23.3 per cent) less than half the male rate of 57.7 per cent. According to the 1997 census the overall gross enrolment rate [which] was 66.8 per cent in primary education, falls to 0.3 per cent in higher education, with the female rates being considerable lower than male rates.

	Total	Men	Women
Primary education	66.8	75.7	57.7
Secondary education	6.9	8.2	5.6
Technical education	0.8	1.1	0.5
Higher education	0.3	0.5	0.2

Table 2.4 Gross Enrolment Rates in Mozambique, 1997 (%) Mario, Fry, Levey, and Chilundo (2003:17)

UNESCO Institute for Statistics reports a slightly higher percentage of literacy in 2002 63.3% literacy among males and 31.4% literacy among females with an

average across the whole sampling of 46.5% literate. In respect to sexuality, Briggs says that Frelimo emphasized sexual equality and says "that 28% of the people elected to popular assemblies in 1977 were women – a higher figure than almost anywhere else in the world". However, in 2003 Graça Machel is quoted to say that "One of the biggest barriers African women face is the lack of educational opportunities. Education is key to being able to make choices about what one wants to do in life. I don't believe we can get equality without making sure that every woman can get an education" Maytham (2002:12).

The Mozambique government seems to be persistent in looking out for females. In several public documents (Republic of Mozambique 1998, 2000, 2001a and 2001b) goals set for learners consistently reflect higher goals for females in order to balance the still current reality of fewer females than males in all levels of schooling. The 2001b (10) document says "the participation of women and girls is very important for the development of this country…it will be necessary to identify models and methodologies of literacy and post-literacy courses of short duration, principally at the community level and attractive to women and girls".

Of course equal opportunity for women to be learners in the Nazarene centres is also an issue to continually encourage. Within the materials developed during our research persistent inclusion of both genders is deliberately used in references to the Portuguese terms for learners and pastors, the references are made to *alunos* (males) and *alunas* (females)*, pastores* (males) and *pastoras* (female pastors) (Scott 2002a, Scott 2002b, Scott 2004a) and a few of the most active trainers in the country are women (Scott 2004b). The pastor of the largest Church of the Nazarene in Africa is a woman, Rev. Bessie Tsambe, as is the pastor of flourishing Maputo City church, so female role models are present as pastors and educators.

Returning to the incidents of the late 1890's to early 1900's and to the area of Mozambique below the River Save, i.e. the *South*, a growing commercial relationship between southern Mozambique and the mines of South Africa, particularly Witwatersrand, significantly influenced the nation. This relationship was a key to the founding of the Church of the Nazarene in Mozambique and still affects the Church of the Nazarene today. This will be described in further detail, but in her book, which First (1983:1) tellingly entitled *Black Gold, The Mozambican Miner, Proletarian and Peasant,* she describes the importance of the connection between the mines and Mozambique:

> There was a time, during their critical formative years, when the Witwatersrand mines could not have been worked without Mozambican miners. Immediately before the Boer War, 60 per cent of black miners came from Mozambique. In 1906 the proportion had risen to 65.4 per cent. After Union in 1920, when the SA state was perfecting its coercive machinery for labour supply from within South Africa's internal labour reserves, the total of Mozambican Workers dropped, but they regularly made up more than a quarter of the total number of workers in the goldmines and collieries affiliated to the chamber of Mines.

The importance of the Mozambicans to the mines as well as the converse significance of the mines to the Mozambicans and to Mozambique itself is underscored by First (1983:2):

> There is no family in the southern part of Mozambique — which was the principal recruiting zone — that has not sent a father and most likely a son to the mines...Although mine labour recruitment was limited by law to the three southern provinces of Maputo, Gaza and Inhambane, the effects of the export of labour have affected the political, financial and economic relations of the whole country.

The entry of Protestant missions into southern Mozambique was "one of the by-produces of mine labour" (Newitt 1995:36). Churches active in the mining areas often had contact with Mozambican migrants and became interested in establishing stations in the home regions of their converts. DeLong and Taylor state (1955:204) "A conservative estimate places the average number of men living in mining compounds hundreds of miles from home at one hundred thousand….When these Christians returned to their homes in Portuguese East Africa, they had a consuming desire to share their spiritual discovery with their own people". These historical statements are apt entrance to the ecclesiastical history of the next section of study.

2.5.2.4 Nazarene Historical Context of Nazarene Adult Learners in Mozambique

The Church of the Nazarene is an international Christian denomination which was founded by the fusion of several groups from different parts of the United States each bringing with it functioning educational institutions and missionaries establishing national churches in several parts of the world. To this union, the founding groups brought with them work already being done in several global contexts including Africa which was entered previous to this 1908 date of Stateside union. A Cape Verdian, João Diaz, was already establishing the Church of the Nazarene in his native arquipelago, the Cape Verde Islands (Scott 2001a:5) from 1904 onward, hence, the Nazarene work in Africa is over 100 years old.

In Southern Africa, the church started in Swaziland through the work of a couple named Schmelzenbach. The first mission station was named "Peniel" at Endingeni.

From Peniel Mission Station, the Church of the Nazarene in Swaziland proceeded to establish health posts, schools, Raleigh Fitkin Memorial Hospital in Manzini, a nurses' training school, a teachers' training school, and a Bible school. The Bible School was started at Endingeni "about 1921, through the special endeavours of Miss Eva Rixse and Miss Ora Lovelace….outgrew its quarters and in 1933 was transferred to Stegi [sic]. Here the school proper was named the Swaziland Bible School" (DeLong & Taylor 1955:216). In 2006 the school is still located in Siteki and is seeking university status as Nazarene College of Theology (Scott 2004).

Previous allusion was made to the fact that the first Nazarene work among the Shangaan-speaking people of southern Mozambique started in South Africa in

mines on the Witwatersrand in 1922. Rev. and Mrs. I. O. Lehman were independent missionaries doing evangelism in Witwatsrand in the Transvaal and in Portuguese East Africa at Manjacaze. They decided that a denomination would be able to stabilize and continue the work so they put both missionaries under the jurisdiction of the Church of the Nazarene (DeLong & Taylor 1955:203).

Similarly to Nazarene work in other places of the world, in both starting points of Mozambique, Gaza and Tete, missionaries started medical ministry, schools *and* pastoral training programmes. "In 1928, Miss Rixse went to open the Nazarene Bible School in Gazaland (Tavane Station) (DeLong & Taylor 1955:188) which describes the inception of the Bible School in the South. The woman subsequently in charge of developing the Bible School, Schultz (1982:32) affirms that Miss Rixse was in charge of the "Gaza Bible School" in which "twelve young men were enrolled," but Stockwell (Restrick 2004) says that previous to 1954, the "Bible School" was more "one-on-one tutelage than a proper school".

In 1952 the International Holiness Mission in Great Britain joined the Church of the Nazarene, and with the amalgamation came about 30 of their missionaries and mission stations, including one station in Tete, Mozambique. For administrative and ministry purposes, Nazarenes in Mozambique were divided in two districts in southern Mozambique, and the joining of the IHM necessitated the forming of a third district. About a thousand miles to the northwest of Maputo, the Tete District was formed (DeLong & Taylor 1955:210-13).

In March, 1954 the leadership of the Bible training programme led by Miss Rixse in Tavane passed to Miss Lorraine Schultz (Schultz 1982, 1997, Restrick 2001). Schultz (1982:5) says the school was "reopened on a full-time basis". From her autobiography, Schultz (1997:49, 50) gives an inside picture of how Tavane Bible School functioned in 1954:

> Recommended by pastors and church boards, 21 students came from churches throughout the three Gaza districts. Some were new converts. But if we were to have workers for tomorrow, it would be necessary for us to train them all. Along with a language barrier that proved horrendous, there were extreme differences in levels of education. While a fourth grade education was considered good then, only a few could understand Portuguese. Some had learned to read and write – barely – in night school near the gold mines. The rest fell somewhere in between.

> Textbooks were unavailable. We had only the Bible, two small booklets in the Shangaan language, and a few mimeographed notes with which to teach. Since I spoke only a little Shangaan at that time, how we got through that first year remains a mystery. For sure, during those first months the teacher learned more than her pupils!

> We added a third-year course in 1956 and a fourth year for theology students in 1957.

Schultz (1997:50-51) comments on the purposes of the training: "As we trained workers, we did our best to equip them with a sound knowledge of Scripture and

help them find spiritual depth in their individual lives". From interviews with Stockwell, a colleague of Schultz in Tavane, Restrick (2001:114) notes that in 1954, "construction commenced on the first official Bible school building. Instruction was given in Portuguese with a large portion of instructional materials being supplied by Nazarenes in the Cape Verde Islands".

Besides cooperation with Nazarenes in Cape Verde, there was also educational and personnel interchange between the two Nazarene Bible training schools in Mozambique, i.e. in Tavane and in Tete. Selected students and a few teachers travelled the 1,000-mile distance that separated the two ecclesiastic districts (Stockwell 1992:55). Because these Tete pastors came to Gaza needed to learn the Southern language, Shangaan, to study in Gaza, many of the established leaders in the church today were trained in Tavane and speak Shangaan, even if their mother tongue is Chewa. The facilities of both Tavane, Manjacaze and Furancungo, Tete were occupied by soldiers during war years. .

An idea began to form in the mind of some of the Nazarene leaders. Schultz dates this idea to 1973. The following lengthy quote from her (1982:96-97), as well as the quote she embeds from Frank Howie, is extremely significant in terms of the TEE model already discussed as well as the system of education by extension functioning in Mozambique today:

> A new book had come into my hands entitled: *Theological Education by Extension (TEE),* by Ralph D. Winter [1969.] It told of the programme of TEE being launched on many mission fields. I was impressed. It would not substitute for the existing Bible Training School at Tavane, but it would reach out to many who could further theological training in their own area. Rev. Frank Howie…felt the burden. Here is a part of his report to the Annual Moçambique Council in 1974:

>> *It was July, 1973….we were called upon to give substance to the dream. It was one thing to talk about an Extension Bible School, to get excited about a new form of theological training; but would it work here in Mozambique?...A network of local study centres, staffed by travelling tutors. A Bible school that takes the training to the student. That trains him where he is. An Extension Bible School…That was the dream. We need not have worried. God had already done most of the groundwork. About six weeks after coming to Maputo, we started our first classes with two part-time African teachers and about 70 students in the city, as well as almost 30 students in the Limpopo area….and now…a total of 106 students registered for this first full year of extension studies. We operated six study centres.*

> That report was a thrill. The TEE programme had been launched with great success, and graduates from the Bible Training School at Tavane, where I had laboured for 22 years, were part-time instructors for this new programme.

Soon after this successful report was given by Howie, the independence of Mozambique and the nationalization of church properties closed the door on the Bible School in Tavane as well as this fledgling programme of pastoral training by extension in Maputo. This action was conferred by announcement on July 25, 1975 made by President Samora Machel. Along with all other schools, dispensaries, doctors, lawyers, funeral directors and transpiration, the Bible School was nationalized and confiscated by government officials (Restrick 2001:188, Howie 1993:63, Mandlate 2005). The office and book deposit in Tavane was granaded and stocks of materials were destroyed (Machava 2004). Facilities at both Tavane and Furanguno were badly damaged but are still standing today.

During the years when foreign missionaries could not visit Mozambique, Howie worked with Mozambicans in the mines of RSA. By 1981, natural disasters opened the door of Mozambique to visitors so Howie drove into Maputo to meet with church leaders (Mandlate 2005). The residential Bible school was closed so they worked on the idea of "a Bible school without buildings of its own, a school without walls" (Howie 1993:72). He reports (1993:74) that "the new…programme opened on February 2, 1982, S Mandlate as director, V Mbanze as a full-time teacher, and four part-time teachers. There were over 100 students enrolled". Mandlate (2005) relates that the system of six teachers working at six different local churches worked for a few years but by 1986 it behoved both students and teachers to concentrate their resources at the church that he (Mandlate) was pastoring, Maputo Central Church of the Nazarene. This Bible school without walls was functioning now in one centre.

In 1988 the World Mission Division [of the Church of the Nazarene] approved the establishment of a residential campus for the Bible College in Maputo but did not have funding in hand for the development of the institution (Howie 1993:58.) The city donated land, and the cornerstone on the property was laid in 1991 (Mandlate 2005). In a book called *The Mozambique Story,* Howie (1993:86) closes with a challenging statement: "The college is the key to the future of the Church of the Nazarene in Mozambique". Moved by the truth of this statement in during his first visit to Mozambique, a Nazarene pastor from Kirkland, Washington, undertook the challenge to find donors and volunteer workmen to build the first 10 buildings on the Maputo campus. Eight years and 22 volunteer teams later, the American pastor, Rev. Randall Craker (Craker 2000) officially ended the campaign called with the inauguration of the tenth building. The Bible School functioning in Maputo today is housed in these buildings with a capacity for 170 residential students is called "Seminário Nazareno em Moçambique".

After the 1986 consolidation of the six centres into one centre in Maputo Central, there were several attempts to get another network of extension centres started in Mozambique (Mandlate 2005, Restrick 2005); the need to extend pastoral training to residents other than those in Maputo was very real. In May of 2000, the Church of the Nazarene transferred educationists, Margaret and Jon Scott, from Romania to Mozambique to work alongside the Mozambican leadership to develop an extension system that would work. This PAR project is conducted through the years of the development of the projected system.

2.5.2.5 The Global Educational Context of Nazarene Adult Learners in Mozambique

The Church of the Nazarene is an international evangelical denomination which values education. The modifier "evangelical" highlights the intention to proclaim the *evangel,* i.e. the gospel or good news. There are Nazarenes in over 150 world areas, publishing holiness literature in 97 languages update: (Stone 2006). From its inception, the Church has promoted holy living, Christian-mission-to-the-lost and education-for-all. When four holiness groups came together in 1908 to found the Church of the Nazarene, each of them already had an established publishing house, missionaries in several countries and an educational institution. These groups were uniting for purposes of living and teaching scriptural holiness. Ingersol (1998:1) reiterates the importance of two populations of learners from the outset: "any generalizations about the purpose of early Nazarene colleges must be broad enough to take into account different intentions – training *Christian workers* and educating a *Christian laity*".

Nazarenes established liberal arts colleges in Kenya and Korea and graduate seminaries in England, Philippines, Costa Rica, Equator as well as the United States (Lambert, Truesdale & Vail 2000:3). By February, 2006, in the fifty-seven Nazarene educational institutions around the world in forty different countries, 49,597 learners were reported (Stone 2006).

The 1980s were the years for Nazarenes to listen and then take action on ministerial education. Like other communities of faith which have been explored in this chapter, the numerical growth across the world, especially in more remote and less developed regions of the globe such as Mozambique (Walker 2000, RIIE 2000) meant that there were not enough pastors and other leaders trained to lead the new Christians. The other problems was qualitative in regarding the way that ministerial training was taking place, especially in the United States. Although holy living was always the goal of the preparation, many moral failures were taking place. Gaps existed between head knowledge and ministerial skills (Vail 2000, Esselstyn 2003). The problems pointed to the need for systemic change. Esselstyn (2003) relates that the leaders of the denomination paid attention to these voices, and in 1985 the General Assembly appointed an "Education Commission" to study the situation of Ministerial Preparation and to make recommendations to the General Assembly of 1989.

When the General Assembly of the Church of the Nazarene met in 1989, the Education Commission (Wetmore 1989) made several recommendations which resulted in the **creation of the International Board of Education** with a careful description of the purposes and responsibilities of the board and its officer who would be called the "Commissioner of Education", and i**ncreased access within Nazarene membership to education of both ministerial and lay leadership**. "No nationality, ethnic minority, nor social class should be excluded or given unfair advantage" (1989:17-18). The 150-page document also states that

> Nazarenes may expect their educational institutions….to be 'holy fellowships' of learners and teachers, administrators, and staff persons. The entire educational enterprise would express and develop the reality of

the presence of the Kingdom of God, especially as it relates to loving God and neighbor with all of the mind in community….and to be engaged, above all, in the formation of Christian character in every member of the learning community.

Also in 1989, the first Nazarene Commissioner of Education was elected and the Office of the [Nazarene] Ministry in a joint effort with Church Growth and approved by the Board of General Superintendents, sponsored the first in a series of very significant meetings called the *Consultation on Ministerial Preparation*. These consultations were held yearly until 1997 in Breckenridge, Colorado, and are frequently referred to as the *Breckenridge Meetings* (Vail 2001). Esselstyn (2003) observes, "It became evident that the impact of the consultations was going to be worldwide so the Office of the Ministry called on World Mission to select representation to join in the discussions, so missionaries, professors, pastors and laymen began to attend from other world areas".

Besides the 1985-89 Education Commission, those involved in the consultations at Breckenridge, and on-going action of the Commissioner of Education and International Board of Education, other action was taken by the Association of Nazarene Sociologists and Researchers (ANSR). According to Crow (1991) in the spring of 1991, the ANSR conducted a formal survey of 600 people – 57% pastors and 42% lay members – to identify the qualities and abilities which are considered "essential" to the Nazarene minister. Among the group surveyed of 600 Nazarenes there was one quality chosen to be the most important by both the group of pastors and the group of lay members. Crow (1991) reports that "'Loyalty to Christ' was perceived by both laity and clergy as the most essential element for Nazarene pastors".

In 1995, fifteen educators from Nazarene institutions of higher learning in several parts of the world formulated and published a position paper to articulate the Nazarene stand in the concerns which were under discussion in broader forum at the *Consultation on Institutional Development for Theological Education in the Two Thirds World* which they were all attending. Among the statements of this declaration are the following: (Lambert 1995):

All educational entities must be committed to equipping all the people of God for ministry to the whole Church in its mission to the world.

The institutions of the International Board of Education will be more effective as they are integrated more fully into a global network of inter-related institutions with the goal of moving beyond network to an integrated system of education.

Our mission requires multi-level education, from certificate to doctoral programmes delivered in multiple settings and delivery systems including various forms of distance education along with campus-based programmes.

At least in part, the assumption of this position by top Nazarene educationalists makes it possible for populations of learners like those in Mozambique to

(certificate-level) to prepare for professional ministry and be granted credentials for ministry from the international level of their church when they complete their preparation.

Across the globe, Nazarenes continued to hammer out guidelines and statute changes which would formulate positive systemic response to the deficiencies which were being identified. Then in the international assembly in 1997, the Church of the Nazarene voted to substitute the section of the international Manual of the Church of the Nazarene which deals with "Education for Ministers". A cursory comparison of this section in the 1993 *Manual* to the same section in the 1997 version of the *Manual* shows the magnitude of this change which permits and encourages curricular contextualization within stated guidelines.

> Cultural differences and a variety of resources will require differing details in curriculum structures, however, all programmes for providing educational foundations for the ordained ministry that seek approval by Pastoral Ministries should give careful attention to content, competency, character, and context. All courses involve all four elements in varying degrees (Bowling 1997:180).

Consequent to these changes, hundreds of Nazarene educational providers in the world are redesigning the curricula of their pastoral training programmes to align with the generalized learning outcomes prescribed in the 1997 Manual (Bowling 1997:180-181, ARCOSAC 2003:32-33):

> **1.   CONTENT –** Knowledge of the content of the Old and New Testaments, the theology of the Christian faith, and the history and mission of the Church is essential for ministry. Knowledge of how to interpret Scripture, the doctrine of holiness and our Wesleyan distinctives, and the history and polity of the Church of the Nazarene must be included in these courses.

> **2.   COMPETENCY –** Skills in oral and written communication; management and leadership; finance; and analytical thinking are also essential for ministry. In addition to general education in these areas, courses providing skills in preaching, pastoral care and counselling, worship, effective evangelism, Christian education and Church administration must be included. Graduation from the course of study requires the partnering of the educational provider and a local church to direct learners in ministerial practices and competency development.

> **3.   CHARACTER –** Personal growth in character, ethics, spirituality, and personal and family relationship is vital for the ministry. Courses addressing the areas of Christian ethics, spiritual formation, human development, the person of the minister, and marriage and family dynamics must be included.

> **4.   CONTEXT –** The minister must understand both the historical and contemporary context and interpret the worldview and social environment of the culture where the Church witnesses. Courses that address the concerns of anthropology and sociology, cross-cultural communication, missions and social studies must be included.

The four paragraphs constitute an institutionalized move to improve the breadth of ministerial training programmes by deliberate addition of three kinds of outcomes which are other-than-content, i.e. capacity, character and context. They are organised by four broad areas which begin with the letter "C" so they are commonly called the "4 C's" by Nazarene educators. Esselstyn (2003) comments: "Obviously the naming of the four categories could have been done in words other than those beginning with a C but some Nazarenes do like alliteration and thought that that would make it easier for all to remember".

The wording of the paragraphs provides guidelines towards re-writing curricula as balanced experiences in the formation of diverse populations of learners. The wording does not demonstrate grammatical consistency or precise educational terminology. The intent of the writing committee was to formulate very broad strokes for each world area to specify. The spirit of the holistic reform is furthered by the explanatory paragraph from the *International Sourcebook for Ministerial Development* and the *Africa Region Sourcebook for Ministerial Development* (ARCOSAC 2003:27)*:*

> The concept of curriculum goes beyond what is thought of as an academic programme or course content. The character of the instructor, the relationship of the students and instructor, the environment, and students' past experiences join with the course content to create a full curriculum. Nevertheless, a curriculum for ministerial preparation will include a minimal set of courses that provide educational foundations for the ministry.

The *4 Cs*, thus, become one of the invariables of my research; in terms of Arboric research they are some of the roots already formed which have an outer, already partially hardened exterior through which the learning experiences of my population of learners may flow freely.

Other roots like this in the Nazarene system are called the *Know-Be-Do*'s. Vail illustrates the "*Be*, *Know*, *Do's*" with the following diagram:
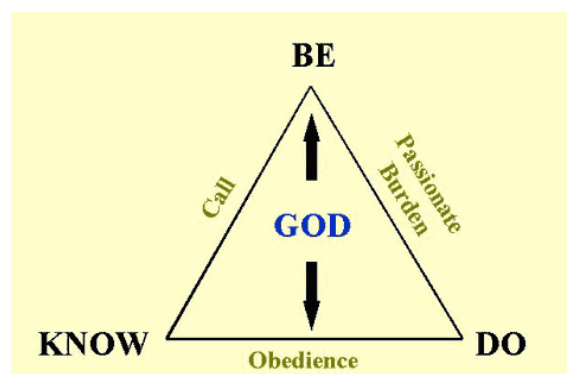

Figure 2.16 The Know-Be-Do Triangle (Vail 2001)

Vail (2001) explains further:

> While the triangle is shown as an equilateral triangle, growth of the minister may result in different sides growing at different rates or one characteristic

being emphasized at different points in the minister's career. God is the focus of the minister's life and He directs growth that occurs over the minister's lifetime of service.

Vail is saying that that, during the years of a minister's life, the aspects of *knowing, being and doing,* as well as those of *call, burden and obedience* do not develop at equal rates. When *obedience* out-develops *call and burden,* the resultant graphic would be Figure 2.17a. When *call* leads in development, then Figure 2.17b illustrates the life. When *passionate burden* out distances the other aspects, then Figure 2.17c would illustrate.
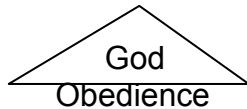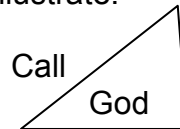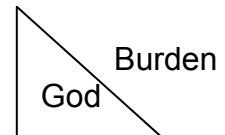

| **Figure 2.17a** | **Figure 2.17b** | **Figure 2.17c** |

The International Church of the Nazarene further describes the ideal Nazarene pastor by identifying what he/she would *Know*, would *Be* and would *Do*. The following two paragraphs became part of the *International Sourcebook for Ministerial Development* and the *Africa Region Sourcebook for Ministerial Development* (ARCOSAC 2003:34-36)*:*

> The goal which we are pursuing for the development of the candidate into a minister of the gospel of Jesus Christ is never fully reached. It is a goal toward which we grow. Continuing education does help us make progress, but the most vital aspect lies in the growth and development of our continuing fellowship with the Lord. The 'goal can be expressed in what we expect a minister to **be**, to **know** and to **do**.

In group settings in which this subject is introduced, everyone present has ideas about what an "ideal" church leader is like, so asking them to answer questions like the following and writing them for all to see, shows that expectations for a minister are generally quite high:

- What does an ideal church leader know?
- What does an ideal church leader know how to do?
- What are some of the character traits of an ideal church leader, i.e. what is he or she like?

Figure 2.18 Composite of the "Ideal" Church Leader

The official answers of the Church of the Nazarene to these questions contribute to the statements which describe the outcomes for programmes of study which prepare ministers for service in the denomination. The official list, published in the *Manual of the Church of the Nazarene* follows:

- **BEING**

A loving servant: Humble. Vulnerable. Expressing love for God (piety) by prayerfulness, availability to the Holy Spirit, being called, being obedient, experiencing the church's confirmation of the call. Expressing love for people through compassion and sensitivity.

Transformed by the power of Christ administered by the Holy Spirit into a person fully given to God.

Honourable: A person of integrity, morally unimpaired, trustworthy, honest, genuine, transparent, loyal, reliable and non-manipulative.

Wise: Expressed through ability to discern the will of God, common sense and objectivity.

Self disciplined: Expressed in maturity, self awareness, self control, a sense of the appropriate, perseverance, patience, courage, boldness, being a self starter, rightly ordering priorities, commitment, and passion for the truth.

KNOWING

The Truth: As expressed in scripture, life and the church.

Liberal Arts: As expressed in human behaviour, sociology, psychology, anthropology, communication and persuasion.

History and Tradition: Contextualization, awareness of the contemporary world, aware of diversity of peoples and societies.

Methods of Research: Exegesis of congregations and communities.

Classic Theological Disciplines: Spirituality, theology, ecclesiology, worship, music, Bible, gospel, ethics, church history, mission, Christian education.

Relational Disciplines: Leadership, management, authority, power, conflict management, knowledge of human brokenness.

DOING

Personal skills: Critical thinking, ministerial thinking, modelling servanthood, love,   reconciliation, faithful behaviour, ability to change, grow and adapt, risk taking.

Pastoral care: Develop solid personal relationships, counsel, guide, heal.

Teaching: Mentoring, directing and imagining a better future, interpreting faith.

Evangelizing: Discipling, nurturing.

Preaching: Exegetically, narrative style, Biblically.

Communicate: Interpersonal communications, public and private communication, listening actively, vision casting.

Leadership: Ability to administrate and handle polity, provide vision, articulate goals, lead worship, assess, plan, evaluate, facilitate organizational development, lead in team building, lead in educational ministry, promote mission, do mission.

Again, the wording of the *Know-Be-Do* paragraphs may be imprecise as educational terminology but they are invariable features of the system in which the learners of my research population have freedom to learn.

In 2001, the twenty-fifth General Assembly of the Church of the Nazarene added the mechanism for contextualization to take place by requiring that all programmes of study which intend to prepare Nazarene ministers to qualify for international recognition (ordination) be validated by "Regional Course of Study Advisory Committees" (Fairbanks 2001:182). The addition of this structure effectively decentralized the locus of assessment of relevancy of the programmes, moving it much closer to the context of each population of learners.

The Church of the Nazarene further empowered educators around the world to return these concerns to the level of the local church where the concerns had first surfaced in order to contextualize the programme outcomes to fit the diverse constituencies of the learner across the international denomination (Esselstyne 1999, Walker 2000). This is accomplished by instituting curricular review committees and writing manuals, called *Sourcebooks on Development Standards for Ordination,* to guide educational providers in the re-writing of their courses of study (ARCOSAC 2003:5). The curricular specifics of the ministerial training programmes are formulated by committees of educators and church leaders, all of whom are stakeholders and partners in the educational endeavours. These programmes are then thoroughly reviewed by the Africa-wide Nazarene curriculum committee (ARCOSAC).[13] ARCOSAC works with the national curriculum committees recommending adjustments until the programme can be verified as aligning with the values and directives set forth by the International Course of Study Advisory Committee (ICOSAC).

What cannot be captured in paragraphs, figures or statistics is the importance of *inclusion* in pastoral training which has been extended to thousands of learners around the globe who are now being equipped for Christian ministry. Among those learners included are almost all of those who are learners in the population of my study in Mozambique.

2.5.2.6 Learners as Developing Leaders in Their Current Contexts

The curricular plan for the ministerial course of study in Mozambique which was formulated and tested by the first PAR team in the year 2000 was approved by ICOSAC in February, 2001, is both historic and extremely pertinent to the population of Nazarene adult learners of this study. The curricular plan was the first programme of study in the Nazarene world which projected the preparation of ministers with such a low entry-level, or perceived-to-be low entry-level, of academic standing; it became historic when the international committee approved it unanimously (Woodruff 2001). This approval was distinct evidence that the global Church of the Nazarene intends to act on its intentions to empower at various levels. It is extremely pertinent to my population because they are direct beneficiaries of the paradigm shift and the curricular reform. Before the changes were instituted by changing of the International Manual of the Church of the Nazarene in 1997 and 2001, these learners could not qualify for ordination. Now their programme of study is approved at the highest levels of their church.

The challenge of identifying literature to implement the approved curriculum requires an understanding of the dearth of books in general, evangelical in particular. Choices of Christian literature in Mozambique are **excruciatingly few**. At the outset of this PAR research in the city of Maputo, with a population of approximately 3,000,000, there was one well-stocked Catholic bookstore carrying titles from Brazil, Portugal and some from an emerging Mozambican Catholic perspective and a tiny evangelical bookshop (Methodist) in which buyers may choose from **seven to ten titles!** (Scott 2001b:9) In 2003, an evangelical mission opened another tiny bookshop which imports books from Brazil, offering about 2,000 titles (Bila 2005).

Nazarene Publications in Kansas City, Cape Verde and Brazil have long produced Nazarene classics in tiny numbers for secondary-level and degree-level ministerial preparation. The pastoral training institutions in Maputo and Cape Verde use these titles in coursework and have them in their libraries (Scott 2001b:9).

Although "having a Bible" would appear to be as easy as dropping by a local bookstore to pick one up, or asking for one from the para-church support groups like Gideons, in all the countries of Portuguese Africa, it is not this simple. While Portuguese is the language which unites the country, it is the second, third or fourth language of the majority of the population. S.I.L. Bible translators report that the whole Bible only exists in 5 of the 39 languages of Mozambique, the New Testament in 10 of them (Scott 2001b:10)

The fast growth of the denomination since the end of the war years (Scott 2001a:6) is the principle reason for being of the population of Nazarene adult learners in Mozambique. In 1989 the Church of the Nazarene had approximately 12,000 members. In 2000, it had about 56,000! The goal for 2010 is to have 1,200 new churches (Walker 2000). Hundreds of men and women are serving churches as pastors with little or no pastoral training because the development of educational structures has not yet caught up with the rapid and extensive expansion of the church since national peace was assured in 1992.

Walker (K. Walker, personal communication October 20, 2000) relates that a key to the recent expansion of the church was the deployment of a Mozambican pastor, Rev. Jonas Mulate, from the South to the Northeast. In 1989 the largest ethnic group in Africa still without a viable Christian church, i.e. "unreached" in missiological terms, was the "Makhua" who live in the Northeast. According to S.I.L. (2004), Makhua is the maternal language spoken by the greatest number of Mozambicans. In only four years, from 1989 to 1993, Rev. Mulate established Nazarene churches throughout these Makhua-speaking Northern provinces through effective evangelistic preaching, then followed preaching by the selection and appointment of lay pastors to lead preaching points. He networked his travel along the family lines of the converts. Gifted as a church-planter not as an educator, he sent a few leaders South to study theology, but most of his church leaders stayed in place as lay pastors and now constitute part of the population of learners involved in this study (Scott 2001a:4-5). Rev. Mulate was transferred to Central Mozambique. Implementing the same techniques of church planting that he used in the North, Rev. Mulate continued to plant the Church of the Nazarene, this time in the provinces of Sofala and Manica, then Inhambane. He, as well as

the church planters (who are also lay pastors) who followed his model, certainly account for a large part of the explosive growth of the church in Mozambique (Scott 2001a:6).

So, who are the developing leaders who are adult learners in Mozambique? Accurate demographics of the population is a tangential result of this study but the careful study of their contexts provide several descriptors. They are men and women who grew up in towns and villages stressed by and sometimes damaged or devastated by civil strife and political instability. Their geographical surroundings include speakers of some of the other 39 languages from other Mozambican tribes with consequent cross-cultural challenges. The learning environment was probably voiced in their second or third language. Although their secular communities encourage adults and women to study, their access to schools was and still is limited by the existence of few schools. The population is probably mostly made up of "adults" according to Brookfield (2004:1) who defines "adult" according to their experience, not their age: "a straight-to-Ph.D.-candidate wouldn't be an adult student by this definition, but a 16 year-old high school dropout who comes back at age 21 or 22 would be an adult student".

Few and *scarce* and *too little* are words which express more common realities in their experience than *much, abundance and plenty.* Their tribal societies are generally collectivistic but their cohorts may be shifting toward individualistic. Their communities of faith highly esteem trained leadership, encourage integrity between word and deed, and affirm reading, education and on-the-job training. Their Nazarene communities are associated with and influenced by their connections to other Christian and Nazarene communities which espouse like values, accessibility and outcomes in their programmes of learning.

Figure 2.19   The Social Contexts of the Nazarene Adult Learner in Mozambique

The "social self" is one of the three sub-selves of tri-dimensional personhood. Yet the "social self" interacts in several groups to which the person belongs. The sub-groups to which the learner in the research context in Mozambique belong are

indicated in Figure 2.19 on the points of the "sun". The learners are bi-lingual or multi-lingual, belonging to ethnic tribes in the country of Mozambique which is still affected by wars and lacks of several kinds. Most of them are members of the Church of the Nazarenes which puts them within the bigger sub-culture of Christians, particularly evangelicals. They are learners who are already church leaders or are becoming church leaders.

2.5.3 Research Aim to Test and Refine TEE Model

As previously mentioned, the TEE model has had success in many countries in Africa and is used by several groups in Mozambique. The swiftness of its adoption across the world as well as the fact that it functions to equip and train those in the practice of ministry meets a wide-spread pressing need, especially in developing countries. The strengths of TEE abound in publications but critical assessments of its weaknesses are few. The list of TEE weaknesses by Kornfield, part of an unpublished typescript in 1976 is one of the only listings.[14] It follows below:

1. The failure of students to complete assignments because of involvement in more pressing matters.
2. Lack of identification of the educator with his students. Because of the brevity of the time spent in each extension centre a growing personal relationship is difficult to establish.
3. Lack of time for the educator to be with his family since he is constantly travelling from centre to centre.
4. Lack of being able to graduate in a relatively short period of time since to cover the same number of courses as a residential seminary would require between two and three times as many years.
5. Too much hinges on one individual teacher and there is lack of exposure to many teachers with varying fields, abilities and vision.
6. It is too easy to quit since there is little initial sacrifice involved in becoming part of the programme.
7. The travelling itinerary could be quite expensive.
8. It would be difficult to be involved in evaluation of nonwritten assignments and of practical applications of the learner's studies.
9. The role of the educator, even more than in the residential setting, perhaps, would be that of providing cognitive input in a limited amount of time, so that affective and behavioural changes would have to occur at the students' initiative. Everyone disagreed with this point by Kornfield. They felt that since the teaching material had presented the cognitive input, then the TEE teacher, even more than the residential teacher, has time to discuss application and behavioural changes. Gaddis of TEE in Zimbabwe added that they also have prepared teacher's guides which suggest many affective type activities to promote change in the student,
10. The lack of resources in many cases, both written and human, to turn to for help during the interim period between the extension educator's visits.

This study aims to take these observed weaknesses into account as well as two others – the lack of academic recognition of TEE, cited by (Gatimu *et al* 1997:14)

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[14] No other reference has appeared in hours of searching on databases.

and the lack of mother tongue instruction, cited by Mkabela and Luthuli (1997:54) – and to attempt to make systemic improvements in the model as possible.

2.6 Holistic Learning Strategies

2.6.1 What are learning strategies in general? What do they aim for? What are *holistic* learning strategies?

In relation to *Tri-Dimensional Personhood*, this section continues to discuss the *Whole-Brain Self*, specifically as this self is developed by holistic learning strategies which impact the whole brain. **Learning strategies are deliberately chosen activities to engage a particular population of learners to facilitate learning toward intended learning outcomes.** The deliberate choice of the activities relates to their fit in relation to the time, the learners, the other strategies being used in the teaching/learning encounter. The facilitators assess appropriateness of strategies during the encounters. *Learning strategies* as a term is chosen for this research from among several possibilities including *brain-based learning, learning styles, teaching strategies*, *instructional events* and *teaching methods*. I discuss the rationale for choosing the term *holistic learning strategies*.

Teaching methods is a long-used, familiar term among educators which unambiguously refers to modes chosen by instructors to conduct their instruction. The problem with this term for use in this research is the emphasis on the *teaching* so it tends to connote a teacher-centred activity which is a different philosophical stance than my research takes. Teacher-centeredness not learner-focus is also a potential inference in the use of the terms *teaching strategies* and *instructional events* so neither of those terms is chosen.

L*earning styles* are the modes of learning preferred by individual learners. It is an explicitly learner-focused term, and a savvy facilitator will take into account in her instructional planning the varied *learning styles* of her learners. *Learning styles* are preferences which can be explored and developed but are not directly prescribed by the facilitator while *learning strategies* are planned by the facilitator. Posner and Rudnitsky (2001:156) say that "teachers ought to think about not only what they will assign and present but the qualities of….thought or engagement that they are seeking to engender…and the [thinking] operations used". This is the basis of choice used by brain-based facilitators.

Brain-based learning is nearly identical with *holistic learning* so either the term *brain-based learning strategies* or *whole-brain learning strategies* could have been chosen. I chose *holistic learning strategies* for two reasons. First, *whole* is clearly broader and more inclusive than *brain* and I do not want to give the impression of considering only the brains of the learners in the choice of strategies. Secondly, because my interpretation of *brain-based learning or whole-brain learning* is slightly different from interpretations of those who frequently use these terms (Herrmann, Jensen, Sprenger, Caine & Caine).

Why use the term *strategies* instead of *methods?* Military operations are well-known to be *strategic or tactical* in relation to the *mission*. *Strategic* operations are those involved with global plans in steps to accomplish a large mission or

objective. Tactical operations undertake all the logistical and technical assistance needed to carry out the mission. Similarly *learning strategies* are activities in which the learners are engaged which result in certain outcomes. In order to facilitate critical thinking in adult learners, Brookfield (1987:72-85) the following strategies: *affirm*…self-worth, *listen* attentively, *show* support…for efforts, *reflect and mirror*…ideas and actions, *motivate*, regularly *evaluate* progress, *help*…create networks, *be*…, *make* people *aware* of how they learn, …*model.* These are strategies for educators to adopt in order to foster critical thinking. Attempting to imagine such suggestions appearing on a listing of *teaching methods* illustrates the kind of fundamental differences which exist between methodologies and strategies.

In relation to strategies which target the development of attitudes, then holistic implies attention to the completeness or thoroughness of change that is desired. The formation of attitudes is complex and the measurement of attitude change must be inferential and indirect (Henerson, Morris & Fitz-Gibbon 1987:13) so strategies must take into account manifestations or consistencies over time.

Posner and Rudnitsky (2001:159) say, "In teaching cognitions, the principal instructional consideration is providing for elaboration". In order for *cognitions* or *understanding* to result from the teaching-learning encounters, planning must include that the learners elaborate something, a book report, a project, a creation of their own, which is called an *elaboration.* The use of elaborations

> requires that students have multiple and diverse opportunities for engaging new content…[they] must integrate new knowledge with existing knowledge. To accomplish this, students must think about and think with the new material in a variety of ways. Listening, notetaking [sic], explaining, analyzing, discussing, developing, critiquing, inventing, experimenting, comparing, arguing, defending, and justifying are a few of the kinds of engagement that lead to elaboration (Posner & Rudnitsky 2001:159).

An *elaboration* as described by Posner and Rudnitsky is a whole-brain learning strategy that sounds quite similar to the *expressions of human creativity* cited by Bruner (1986:153) and the *symbolic products* referred to by Gardner (1987:391-392), not in relation to extraordinary expressions or products, but in relation to the process of creation of any such thing.

	Quadrant A	Quadrant B	Quadrant C	Quadrant D
The kinds of thinking used in the *elaborations* of Posner & Rudnitsky, assigned to the brain quadrant stimulated	Listening, Analyzing,	Developing, Comparing	Explaining, Critiquing, Defending, Justifying	Inventing, Experimenting
	Remembering, integrating with past knowledge			

Table 2.4 Kinds of Thinking Used in Elaborations of Posner and Rudnitsky (2001)

Certainly many of the verbs used by Posner and Rudnitsky as necessary in an *elaboration* are integrating new knowledge with existing knowledge, involved in

group discussions – listening, explaining, analyzing, developing, critiquing, inventing, experimenting, comparing, arguing, defending and justifying may be assigned to the four quadrants of the whole- brain model which indicates the extent to which an *elaboration* stimulates each of the four quadrants, i.e. the "whole brain", hence the justification for considering it "whole-brain". Considering that group discussion also may be described by the verbs employed above for an *elaboration,* group discussion may be considered to be a *verbal elaboration,* and it may also be considered a whole-brain learning strategy since it requires brain activity in all four quadrant. Some of the participants in group discussion may be spectators and not actively engage in the mental activities which are described; for these learners, the strategy is less active because less of the brain is engaged.

A = listening
analyzing
critiquing

D = inventing
experimenting

B = note-taking
arguing

C = explaining
defending
justifying
comparing
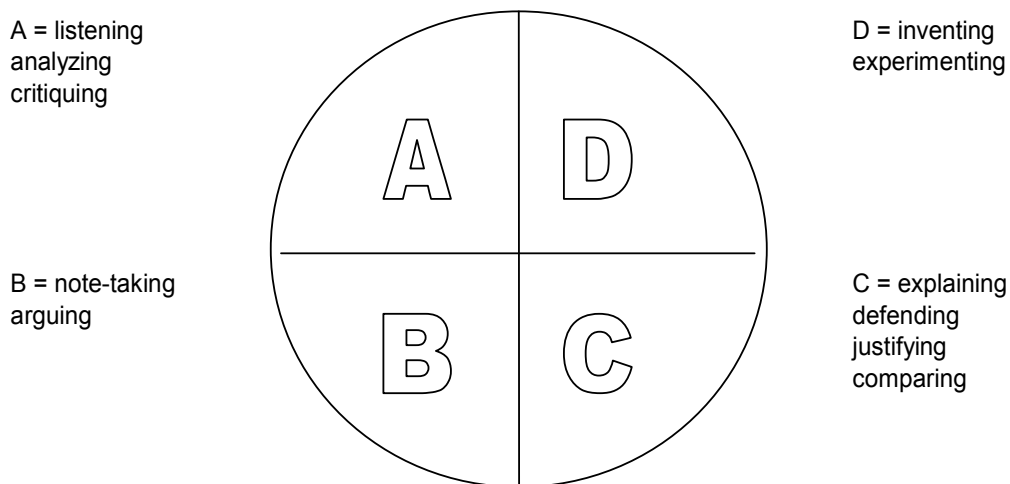
Kinds of Thinking Assigned to 4 Brain Quadrants

Figure 2.20   Synthesis of Components of the Mind (Adaptation Johnston 1996:23)

Figure 2.20 above assigns the verbs identified in *elaborations* to graphic positions on the stylized version of the four-quadrant model. The Four-Quadrant model of the brain is metaphoric (Herrmann 1995:63); the quadrants represent the four quadrants of the brain but is not a physiological map.

Whole-brain learning strategies are activities which target the engagement of each of the four quadrants of the brains of the learners. Holistic learning strategies aim for outcomes in each of the domains of holistic personhood, i.e. growth and development in the cognitive, social, spiritual selves of the individual. As previously mentioned "facilitators…model openness and critical analysis" Brookfield (1987:71) in any group in which critical thinking is being developed. Brookfield further states that "two central activities would be…identifying and challenging assumptions, and exploring alternative ways of thinking and acting". One way to explore alternative ways of thinking is to deliberately vary the side of the brain or the quadrant of the brain which is being used as implied by Hulme (1996) and De Boer, Steyn and du Toit (2001) who encourage facilitators to design teaching activities to move back and forth dynamically in the delivery of each key learning point to distribute learning to all four quadrants of the whole brain model.

After the metaphoric four-quadrant model was first designed, and after much profiling of learners to identify their learning preferences, Herrmann expanded and applied the model. In the figure below, Herrmann details the kinds of mental activity which are typical of each quadrant.

WHOLE BRAIN LEARNING		AND DESIGN CONSIDERATIONS	
A – UPPER LEFT		**D – UPPER RIGHT**	
LEARNS BY:	**LEARNERS RESPOND TO:**	**LEARNS BY:**	**LEARNERS RESPOND TO:**
ACQUIRING & QUANTIFYING	FORMALIZED LECTURE	TAKING INITIATIVE EXPLORING HIDDEN	SPONTANEITY
FACTS APPLYING	DATA BASED CONTENT	POSSIBILITIES	FREE FLOW
ANALYSIS & LOGIC	**FINANCIAL/TECHNICAL CASE DISCUSSIONS**	RELYING ON INTUITION	EXPERIENTIAL OPPORTUNITIES
THINKING THROUGH IDEAS	TEXT BOOKS & BIBLIOGRAPHIES	SELF DISCOVERY	PLAYFULNESS
BUILDING CASES FORMING THEORIES	PROGRAMME LEARNING BEHAVIOR MODIFICATION	CONSTRUCTING CONCEPTS SYTHESIZING CONTENT	**FUTURE ORIENTED-CASE DISCUSSIONS**
			VISUAL DISPLAYS INDIVIDUALITY AESTHETICS BEING INVOLVED
B – LOWER LEFT		**C – LOWER RIGHT**	
LEARNS BY:	**LEARNERS RESPOND TO:**	**LEARNS BY:**	**LEARNERS RESPOND TO:**
ORGANIZING & STRUCTURING CONTENT	THOROUGH PLANNING	LISTENING AND SHARING IDEAS INTEGRATING EXPERIENCES WITH SELF	EXPERIENTIAL OPPORTUNITIES
SEQUENCING CONTENT	SEQUENTIAL ORDER		SENSORY MOVEMENT
EVALUATING & TESTING THEORIES	**ORGANIZATIONAL & ADMIN CASE DISCUSSIONS**	MOVING & FEELING	MUSIC
ACQUIRING SKILLS THROUGH PRACTICE IMPLEMENTING	TEXT BOOKS	HARMONIZING W/ THE CONTENT	**PEOPLE ORIENTED CASE DISCUSSIONS**
COURSE CONTENT	BEHAVIOR MODIFICATION PROGRAMME LEARNING STRUCTURE LECTURES	EMOTIONAL INVOLVEMENT	GROUP INTERACTION

Table 2.5 Whole Brain Learning and Design Considerations (Herrmann 1995:419)

It is pertinent to notice that "discussions" are placed into each quadrant, but the nature of the discussion is particularized: financial-technical cases in Quadrant A,

future oriented ones in Quadrant D, and so on. This diagram is used as a basis to categorize learning strategies which are researched in the PAR project.

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❶ Studying the meaning of the words, phrases and passages that Jesus used
❷ Paying attention to the teacher
❸ Responding to questions and discussing the answers.
❹ Knowing the words of Jesus
❺ Putting the teachings of Jesus into practice
❻ Obeying the instructions of Jesus
❼ Training in groups
❽ Having eyes and ears open like a child's
❾ Coming to Jesus with concerns
❿ Having the habit of singing together

Table 2.6 Ten Methods of Learning According to St. Matthew (Scott 2002a:17)

The model of the Apostles, previously considered, also offers insight into whole-brain learning strategies. Matthew specifically takes note in his gospel account of the ways that he was learning from Jesus as the master teacher of the disciples. The list of the "Ten Methods of Learning According to St. Matthew" (Scott 2002a:17) shows that the apostles engaged in connecting new knowledge with previous knowledge by "studying the meaning of words, phrases and passages" that Jesus used from the educational system of their context, the synagogue teachings from the Old Testament (Quadrant C, harmonizing with the content). They also listened carefully to the teaching (lectures, i.e. Quadrants A and B) and put the teachings into practice and obeyed instructions that he gave them (whole-brain A, B, C and D). Responding to questions and discussing the answers, they had group discussions which fall into several quadrants but since Peter spoke a lot and Matthew is never quoted to have said anything, different portions of Peter's brain were used than Matthew's. "Having eyes and ears open like a child's" refers to an attitude of openness to learn and make mistakes, to explore and discover (Quadrants A and B). Matthew says that they "came to Jesus with concerns" which translates to prayer (Quadrant C with others). Of the apostles only Matthew refers to the "habit" of singing together (Quadrant C).

Holistic facilitation of learning is conceived in the mind of the facilitator and born in the teaching/learning episode. Killen speaks of *good teaching practice* when he says "teachers… must be able to design effective learning experiences, they must be able to reflect on what they do and they must be able to change their practices according to what they learn from their experiences. (Killen 2000:vi). *Holistic learning strategies,* therefore, are choices made by facilitators previous to and *during* learning episodes:

- choices regarding their stance (attitudes, actions and interactions) in relation to their learners,
- choices among the multitude of learning activities, assignments, modalities, methods,
- choices related to issues of time and space which influence the learning episode,
- choices which respond dynamically to the set of learners and
- choices which facilitate learning strategically toward intended outcomes.

In order for the monitors who facilitate learning in the environments of the learners of my research to be able to design effective learning experiences, as Killen cites above, deliberate consideration must be given to the several choices designated above in relation to the facilitators of learning in the context of my research. These monitors meet voluntarily with their learners under very adverse conditions; their training is minimal, and they have many other obligations in their churches, families and communities. They deserve as much assistance as possible in order to equip them to make these choices so that they do not get bogged down and quit their task. Because of these real restraints, much of the training done with the monitors is role-playing of the situations in which they will be the facilitators. In the role-playing, the attitudes, actions and interactions which encourage learners are rehearsed over several weeks of simulated class settings.

The choices the monitors have related to learning activities, assignments, modalities and methods have been limited in number so that they can practice a few with more excellence. Choices relating to time and space are left up to each cooperative learning group. The exit outcomes are those prescribed by the global Nazarene system. Therefore, all five realms of choice listed above are pertinent and accounted for in this research. The holistic learning strategies which are the focal point of the research are the learning activities and modalities which are chosen from the multitude of others because of the ability of monitors to be successful in their supervised experiences of using them. These holistic learning strategies are discussed in the next section. In selecting holistic learning strategies which are within the experience and expertise of the Mozambican monitors to utilize, attention is given to the quadrant to which each strategy belongs so that the set of strategies which is used by them stimulates the whole brain of the learners in my population, i.e. is holistic.

2.6.2   Exploring Learning Strategies Using Four Quadrant Model

Given the multitude of choices of holistic learning strategies as discussed in the previous section and the academic limitations and minimal training which the facilitators have, which holistic learning strategies are within the command of the monitors in Mozambique? The answer is given as a listing, then is compared to the diagram of Herrmann which is Table 2.5 in the previous section, then the strategies are briefly detailed theoretically and pragmatically.

The learning strategies which are used with the learners of the research population include the following:

1. actively and independently assessing Bible content
2. hearing the Bible and text material read and explained
3. memorizing Bible content
4. reading the programmed Text Africa books
5. regular group discussions based on main ideas (informational)
6. taking of written exams
7. answering in writing all of the questions of the Text Africa books
8. attending class at least 67% of the time
9. discussions based on reasoning questions
10. inviting God to intervene (prayer)

11. encouraging and helping colleagues
12. including peer tutoring in second-chance occasions
13. reflection using several applications
14. regular singing of songs
15. choral reciting of truths
16. working on projects together to buy books
17. discussions based on application questions
18. icon or visual clue interpretation
19. key words as tags, labels
20. pictures, maps, graphs
21. discussions based on key words
22. identifying heroes
23. appropriately applying Bible content to life scenarios
24. **rehearsing integrity: hero modelling / role-modelling /**
25. **role-taking/ self-sacrifice**
26. **team work: team building work projects**
27. **pair or trio groupings /peer tutoring**
28. **classical spiritual disciplines**
29. **singing for learning**
30. **cooperative learning groups**
31. **praxis**

The last strategies of the list above are highlighted for their holistic impact on the brain Having thirty-one different learning strategies as their set of experiential knowledge from which to choose gives monitors freedom within structure to facilitate learning with confidence within the structure. The nature of the learning which takes place in the four quadrants is based on the brain research presented in an earlier section. The model is descriptive so enables brain-based educators to plan learning events with balance to the different areas of the brain. In this way, the learners are more at ease with the activities which suit their preferences and more challenged with activities which are outside of their preferences. The whole brain may be stimulated.

Key mental activity	Quadrant A = Decoding	Quadrant B = Ordering	Quadrant C = Reflecting	Quadrant D = Synthesizing	Quadrant A
Other mental activities of the quadrant	Coding Reading Listening Analyzing Measuring	Reorganizing Planning Scheduling Tactical	Moving Music Making concrete Socializing	Playing with Visualizing "Gestalting" Exploring	
Activating between 2-4 quadrants	**Praxis**	**Spiritual Disciplines**	**Teamwork**		**Singing for Learning**

Table 2.7 Mental Activities per Whole Brain Quadrant

In Table 2.7 activities normally associated with each quadrant are specified and four activities, decoding, ordering, reflecting and synthesizing, are highlighted which are key brain activities of the quadrant. Four strategies are particularly holistic in their potential: praxis, spiritual disciplines, team projects and critical singing. Similar to *elaborations*, each of these four has potential to utilize two to four quadrants of the brain during their use.

Following along this line of categorizing learning strategies according to the whole brain model as set forth in Tables 2.5 and 2.7, twenty-five strategies would be distributed to the four quadrants of the whole brain model as follows:

A = Decoding	D = Synthesizing
actively and independently assessing Bible content	icon or visual clue interpretation
hearing the Bible and text material read and explained by monitors and colleagues	key words as tags, labels
memorizing Bible content	pictures, maps and graphs
reading the programmed Text Africa books	identifying heroes – in Bible passages and in text narrations
regular group discussions based on main ideas (informational)	discussions based on Key words
	appropriately applying Bible content to life scenarios
B = Organizing	**C = Reflecting**
taking of written exams	Inviting God to intervene (prayer)
answering questions in writing in the Text Africa books	encouraging and helping colleagues including peer tutoring
attending class at least 67% of the time	reflection in several applications
answering all of the questions in the Text Africa books	regular singing of songs
discussions based on reasoning questions	choral reciting of truths
	discussions based on application questions

Table 2.8 Strategies for Facilitating Learning in Each of the Four Brain Quadrants

The above categorization separates *discussions* into each of the four quadrants based on the nature of their content or the known dynamics of the discussion. Table 2.8 does not list *praxis* and *cooperative learning groups* which have already been discussed. And it also excludes four other strategies which certainly affect the learner in many ways, i.e. holistically so none of them can be placed in any one quadrant. These four are each "telescoping learning strategies", one within another with ever broader scope: 1) "singing for learning", 2) the classical Christian spiritual disciplines, other than "simple prayer" (explained later), 3) teamwork which includes working together for everyone to pass on pass-fail requirements, team building work projects, pair or trio groupings for studying out of classes, and 4) rehearsing integrity, a very central or core activity which includes hero modelling / role-modelling / role-taking and self-sacrifice. All of the strategies are discussed in more detail in the following paragraphs, particularly the four just mentioned.

2.6.2 1 Rehearsing Integrity: hero-modelling / role-modelling / role-taking / self-sacrifice

The *identification of heroes* as a learning strategy is a cerebral function. *Hero modelling* starts with *hero identification* but requires the participation of the whole brain. Heroes are people, real or mythical, who we admire. We basically agree with and are amazed by what they say and do and with the attitudes and values they display. We are attracted to their lives. In whole-brain terms, the lives of heroes present patterns which resonate with the patterns of our wiring. We are moved (affectively) to make the patterns of our lives ever more congruent with the patterns of their lives.

Colson (1990:114) says that "respect for heroes and the authority structures they represent is on the rise in America", and the reason for this, he continues, is that "we need legitimate goals and aspirations beyond self. These can be provided by role models, the heroes who inspire the rest of us and goad us on". The reason that John Wesley became a "paragon of Christian social action, engaging in prison reform, slave emancipation, etc"., according to Kinlaw (1998:101) is that these activities "were a normal consequence of Wesley's message…of entering into the Christ-life". Wesley desired to enter into the life of Christ.

For many centuries Biblical and Christian heroes have been identified and their lives are studied textually to discover everything possible about them. The importance of "imitating Christ" in several models of spiritual environments was discussed in a previous section. Besides the book *Imitation of Christ* by Thomas á Kempis, Jesus as the ultimate model of everything – thinking, actioning, living, relating, teaching, feeling, synthesizing, fulfilling and so on – prompts writers to produce book after book towards the goal of becoming like this hero. Kingsolver (1998:13) says that having "the mind of which was in Christ Jesus…internal guidance system" will equip and enable "to walk like Jesus walks – to pursue the goals he pursues, with the attitudes and passions that Christ himself has". Neethling, Stander and Rutherford (2000:15-16) say that "probing the thinking of Jesus in order to learn how to think like him will better enable us to behave like him". Note the goal again, the desired outcome, is to be like the hero, in this case Jesus.

As previously mentioned, the learners in this research already occupy positions of leadership which makes them "role models" for others in their communities. So besides emulating their Hero, they are, by virtue of position, models visible in their communities, candidates for imitation by those they are leading. As they attend classes regularly, study and lead they are already "role-taking" the roles of "learner", "leader," and, in a humble sense, the role of "hero" for those who are watching their lives.

A kind of "hero" is the "moral exemplars" which have been studied in recent years and have caught the attention of many including Gardner (1997) and Brookfield (1998). It is interesting to note the attitudes of selflessness and perseverance as well as their gestalt perspective view of life as commented by Gardner (1997:132):

They believed passionately in what they were doing and had no doubts that they were pursuing the proper course of action. They were overwhelmingly positive in attitude, believing that setbacks were only temporary or part of a larger plan. Their beliefs were often founded on a religious basis. Perhaps surprisingly, they did not regard what they were doing as anything special – they assumed, we might say naively, that anyone else in their position would behave with equal nobility. Their scores on standard tests of moral reasoning did not stand out – the capacity to behave in a caring way seems quite different than the capacity to reason acutely about moral dilemmas.

The best explanation for the "selfless behaviors and attitudes" of the moral exemplars, according to Gardner (1997:132) is that [italics mine] "over time, these individuals *established habits* that led them to [behaviours considered 'moral']…".[15] Practicing or rehearsing behaviours is the acting out "of appropriate and effective ways to handle real-life situations…differs from other forms of role playing…by focusing on behavior change as an end in itself, not as a technique for identifying or working through presumed conflicts" (Master & Burish 1987:99).

Self-sacrifice (and its sister trait, self-denial) rarely falls on the lists of "learning strategies", however, it is explicitly described as a means of learning throughout the New Testament[16], and by most of the mystics like de Caussade (1751): "if all knew that saintliness consists of all the suffering which their state provides each moment; that it is not any exceptional state that leads to the sublime heights of perfection.. how happy they would be!" It is implicit in education which takes place in monastic settings, in the lives of contemporary moral exemplars studied by Gardner, and in the learning environments of this research study. It cannot be ignored because self-sacrifice is continually present in the lives of the monitors and in the learners who finish courses. Brookfield (1998:301) recognizes the lack of critical reflection in these moral exemplars: "They are acting out of a sense of moral certainty in a way which is experienced as highly pleasurable, rather than self-sacrificial. These moral convictions are not reached after an extended period of soul-searching or careful analysis".

Gardner postulates (1997:132) that:

> the 'moral exemplar' is most singular in the extent to which he sacrifices his personal goals for those of his family, the broader community, or even world society. Knowledge of self or other, interests in a domain of knowledge or skill, are harnessed to a broader concern: the improvement of life conditions for those other than oneself.

Moral exemplars are "most singular" in the *extent* to which they sacrifice for others. I would observe that sacrifices – of personal goals for the sake of others – even large sacrifices are normal sacrifices in the lives of many spiritual people,

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[15] *To the extent that [extraordinary individuals] inspired others to undertake comparable good works, these individuals earn the descriptor spiritual (Gardner 1997:132).*

[16] *For example, Paul says in 2 Cor. 4:2 in a contemporary version of the Bible (Pederson 1993:373): Since God has so generously let us in on what he is doing, we're not about to throw up our hands and walk off the job just because we run into occasional hard times.*

and pertinent habits for the learners in my study. However, I prefer to note, as meat for learning contexts, the importance of "harnessing"…"knowledge of self or other"… "to a broader concern". This harnessing or connecting can be highlighted in learning settings. Why know self? To better serve those near you. Why know others? To better serve them. Why know anything, from any domain? To improve life for others. These answers are valued as "correct" in the communities of learning of my study because, as Kinlaw (1998:101) comments, "The essence of Christian living is making oneself a servant as Christ is a servant". This essence is sung in beloved hymns: "I will serve You (God) because I love You. You have given life to me," and so on. The words to another are "Make me a servant, humble and meek", and there are many, many others. Missionary David Livingstone (in Olasky 2005:36), having walked hundreds of miles in crossing the continent of Africa chronicles frequent illness and many snake encounters yet writes, "Can that be called sacrifice that which is simply paid back as a small part of a great debt owing to our God which we can never repay?"

2.6.2.2 Team Work: team working projects / pair or trio groupings for studying outside of class / peer tutoring / pass-fail requirements

There are several rings to this telescoped strategy. It deserves a name that is easier to handle. Calling it "teamwork" emphasizes that, as a team of any sport, its members have a common goal, it will require several skills, communication, distribution of task, strategy setting, and working together to reach that goal.

There are standardized features of the IBNAL curriculum which are deliberately built-in to facilitate complex learning like attitudes and character traits over the period of time that the learners are involved in the programme of study. These features make a structural framework for "team work" which connect and overlap the other learning strategies of this "telescope", i.e. *team working projects, pair or trio groupings*, *peer tutoring / solutions to pass-fail requirement*. These curricular features are specified in writing, first as commitments on the part of each student in a pre-study covenant, then as course requirements for each of the forty-two courses of the programme. In order to become a student in the IBNAL programme, the person signs a statement that he/she will (Scott 2001a:3):

- *do homework to the best of their ability;*
- *arrive as close as possible to the beginning time of the weekly class, with their Bible, textbook (with questions answered) and ready to enter into discussions;*
- *respect the monitor and classmates in their contributions in class;*
- *pay the fees and cost of the book.*

We encourage all those interested in studying to do so. For those who have less than 3rd grade instruction, another set of procedures is also required. These students must

- *find a person who will help them everyday by reading the 5 lessons per week and will write in the answers to their questions;*
- *memorize the key verse each week;*
- *begin to study with someone to improve their reading ability.*

A student who fails in this code of conduct will not be allowed to enrol in classes the following term.

In order to pass any course of the forty-two courses, the student must complete all of the course requirements. The requirements are the following (Scott 2001a:5):

At the close of each 'regular' course of the IBNM [later changed to IBNAL], one TEE unit, Theological Education by Extension, will be attributed to all those who have

- *attended 8 of 11 weeks of classes [or 67%] in which they participated in a constructive way in the discussions;*
- *completd 90% [changed to 100% in 2002] of the questions in the textbook, that is the great majority of the questions in each lesson;*
- *achieved at least 50% on the final test (which may be administered orally) which will include*
- *memorized Scripture passages*
- *made payment of their student book and fees.*

Failure to complete any one of the requirements means the student does not get credit for the course. Monitors are trained to give learners a "2nd chance" to complete any of the requirements which are not completed at the time that colleagues complete them. Monitors are encouraged to invent ways (strategies) that, by working together to help the weaker members of the cohort during this grace period, all of the learners can pass the course.

So in order for all of the learners to pass the course, the monitor has several options. When one learner fails because of getting less than 50% on the exam, an academically strong colleague may tutor him or her for a second setting of the exam. The exam may be given orally instead of written. When someone fails because of less than 67% attendance, the monitor may give the learner responsibilities that would count as class times, responsibilities which contribute to the well-being of the *cohort* (the group studying together). Since paying for the textbooks is required but may be extremely difficult for the whole cohort, they also work together as a team to raise money for everyone's books. Mindell (1995:194) describes such activity saying, "Teamwork involves spontaneous, organic consensus that sees everyone's view as part of the community". Mindell says that the building of consensus which he defines as "that special, temporary group condition in which people move unanimously together in a particular direction". By consensus, and as a team, the cohort may plant a peanut garden to raise funds for the books or make baskets and market them jointly. The system of IBNAL for the African context promises a good fit according to Mkabela and Luthuli (1997:8):

African learners should be given much more opportunity to work together in the classroom and on projects outside school. Grading of learners should be based on the ability to work together and facilitate the potential of others….most African people were required to adjust to the solitary nature of Western education, people used to the Western system can be expected to adjust to the co-operative system. Ideally, both systems need to be explored and, if possible, be made mutually inclusive

This social commitment to each other has spiritual dimensions, according to Plunkett (1990:82), "as does every step in life…The sense in which we belong to each other both transcends the rational order, and demands of us a constant spiritual opening to others". Teamwork is only one aspect in development with these complex strategies; responsibility, integrity and selflessness are also facilitated by these strategies. Colson (1990:147) posits that it is the duty of the Church "to call men and women to identify right and wrong and to accept responsibility for their behaviour". So the activities and attitudes prescribed in the covenant and in the course requirements which include respect for others in the cohort ideally work together to produce consensus, teamwork and other actions which demonstrate genuine caring.

2.6.2.3 Classical Spiritual Disciplines

Classical spiritual disciplines is a large set of telescoped or intertwined strategies which are centuries-old means to "know God" or "practice godliness / holiness" or construct "spiritual knowledge". The classical spiritual disciplines include confession, meditation, reflection, spiritual reading, contemplative prayer, silence, solitude, and fasting. They are the subject of volumes of literature like the famous *The Practice of the Presence of God* by Bro. Lawrence and *The Sacrament of the Present Moment* by Jean-Pierre de Caussade, of art forms like iconography and worshipful dance, of retreat centres, seminaries and monastic orders, of the film "The Passion of the Christ", produced by Mel Gibson, and of the "spiritual exercises" of Loyola. The learners in this research study practice classical spiritual disciplines – to a limited extent in the formal learning settings, but more regularly, usually daily, on an individual basis, so they are learning strategies which facilitate learning in the lives of this population of learners. The whole brain of the learners is affected by these disciplines.

Descriptive comments follow about some of the most commonly practiced disciplines, but the way they intertwine makes the consideration of one alone quite artificial. In order to practice genuine confession, other disciplines like meditation, silence, spiritual reading and/or silence precede the act of confessing – to God or to a person. Solitude assists one to meditate and reflect. Contemplative prayer may be accompanied by fasting. Spiritual reading includes meditation and reflection, and so on.

Confession, combined with repentance, is the practice of admitting to God personal responsibility for actions, attitudes, thoughts which are known by the repentant one to be against his or her conscience. Such admission, when coupled with a belief in forgiveness, purges from the weightiness of guilt. Without confession "we push the awareness of what we have done into our subconscious…what has been repressed still generates sadness. It dampens our spirits. We feel depressed...because of these repressed memories of sin" (Campolo 1994:116). Confession relieves the internal and personal weight of "falling short" of the best.

The practice of "blessed subtractions", as Freeborn *et al* (1994) call it, refers to the disciplines that subtract things from life for a period of time. The normal things are not wrong but the discipline subtracts one or more of them in order to focus more

intensely on "knowing God". Solitude and isolation subtract people, silence subtracts noise and communication, fasting subtracts food, chastity subtracts sexual activity, poverty subtracts financial means and so on.

St. Anthony spent twenty years in isolation. "When he left it he took his solitude with him and shared it with all who came to him. Those who saw him described him as balanced, gentle, and caring" (Nouwen 1981:32). "A good dose of solitude", contends Foster (1998:52-3), "is necessary for our [spiritual] growth even though we want to affirm the importance of the Christian community". Yet, it is not the solitude itself which produces godliness. "Walking with Christ" in the solitude (Laubach 1954:136) is the source of peace and blessing because, explains St. Augustine, speaking to God, "thou hast made us for thyself, and our souls are restless until they find their rest in thee". Frankl (in Campolo 1994:215) observes that in the Nazi concentration camp, survival was dependent upon "the ability to imagine a future… that would express the joys of Shalom...the peace and joy of God...who could see beyond the present".

"Silence is a gift of hidden wonders", says Civen (1984:74) poetically, and continues by pointing out that by the power of silence "we hear the Song of Songs; at its core we find God. Silence is not less than sound, but more. Silence is the sound of All-in Unity. God is found in the waiting silence of the seeking heart". Kreeft (1990:203) maintains that without silence, we cannot be good, "for without silence we cannot grow deep roots, and without deep roots we cannot develop character, and without character we cannot be good". The quiet mind finds resources which are otherwise hidden. "As we learn to listen with a quiet mind, there is so much we hear. Inside ourselves we can begin to hear that 'still small voice within,' as the Quakers call it, the voice of our intuitive heart which has so long been drowned out by the noisy thinking mind" (Dass & Gorman 1985:111).

Foster (1998) suggests fasting from food is only one of the options, that fasting from the media, from the telephone, from the dictates of our consumer culture, from achievement addiction are other subtractions from which we may better "know God". "Blessed subtractions" (Freeborn et al 1994) are disciplines which deliberately reduce mental and spiritual clutter in order to focus on self-with-God. In this way repentance and confession would also be "blessed subtractions".

Other spiritual disciplines involve focusing in spite of other things around or focusing enhanced by aids. Meditation, reflection and contemplation focus on God in spite of surroundings as Wurmbrand and Bonhoeffer were able to do in solitary confinement in Romania and Germany, respectively, and as seekers may do in community retreat settings. Meditation/reflection and/or contemplation may use an object like the written Word of God, a written prayer, a rosary, a piece of sacred art, worshipful music, bread and wine, to focus, not on the object itself, but on God through the object with the goal of "touching God".

Through the centuries there have been great masters of contemplative prayer who "devoted all, or nearly all, of their waking hours to prayer…they prayed and worked simultaneously. They prayed while they read, while they walked, while they listened to music, while they were writing, while they were working with their hands" (Laubach 1954:95-96). The intent of their lives was to put into practice the

Bible verse "prayer without ceasing". Laubach himself tried to do this. He comments, "When one first tries to form this new habit, his mind resists and runs off on a tangent. This stage of mind wandering must be endured by all who would learn this discipline. It is true of every new good habit that one seeks to form. We must pass through a period of failure" (Laubach 1954:96).

The result of the practice of spiritual discipline may be a creative flow from which a work of some kind is inspired and produced. The result should be peace and harmony with self, others and God. Brother Lawrence, one of the great masters of contemplative prayer exhorts, "Let us often remember…that our sole occupation in life is to please God. What meaning can anything else have?"

Reflection must be practiced outside of environments which are formally assigned to learning and include the "learning of God" in reflection in whatever setting this may take place. Ultimately the learning setting is within, the whole brain selves of learners. Classical spiritual disciplines affect the whole brain.

2.6.2.4 Singing for Learning

"Singing for learning" is not simple singing of any song. It is the singing of songs which have specific words that express ideas and/or concepts of the I.L.O.s (intended learning outcomes) and/or major points of content. The specific words codify meaning in such ways that Quadrant A analyzes and deconstructs it. The words express known ideas or constructs in new ways which Quadrant B reorganises. The melody pleases and plays in Quadrant D and moves the emotions of Quadrant C. Hence, singing for learning is whole brain and powerful to the individual. In the collective realm music is also powerful for the simultaneous effect it has on the group. Storr (1992:89) describes this:

> Music brings about similar physical responses in different people at the same time. This is why it is able to draw groups together and create a sense of unity...Music has the effect of intensifying or underlining the emotion which a particular event calls forth, by simultaneous coordinating the emotions of a group of people.

Martin Luther and then Charles Wesley utilized the power of music to speak to and teach the people. "A Mighty Fortress" became the anthem of the German Reformation, sung by people in churches all over the country. The words reflect the context: the architecture of Germany, the political and ecclesiastical struggles of the times, and the theological war between God and the "ancient foe" (Satan). The words of the first two stanzas are written below on the left in poetic, archaic English. I have written a non-rhyming, line-by-line interpretation on the right:

A mighty fortress is our God,	Our God is like a castle,
a bulwark never failing;	a support which never fails;
our helper he amid the flood	God helps when many ills descend
of mortal ills prevailing.	On mortals [men]
For still our ancient foe	The enemy, Satan,
doth seek to work us woe;	is still out to make problems;
his craft and power are great,	he has great skill and power
and armed with cruel hate,	and hate is his weapon,

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on earth is not his equal.	No one on earth is so great.
Did we in our own strength confide,	If we trusted in our own strength
our striving would be losing,	our efforts would not win,
were not the right man on our side,	if the right man [Jesus] were not
the man of God's own choosing.	Siding with us, the choice of God.
Dost ask who that may be?	Do you ask who he is?
Christ Jesus, it is he;	Christ Jesus is the one.
Lord Sabbaoth, his name,	Holy Lord, his name,
from age to age the same,	the same in every age,
and he must win the battle.	Jesus will win the battle.

The melody had already proven to be singable and pleasing because Luther borrowed a popular tune. Luther and Wesley "met the needs of the culture of their day by taking the tunes out of bars, putting words to them, and using the songs in worship…They did not conform the message, just the package" (Easum 1993:86).

John Wesley had rules for singing which indicate how important the words and the manner of singing were to him:

- Learn these tunes before you learn any others; afterwards learn as many as you please.
- Sing them exactly as they are printed here.
- Sing all.
- Sing lustily and with a good courage. Beware of singing as if you were half dead, or half asleep.
- Sing modestly.
- Sing in time.
- Above all sing spiritually. Have an eye to God in every word you sing. Aim at pleasing Him more than yourself, or any other creature

(Bible1982:i)

As noted previously, Wesley hymns combine doctrine and experience; for example, *A Charge to Keep* speaks about the responsibility (charge) of glorifying God, fitting the soul for heaven, serving contemporaries, and fulfilling a call to serve. The second stanza speaks of personal accountability to do God's will, to be careful to live in God's sight so that the servant of God will be prepared to give a "strict account" to God of his or her life:

A charge to keep I have, a God to glorify;
A never dying soul to save and fit it for the sky.
To serve the present age. My calling to fulfill;

O may it all my pow'rs engage to do my Masters' will!
Arm me with jealous care, as in thy sight to live;
And o thy servant, Lord, prepare a strict account to give!

(Bible 1982:75)

Many hymns of the Wesley brothers are still sung in Western cultures. This fact attests to their enduring power and value. However, the music of Luther and the Wesleys does not necessarily move the hearts of people from other cultures.

Easum (1993:86) emphasizes the importance of "culturally relevant music". This relevance is also a factor in "singing for learning" as a holistic learning strategy. "There is ample evidence to show that myths, folk tales, proverbs, songs and drums have always played an important educational role in traditional African life," observes Letseka (2000:189). The monitors are encouraged to pick one song for each face-to-face session that connects to one of the main ideas of the week, and to explain the connection before singing the song. In the written guides that monitors can use, several of these possibilities are suggested to them, for them to choose from so that the use of songs in "singing for learning" is encouraged and facilitated. There are two Wesley songs in the collections from which the monitors train.
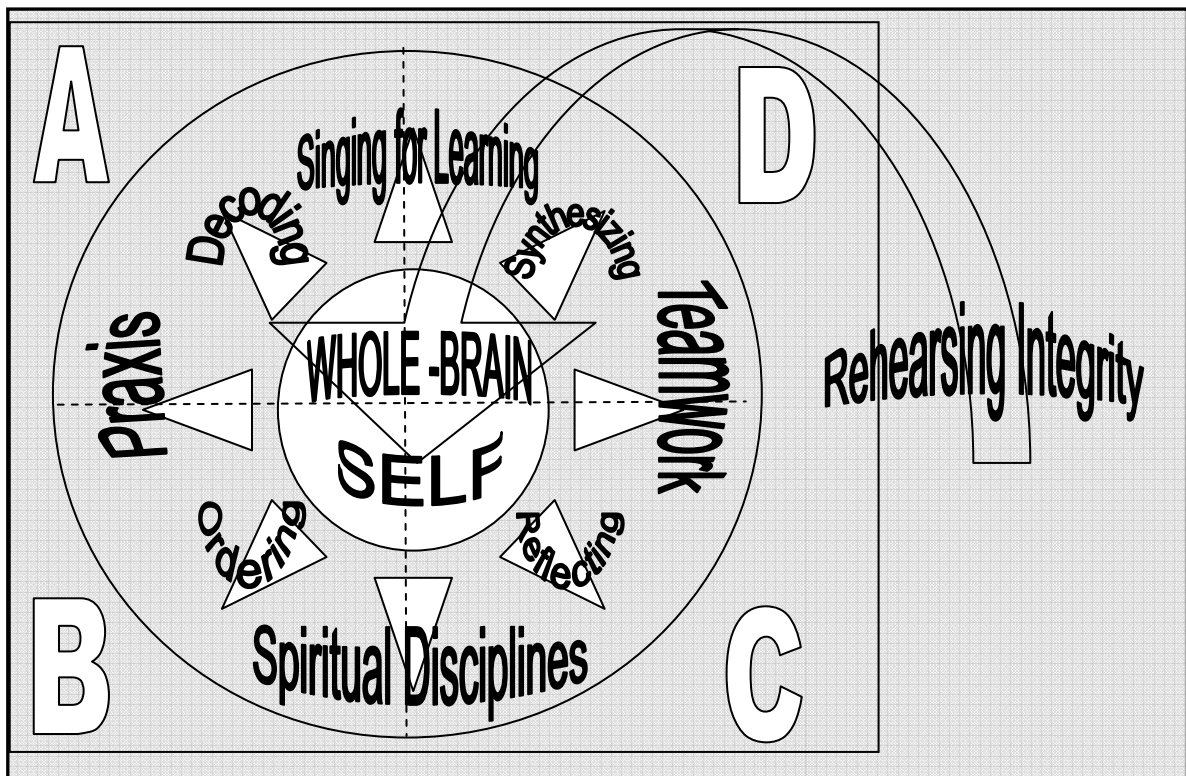

Figure 2.21 Holistic Learning Strategies Positioned on Four Quadrant Model

In the diagram in Figure 2.21 a circle quartered by dotted lines representing the four quadrants lays over the diagram of the whole-brain self in which a key thinking modality is specified in each quadrant – decoding, ordering, reflecting and synthesizing. The four complex strategies – praxis, spiritual disciplines, teamwork and singing for learning are placed deliberately at the junction of quadrants which they potentially unite. As discussed in the previous paragraphs, the potential of these, as well as some other strategies, is to affect all four quadrants depending on other variables. As also mentioned previously, the telescoped strategy – rehearsing Integrity: hero-modelling / role-modelling / role-taking / self-sacrifice – would fit at the centre of the whole-brain self diagram. Now I present a brief look at other learning strategies, organised by quadrants.

QUADRANT A = Decoding

2.6.2.5 Actively and Independently Accessing Bible Content

In homework assignments in order to answer questions in the textbooks, the learners get Biblical answers by opening their own Bibles, finding the correct reference and reading the references to answer the questions. Boff (2000:86) .the [Holy] Spirit never allows Jesus' words to remain dead; whenever they are reread, they gain new meaning and produce new practices". Bediako (1995:62) holds:

> The single most important element for building such an indigenous Christian tradition is therefore the Scriptures in the vernacular language of a people. It is to the undying credit of the modern missionary enterprise from the West, and to the lasting benefit of the newer church which have resulted, that the value of the vernacular Bible for converts was generally recognised, quite early. There is probably no more important single explanation for the massive presence of Christianity on the African continent that the availability of the Scriptures in many African languages.

The student books of the Text Africa series refer the learner to the Bible repeatedly such that the learner gets used to opening the Bible, seeking the particular passage and reading it silently.

2.6.2.6 Hearing the Bible and Text Material Read and Explained by the Monitor and Classmates

The face-to-face sessions are normally opened by the monitor with a brief devotional based on the Bible verses that are being mastered during that particular course. These 5-10 minutes of open Bible, being explained by the monitor, provide occasion for a spiritual boost to the learners, many of whom are already pastors leading churches and not able to hear others preach.

Decoded words captured by hearing them enter the brain differently than decoded words captured by reading them silently. Hearing and reading at the same time enters differently yet. During the two hours of each face-to-face session, this strategy is used commonly. Sometimes the readings are done in chorus which magnifies the sound, multiplying the audio effect. Bartle (2001:86) emphasizes the importance of scriptural readings within each learning community:

> When people from thousands of different cultures read the Scriptures, the parts that are very significant to one group of people are often not so important to those who come from another cultural background. They search the Scriptures through the spectacles of their worldview. As Christians around the world share with each other their grasp of Scripture and their understanding of God we all gain in the process.

The cooperative learning groups which are opening the Bible to read to one another are not "Christians [from] around the world" but they are Christians sharing their understanding and interpretation as each interacts with Scripture.

2.6.2.7 Memorizing Bible Content

One of the requirements to pass each course is to memorize four or five Bible verses which are carefully selected to reinforce the main ideas of the lesson content. If learners do not have the verses perfectly memorized the first time they take the exam, they can keep on trying to write or say the verses until they master them. The learners fill their spare minutes reciting their verses for one another, in the large groups or in pairs or trios. The Bible itself gives motivation for the learners to accomplish these memorizations since their goal is personal piety: "I have stored up your word in my heart, that I might not sin against you (Psalms 119:11)".

Memorization as a learning style currently carries some stigma of being "too rote" in nature. However, I personally must acknowledge that some things thoroughly memorized have usefulness for a long time. I can still recite some learning that I committed to memory forty-five years ago, and I visit those memorized pieces from time to time when they are useful to me. My point is that memorization is not a major tool in the learning toolbox, but it still has a place there.

2.6.2.8 Reading the Student Textbooks

Because of its honoured place in learning for centuries "reading" as a learning strategy needs no explanation. As Bloom *et al* (in Anderson & Sosniak 1994:16) say "the teaching of knowledge is…basic to all the other ends or purposes of education". Memorisation and reading are codified inputs of knowledge. In face-to-face sessions, information contained in text books is the basis for the discussions.

The "programmed Text Africa books" do need comment because they are unique student text, designed very explicitly for learners like those of my research population. All of the Text Africa books have the same format of divisions – ten units of five lessons, The units are the basis of study for one week; each divided into five lessons which are intended to be read and studied daily by each learner, and the unit content, already known to each learner, is the basis for the weekly session of the learning group. Besides format consistency, there are other characteristics of the texts which are intentional in every book. Text-writers comment: "The way to maintain a conversation style of writing is to adopt a friendly tone of writing, informal and colloquial…you need to develop a mental imagination that you are talking with an individual learner and it is only then our writing will be 'readable' and your learner will 'hear'" (Gatimu *et al* 1997:73).

The standard format encourages daily work. One of the founders of TEE, Winter, strongly extols the worth of this practice. He says (1969:430):

> …if properly handled, these daily studies can involve not only the mastery of required course content, but a great deal of creative thinking and writing and even the development of independent research skills. These men [sic] are not just passing courses. They are developing a discipline that can continue to operate far beyond the limits of the usual three-year theological cram course. The extension programme affects the student in his daily life through books and new study habits

The development of a daily discipline of studying books at home surely is a worthwhile by-product of the special and deliberate design. Beside the standardized organization of the books, and the conversational style, there are two other aspects worthy of mention. The illustrations given and the situations posed are all African. And the formatting on each page is different. The pages are not full of text; each page is broken into frames which cycle sequences of learning activities, stimulating different parts of the brain. Each frame is composed of Information, Response and Confirmation. Holland (1975:17) reproduces a page from *New Testament Survey, Part One* to illustrate the page format which is copied below:

Take your Bible now. Open it at the front. Find the page where all the books of the Bible are written. Find the names of the New Testament books.

    Count the number of books in the New Testament.

2. How many books are in the New Testament? _____
==
    There are 27 books in the New Testament. These books are not all the same. They are very different.

    Do you have some cattle? Think of a herd of cattle. To some people, all the cattle look the same. But if you know the cattle they look very different from one another. Some are heavy. Some are light. Some have many colours. Some are on colour. Some have straight horns. Some have horns which are bent.

    In the same way, there are different kinds of books in the New Testament. There are four kinds:

        (1) Gospels
        (2) History
        (3) Letters
        (4) Prophecy

3. Gospels are one kind of book. In which Testament are they? _____
==
    The first kind of book in the New Testament is the Gospels. These books tell the good news about how Jesus came. They tell about his work to save us.

4. The book of Luke tells the good news of Jesus. What kind of book is it? _____
==
    Luke is one of the Gospels. The Gospels come first in the New Testament. They are like the cow that leads the herd. They lead us into the New Testament.

Figure 2.22 Example of a Page of Text Africa Material (Holland 1975)

The wording is intentionally simple and straightforward so that the learners are able to easily grasp the basic content. This is how the Text Africa books are written.

The other student text materials which have been developed for the learner population during this research have incorporated several aspects of the Text Africa books into the writing style, i.e. conversational Portuguese, organization of main ideas in each learning unit intended for one week of homework, frequent questions within the text, African examples, etc.

2.6.2.9 Regular Group Discussions Based on Main Ideas of the Week

During their training, the monitors role-play discussions with three kinds of questions for their use in conducting the face-to-face class sessions in which the already-studied lessons are discussed. The kinds of questions are 1) informational, 2) reasoning questions, and 3) application. The main ideas of each lesson are stated as daily assignment titles, and then are presented in more detail through biblical texts and questions written into the books. The discussions based on the main ideas are, therefore, data-collection or informational in nature, clearly within the domain of Quadrant A. Aspects of the mental processing which precedes speech or writing are described by Vygotsky (1962:144), "Planning has an important part in written speech, even when we do not actually write out a draft. Usually we say to ourselves what we are going to write; this is also a draft, though in thought only". So, before a participant writes answers or speaks in a discussion, mental planning or drafting has taken place. Killen exhorts another type of planning, too. Based on his understanding that the fact that learners are participating in a discussion does not automatically mean that they are learning anything, Killen says (2000:42) "You have to help learners to think about the ideas being raised in the discussion and to use these to construct a deeper understanding…Prepare the discussion plan: questioning, timing, keeping a discussion moving and on the right track" (Killen 2000:52-53). This is what monitors do in supervised practice facilitation of discussion groups and the ideal that they would keep on practicing when not being supervised.

QUANDRANT B = Organizing

2.6.2.10 Taking Written Exams and Answering Questions in Writing in Student Books

These two learning strategies, commonly used in educational settings, are considered together because the difference between them is the length of time past before recalling the answers. The Text Africa books reinforce by having learners write several different times the same answer to the same question. Such repetition may be overkill for some, but it is effective in brain-based learning because the learners are re-writing the correct answer. That is the "programmed" aspect of the textbooks. Doing the lessons this way is motivational in that the learners are enabled to master the informational lesson material, and respond to this material, from memory, on written exams. Laubach *et al* (1991 91:187) corroborate the effectiveness of these written learning strategies used with adults with minimal formal schooling. When the learners do the homework as prescribed, on a daily basis, then their performance on the written (or oral) exam is enhanced by the practice writing of the correct answers.

Doing the homework of answering the questions in the student books is promised by the learner when he or she signs the covenant. From his framework of "emotional intelligence," Goleman (1996:285) says the bedrock of character is self-discipline…and "a related keystone of character is being able to motivate and guide oneself, whether in doing homework, finishing a job, or getting up in the morning". The Nazarene curricular reform requires attention given to the development of *character*. Answering the questions page by page, week after week, pours the informational content through the fingers of their writing hand. Then, having the answers in writing when the learners come to the face-to-face session provides equality in the preparation for discussions which take place in the session. Self-discipline belongs to Quadrant B, according to Herrmann (1995:425), and self-discipline is what it takes to get the home-work completed.

2.6.2.12 Attending Class at least 67% of the Time

This behavioural pattern of attending class most of the time implies traits like responsibility (to the cooperative group and to the learner's own goals), honesty (the learners signed a covenant that commits their attendance), as well as their skill in time management which is important for leadership. In relation to assessing attitudes, Henerson *et al* (1987:13) comment:

> Behaviors, beliefs, and feelings will not always match, even when we correctly assume that they reflect a single attitude; so to focus on only one manifestation of an attitude may tend to distort our picture of the situation and mislead us. We have no guarantee that the attitude we want to assess will 'stand still' long enough for a one-time measurement to be reliable. A volatile or fluctuating attitude cannot be revealed by information gathered on one occasion.

Excellent attendance at face-to-face sessions is not the only behaviour quantified and recorded over time. The next learning strategy is also quantifiable. Over the course of 42 different classes which the learner attends to qualify for ordination, a pattern of attendance emerges which infers measurement of attitudes like those mentioned above.

2.6.2.12 Discussions Based on Reasoning Questions

The second kind of question that monitors practice using in their training are "reasoning questions". While informational questions usually have only one correct answer because they are identifying factual data, "reasoning questions" have more than one answer; therefore they are the basis for healthy interchanges of ideas and positions in group discussion. Informational questions use journalistic words like *what, when, who, where, how many* and *how much* (Thornton 1990:50)*.* Reasoning questions probe the meaning and significance of information, so frequently are used right after an informational answer is given. For example, "What was special about the birth of Jesus?" Answer: He was born of a virgin (informational). "If Jesus was born of a virgin, what is the significance of his birth?" Answer: there are many answers because it was a reasoning question. Discussion ensues. The mental activities are reorganizing past knowledge in new

frames which belongs to Quadrant B and synthesis, which would be Quadrant D thinking.

St. Augustine is famous for using "Socratic questioning" which Armstrong (1994:70) describes

> In Socratic questioning, the teacher serves as a questioner of students' points of view. The Greek sage Socrates is the model for this type of instruction. Instead of talking *at* students, the teacher participates in dialogues *with* them, aiming to uncover the rightness or wrongness of their beliefs. Students share their hypotheses about how the world works, and the teacher guides the 'testing' of these hypotheses for clarity, precision, accuracy, logical coherence, or relevance through artful questioning.

Reasoning questions are a type of "Socratic questioning". The aim is not for the teacher/facilitator to uncover "the rightness or wrongness of …beliefs" but more that the learners discover this within themselves. Ideally the "testing of hypotheses about how the world works" takes place in discussions on reasoning questions.

QUADRANT C = Reflecting

2.6.2.13 Inviting God to Intervene (Prayer)

Contemplative prayer is described above as one of the classical spiritual disciplines. The prayer of this learning strategy is not the same thing as contemplative praying. This prayer is recognition of God in the learning environment. At the beginning of the face-to-face session, one of the learners in the group is asked to lead the group in spontaneous, non-formal thanksgiving for His presence and His blessings. The opening and closing of the class session in prayer is an affirmation of faith in the promise of God to be "with us". Indeed, as Laubach (1954:97) puts it:

> Learning to live with God is the highest of all habits...It may take longer to form than any other habit, but after a while experience will show that it grows easier. After months and years of practicing the presence of God, one feels that God is closer…At last, God gets so close that one stops thinking of God as outside himself, and begins to think of Christ inside in one's own though and breast. He sees God's thoughts flow into his mind. Sometimes one feels that they are coming in from above but more often one feels that these thoughts are welling up from the unconscious, as from a hidden fountain.

Prayer at the outset of the time spent together in the learning setting also gives the opportunity for learners to "bear each others burdens (Galatians 6:2) by praying for each other.

2.6.2.14 Encouraging and Helping Classmates

Mutual encouragement and the desire to help each other are hoped expressions of the trust and loyalty that learners in a cooperative learning group experience.

As the learners discuss important issues week after week and apply them to their individual situations, they "hear" each other. Dass and Gorman (1985:113) note, "In most helping situations…'I hear you' reflects a much deeper message: 'I understand. I'm with you.' The reassurance does not come from the words themselves, of course, but from what the words represent. It comes if the person indeed *feels* heard".

2.6.2.15 Peer Tutoring in Second-Chance Occasions

If learners in my research population do not accomplish all five criteria to pass a course when the other learners in their cohort pass, then a "second-chance" can be invented for them. In such inventions, the cooperative learning group may assign a peer to tutor the weaker one. This is an academic extension of the previous learning strategy "encouraging and helping colleagues". Gatimu *et al* (1997:27) surely pinpoint one of the activities of peer tutoring, "Dialogue is… found when students study in groups. In these groups they discuss the issues raised in the study material". Peer tutoring is a dialogic review of learning already in process. The readiness and willingness of a colleague to take time to help a peer in this way also is a display of traits like "kindness", "unselfishness", "loyalty" and "self-discipline". Henerson *et al* (1987:13) say that attitudes have "many *manifestations* – productivity, attention, interaction with others, verbal responses". They also say that attempts to measure an attitude such as racial prejudice may be "blurred by peer group pressures, the desire to please, ambivalence, inconsistency, lack of self-awareness". Applying this to peer tutoring, those who volunteer to help others may have some other personal agendas for doing so. However, the learning strategy has validity for certain cases; it is a useful solution for benefiting the weaker learner and for giving all the learners experience in group problem-solving, contributing to creativity and resourcefulness.

2.6.2.16 Reflection in Several Applications

Reflection a mental activity is discussed previously in several ways – as "critical reflection" in adult learning theories, as one of the partners of "praxis", as a component of Participatory Action Research and the Freirean approach, as parcel in "discussions" of all kinds, and in each of the "classical spiritual disciplines". Reflection, however, is not a "given" in all learning contexts. Not everyone is reflective by natural disposition or temperament; not all learners have experience in environments where reflection is encouraged. So, reflection may need to be practiced in the safe learning environment for it to become an acceptable practice. Sonnier (1962:54-55) suggests that a non-threatening beginning might be the simple question, "Did you enjoy learning this lesson?" Other simple questions may be more natural for the reflection of other learning populations. Some educators use quiet moments as time at the end of a learning session to deliberately reflect on what has happened during the learning session, time before closing, time before moving on to another activity. Reflection may have to be introduced in small, deliberate ways in order to be widely practiced.

2.6.2.17 Regular Singing of Songs

Singing is already a frequent activity among the population of learners in my research, so it is a normal part of their group settings. "Singing for learning" has been explained above, but the "regular singing of songs" is another learning strategy. It is the use of songs to create appropriate ambient in both spatial and temporal senses, not the whole-brain learning experience that "singing for learning" has the potential to be. Music unites, as previously cited in Storr (1992); so singing is a force to draw the group together, to unite the hearts and minds of the members. Singing usually is pleasant so it conditions the audio environment with harmony. Singing evokes emotion and rhythmic movement, so it stirs the learners. Singing is poetry put to melody, so it enhances memory. A children's song I learned long years ago says:

> Sing it! You'll never forget it!
> If you've something to remember, put it in a melody.
> Sing it! You'll never forget it, if you sing it!

To say that "you'll *never* forget" is an overstatement, excused by poetic license, but the repeating sound waves of song do make pleasant patterns over which memories seem to travel well. Brain-based educators like Jensen and Sprenger use music deliberately as a memory lane.

Among the learners of my population, singing in their maternal languages is very much preferred over singing in Portuguese, so singing in these first languages is continually encouraged. "Western Christianity...is very cognitive and analytical [A-quadrant]…in order for theology to be contextualized the truths of the gospel must be expressed through song, ritual, ceremony, and symbols [C and D quadrants] that are meaningful to the people" (Bartle 2001:91). For purposes of unifying groups of learners from different parts of the country, learning to sing songs in Portuguese also has some value, so the Student Guide of IBNAL (Scott 2001a) has a number of hymns and choruses which they also learn, which the monitors learn during their training.

2.6.2.18 Choral Reciting of Truths or Chants

The inclusion of "choral reciting of truths" as a learning strategy has four sources of inspiration: Jewish practice, Eastern Orthodox practice, the movie "28 Days", the personal memory of practices in youth organizations. The "shema" in Deuteronomy 6:4 is the heart of Jewish Law; they repeat it often, and can recite it in chorus. Most Christians know how to recite in chorus the truths of the Lord's Prayer, a few of the Christian creeds and John 3:16. Eastern Orthodox priests lead their flock to choral recitation of many truths. In the movie "28 Days" the main character, an alcoholic in a rehabilitation centre, refuses to recite truths that others are repeating when she first gets to the centre; but the chants are truth, and when she stops denying the truth of them, she joins in the recitation. Then, in life after the centre, the chanted truths appear in her thinking and help her through tougher times. The "motto", "pledge" and "promise" of each youth organization I was a member of (Girl Scout, 4-H, Job's Daughters) are still in my memory, and they still

inspire me. They are well-articulated, poetic expressions of noble behaviour. An example is the Girl Scout promise: "On my honour, I will try to do my duty to God and my country, to help other people at all times, and to obey the Girl Scout laws".

In terms of whole brain learning, the "choral reciting of truths" magnifies the audio effect of oral work; it is more than hearing a truth from just one voice so reinforces the impact. The poetic or mantra-like effect of repeating phrases several times in the identical way echoes or ripples in the brain. If neuronal impulses are like indentations in the "gelatine" of the brain, then repeated identical phrases may deepen the indentations, strengthening connections to other neuronal pathways.

Gravett says it very succinctly (2005:34):

> Neurons that are repeatedly used grow stronger synapses and more effective neuron neuronal networks. And the more they fire, the more they send out new branches looking for more and newer useful connections. The frequency with rich the synaptic pathway is used determines whether it will stabilise or not. Neuronal circuits that are used become stable or 'hard wired', while those that do not get used gradually 'dissolve". Thus, repetition is needed for strengthening synapses. The notion of frequent repetition or rehearsal must be considered in conjunction with the fact that it is the *learner's* neuronal networks that need strengthening. Consequently, educators need to shift the performing and rehearsal as much as possible to the learners. This once again highlights the importance of learning actively engaging and working with the learning content.

2.6.2.19 Discussions Based on Application Questions

The third kind of question which monitors in training learn to use is "application questions". These have personal pronouns in them and can have as many answers are there are learners in the group because the application is personal in terms of "I", "me", "my", "mine" or the collectives "we", "us", and "our". If such and such (Jesus rose from the dead) is true, how does this affect the way *we* act (conduct funerals)? Or, "How does this affect *our* attitudes toward dying?", etc.

Caine and Caine (1991:7) remind us that "people can and need to grasp the larger patterns. The part is always embedded in a whole; the fact is always embedded in multiple contexts". The knowledge collaboratively constructed in cooperative learning groups has both individual contexts and collective contexts for application, hence multiple right answers. Brookfield (1998:286) states that "A respectful stance towards the adultness of learners means that we acknowledge that their experiences in the world outside affects substantially what happens inside the adult classroom". Application questions have the potential to guide learners to apply this respectful stance to the inverse direction, taking the learning from their "learning setting" to "affect substantially what happens" in their living setting, i.e. their "world outside".

Brookfield also (1998:287) cites several studies (Mines & Kitchener, 1986; Rybash *et al*., 1986; Sinnott & Cavanaugh, 1991; Sinnott, 1994; and Kitchener & King, 1994) which "show that the capacity to make an informed critique of one's

experience is context and person-specific". This seems to mean that no one is really able to evaluate the experience of another. This respects the opportunity of the individual to apply learning to his or her unique experience. Yet…adults do seek consensus, that their choice of application is somehow appropriate and probably effective. Perhaps this seeking of consensus is more so in collectivistic societies than individualistic societies. In summary, then, discussions based on application as a learning strategy seems to be the planning phase of *praxis*.

QUADRANT D = Synthesizing

The deliberate inclusion of learning strategies from this quadrant is influenced by the position of Kreeft (1990:131): "I suspect that if Jesus were teaching today he would produce great movies and TV shows". Kreeft continues to describe the parables of Jesus as "really little mental movies. They were not only pictures, but moving pictures. He knew how much the mind is moved by moving pictures". The intended use of the D-quadrant strategies is to excite the minds of the learners to visual creations that are somehow more dynamic than what is on paper before them. The challenge is for them to "see" more than the eyes envision in order making a "more lasting dent" in their brain wiring. Others encourage this active envisioning: Bruner and Nouwen (1977:66) write about the visual power in stories in which we can "walk around, find our own place…encounter, dialogue and share". This makes every Bible story a new "world" (Bruner) or "land" (Nouwen) for learners to enter in the imaginations of Quadrant D. In visualization or in other D-quadrant fabrications concepts, ideas, principles, values, inspirations, etc. are synthesized, put together in a holistic construction which makes sense, has meaning, and ties together different parts and perspectives. So each of the five strategies listed here is connected to the others by these mental dynamics.

2.6.2.20 Icon or Visual Clue Interpretation

Icons are visual clues or graphic symbols for constructs of realities which may take many words to unpack. For example, depending on the meaning culturally attached to it, a triangle, as an icon, may mean to the person who sees it – a company for internet and other electronic communication (AOL), the sphinx of Egypt, or the triune God. Obviously, the meaning of the icon must be articulated.

Nazarenes and other Christian groups in Melanesia teach Bible and train others to teach the Bible by using stick figures. These essentially function as icons or visual cues. Bartle (1998:1) describes how this visual learning strategy is used in connection with praxis and cooperative learning groups:

> A village church with walls of woven bamboo, a cement floor and a roof of corrugated iron situated in the highlands of Papua New Guinea. Thirty women are seated on narrow wooden benches gazing intently at a large sheet of paper at the front of the church. The sheet is divided into nine squares and in each square are a series of stick figure pictures. The teacher holds an open Bible in one hand and a pointer in the other and step by step works her way through the lesson pointing to the various pictures as she teaches. From time to time she will ask one of the women to read the Bible verse that corresponds to the reference on the chart. Concluding her lesson she goes back and revises it and asks for any questions. After replying to any questions the class breaks into groups of two or three.

2.6.2.21 Key Words as Tags or Labels (or Suitcases to Pack Into)

With the definition referenced previously that Bruner gives of a word the basic unit of communication into which much meaning can be packed, single words can be used deliberately as "suitcases" into which many ideas and concepts may be stuffed. Functionally, key words can be used as icons; they do not have to be "read", they just have to be recognized as memory triggers. In the same way that the meaning of an icon must be articulated, words used as keys, tags or labels to subjects of larger significance, must also be articulated and/or textually explained in order to unify and particularize meaning within a cooperative learning group or other collegial setting. Besides exploration of the significance behind the key word, graphically distinguishing the letters, also is recommended in this strategy in order to cue the one seeing the word that the word is not used for its normal codifying function, but means something specifically. The use of the "word art" function on word processors works well for such presentations.

For example, ADAM as a key word becomes more than just a name. According to the meanings which I would attach to the graphic in the minds of learners, the key word tag has within it the story of creation and the first covenant of God with humans, the eternal purposes of God for all of creation, including humankind as steward of all creation, etc.

2.6.2.22 Photos, Pictures, Maps and Graphs

A picture is a tiny slice of reality so is more easily interpreted than maps and graphs which are symbolic or iconic; the latter represent reality, and these representations have to be explained. A picture (usually) makes sense without prior learning or verbal explanation. Maps and graphs do not. The "Bible in pictures" is the presentation of Biblical narrations in the form of sequential drawings which are like comic book strips. Unlike the stick figures mentioned previously, the drawings are life-like presentations which act like "pictures" in the presentation.

2.6.2.23 Discussions Based on Key Words

Vygotsky (1962:5) says that the unit of verbal thought is "found in the internal aspect of the word, in *word meaning*….it is in word meaning that thought and speech unite into verbal thought". Discussions based on words which are key to understanding the lessons in the textbooks are ways to identify and explore the basic units within the main ideas. Mental activity includes synthesis. Discussion about *key words* is continued in their use as visual symbols in the D-quadrant.

2.6.2.24 Identifying Heroes

Although other learning strategies like reading, listening to stories about, comparing one life to another, i.e. valuing the worth of the potential heroes, the mental vote-of-ascent that this person is "*my hero*" is a right-brain function. It is usually accompanied by emotion, like loyalty and aspiration to "be like" the hero. The D-quadrant mental activities are the holistic, constructivistic knowing of the

hero, a kind of thorough identification with the person that involves synthesis and imagination. Nouwen says (1977:65) we "call to mind men and women in whom the great vision becomes visible, people with whom we can identify, yet people who have broken out of the constraints of their time and place and moved into unknown fields with great courage and confidence," and he gives as example those described in the book of Hebrews, chapter eleven, which is the "hall of fame" of biblical heroes of faith.

2.6.2.25 Appropriately Applying Bible Content to Life Scenarios

The ability to appropriately apply Bible content to life scenarios resides at the heart of praxis. It presumes understanding of the Bible content so discussions concerning the meaning and potential applications precede the actual application to life situations. Bloom *et al* (in Anderson & Sosniak 1994:16-17) add that "when the student encounters a problem or situation, he will select an appropriate technique for attacking it and will bring to bear the necessary information, both facts and principles". This is a kind of synthetic, integrative thinking to action.

2.6.2.26 Praxis

As previously discussed for the term *praxis* the definition of Hasbrook (2002:1) is "the partnership of action-reflection-dialogue". This IS the intended strategy for the TEE model in which dialogue is based on the textual material in the textbooks and in the Bible and continues through reflection and action, reflection accompanies textual study, prayer, discussions and action, and action is carried out responsibly, reflectively and responsively in family, church and community as application of learning or response to reflection and dialogue.

2.6.2.27 Cooperative Groups

The use of cooperative learning groups is discussed at length in the previous section but it also is listed here since it is a holistic learning strategy. Cooperative groups contribute to the mutual moral, cultural and spiritual accountability of the learners in the groups, as those in the Wesley classes, and also as those in the first-century Church: "Out of…worship grew a fellowship of love and caring that was the most remarkable feature of the early church....nothing attracted and converted pagans more often than the love and caring that they saw among pagans" (Kelsey1984:41).

The validity of learning in groups vs. learning alone is captured in a testimonial by Williams (1987:42) of a sixty-year-old man who describes how such a study group with two-way participation has opened a new dimension in his life: "I've always loved to study. Since college days that has most often always meant reading by myself, usually in bed at night after the house got quiet....Something's been happening… that's opened up a whole new world for me. I'm becoming a part of a learning community again".

This case serves as an example of what Cohen is turning up in his study of over 3,000 older adults. He (2006:84) says "only 10 percent of the people I've studied describe the midlife transition as a crisis. Far more say they're filled with a new

sense of quest and personal discovery". For those of my learning population who are "older adults" in the cooperative learning groups, this news is encouraging.

2.6.2.28 Summary of Holistic Learning Strategies

The four-quadrant brain metaphoric model is useful for the consideration of learning strategies as it assists in assessing how strategies are more likely to vary in their effect on the brain. With the intention for learning to take place in more effective ways in the lives of the learners, then strategies which are probably more effective are better to choose. Among the thirty-one learning strategies explored and assigned to the brain quadrants which they probably stimulate, several surface as the most likely to facilitate learning holistically, so that these constitute the set of learning strategies which are the focus of my research: discussions of several types, praxis, singing for learning, classical spiritual disciplines, teamwork including team building work projects/ studying together / peer tutoring / pass-fail requirements, rehearsing integrity including hero-modelling / role-modelling / role-taking / self-sacrifice and cooperative learning groups.

2.7 Summary and Synthesis of Theoretical Framework

2.7.1 Summary of the Literature Review

The over-arching theoretical framework of this Participatory Action Research project is "holism". Within holism I review several concepts and models including whole-brain models of brain organization and function and holistic identity, memory and spirituality. Within holism, I also explore the construct of "tri-dimensionality" with the intent to posit my research within this tri-dimensional model of self, the tri-dimensional person the "social self", the "spiritual self" and the "whole-brain self". Within tri-dimensionality three specific constructs of learning are explored − spiritual learning environments, cooperative learning groups and holistic learning strategies − all of which facilitate the learning and development of the learner as a whole person.

The graphic model in Figure 2.9 illustrates the three dimensions of personhood in which the "social self" is surrounded by the different groups to which they belong, allowing the interpretation that a different sub-self relates to each group. Figure 2.9 also identifies the "spiritual self" as the "real self" in the centre of the person. The graphic model specifies the "mental self" as, particularly "whole-brain". "Memory" and "God" are written into the model of tri-dimensional personhood since all parts of human experience, social, spiritual and mental are tied together by memory and are influenced by the presence of God. While "remembering and understanding" are commonly linked as parts of learning, the other truth is that remembering and understanding of self are both parts of identity.

Cogmotics, as described by Copley (2000a, 2000b and 2000c) appeared to be similar to, perhaps even the same as *tri-dimensional learning* but after a more critical comparative analysis, it became clear that the aims are parallel, the theories and practices overlap but overall they are not the same. Table 2.9 which qualifies the comparison follows:

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[18] *The repetition of "three" in several aspects of this research is circumstantial and neither deliberate nor important.*

Copley			Tri-dimensional
Teaching	**Facilitating**	**Animating**	**Forming**
Information	Knowledge	Wisdom	Knowledge & Wisdom
Conditioning	Learning	Growing	Transforming
Passive	Participative	Experiential	Volitional
Monologue	Discussion	Dialogue	Utilize all 3 oral modes
Impersonal	Personal	Transpersonal	Relational
Serious	Light hearted	Whole hearted	Inspired
Authority	Advisor	Catalyst	Facilitator
Defined	Explored	Evolved	Organic
Disempowering	Enlightening	Empowering	Equipping
Cognitive	Cognitive/social	Cognitive/social/physical Emotional/spiritual	Cognitive/social/physical Emotional/spiritual
Partistic	Halfistic	Holistic	Transcendental
Fight	Fumble	Flow	Blossom

Traditional Teaching	**Cogmotic Animation**	**Tri-dimensional Facilitation**
Emphasize separateness	Emphasize wholeness	Emphasize oneness
Confuse uniformity with unity	Welcome diversity	Diversity and unity
Trivialise the individual	Exalt the individual	Exalt God
Dull the creative spirit	Nurture & celebrate creativity	Liberate & affirm creative spirit
Be competitive	Be collaborative	Be connected
Restrict	Liberate	Liberate
Block human energy	Release human energy	Focus human energy
Be static and rigid	Be dynamic and flexible	Be responsive and deliberate
One best way	Many different ways	Diverse excellence
Linear and hierarchical	Omni-directional and mutual	3-dimensional and participatory
Feel unnatural	Feel natural and free	Free, secure
Audio/visual	Multi-perceptual	Transcendent
Hard work	Joyful participation	Authentic significance
Outcome orientated	Process orientated	Process toward outcome

Table 2.9 Comparison between Cogmotics (Copley 2000a) and Tri-dimensional Learning

The characteristics of Tri-dimensional Facilitation of Learning which are found in the shaded areas of the above table become increasingly significant as the focus of my research narrows to facilitating learning through holistic learning strategies. The organization and function of the brain, as a whole, and its multiple processes of thinking are described in literature and explored in field research in many ways. I organise the considerations of this literature into five categories based on their perspectives of the brain. The literature has frequent references, too many to begin to cite, for the Multiple Intelligence Theory (Gardner 1983, 1987, 1999, Armstrong 1987, 1998, 1994), the Modular Brain Theory (Restrak 1979, 1988, 1994, Harth 1982, Bergland 1985, Pinker 1997, and also Gardner 1987, duality models including hemisphericity, vertical and lateral thinking (De Bono 1973,

1976, 1982, 1985), and the Triune Brain Model (MacLean 1952). There is less frequent reference to the Four Quadrant Model (Herrmann 1994) but I agree with Hulme (1996) that its metaphoric and non-technical presentation makes it user-friendly so I choose it for framing much of my research. Another reason to choose the Four Quadrant Model is inclusiveness; Herrmann folds into it understanding from other models and theories.

Several physiological aspects of brain function are basic understanding to the workings of the brain which underpin brain-based facilitation of learning: the networking of dendrites and creation and maintenance of synapses at the ends of neurons (brain cells), the vastness of the number of neurons, the physical division of the brain into left and right hemispheres connected by the *corpus collosum* which can be surgically severed but can also be bridged by dendrites collecting across the divide (Cohen 2006) and the long-known tri-partic structure (neo-cortex, mid-brain and brain stem). Recent attention given to the limbic brain, especially in relation to emotions, emotional memories, emotional intelligence (Goleman 1996, 1998) and spiritual intelligence (Zohar & Marshal 2000) as well as functional alterations that are triggered by changes in hormones that bath the brain cells are also pertinent to considerations of "memory" and, ultimately "selfhood".

Memory is organised in one part of the brain for ordinary input, and in another part for emotionally-charged input. The concept of memory being a recalling of knowledge or experience that is filed in a bush called "neuron network *x*" is probably less congruent with known brain functioning than the idea of memory a hurried searching "all over the brain," impulses scurrying along gelatinous impressions previously formed by neuronal connections, comparing pattern after pattern, getting to something that it is "like" (Gravett 2005:35) before it gets to the previous impression of what the knowledge or experience was – all in a matter of seconds (or a few more seconds if the learner is older.) As such, the memory is never quite the same as the first impression, because, of course, the brain is different the second time it constructs the knowledge or experience. As such, the memory of one individual differs from the memory of the same knowledge or experience of another individual.

Spirituality has many nuances of meaning but also several loci of source. Spirituality refers to the meta-physical aspects of personhood; these may be result of the connections of the individual 1) with a cosmic, something or someone at a point outside of self, 2) with a superior self deep within the individual or 3) with God outside of self and transforming self by personal encounter. The third position, which finds tenuous inference in Bruner, Gardner and Csikszentmihalyi and specific reference in Plunkett, Campolo and Copley, is selected as the position of this study.

Tri-dimensionality applies to the process of learning as each of three sub-selves – social, spiritual and whole-brain – responds, grows and develops through learning experiences. Within tri-dimensional learning the triune model of Johnston (1996) identifies the "processing self", the "performing self" and the "developing self" each as components of the mind. In the curricular reform of the global Church of the

Nazarene, the target outcomes are organised into four domains – the 4 Cs – content, competency, character and context.

Learning environments include the many physical aspects of settings in which teaching/learning encounters take place which may or may not be under the control of the facilitator. The attitudes of learners and facilitators and the relationships between each of them are the most important elements of a learning environment as inferred by Laubach (1960), Laubach *et al* (1991) Imel (1995), Freire (1970, 1994, 1996) and others. In most of the models cited of spiritual learning environments, *critical reflection* as the "spiritual activity" of applying Scripture to life as divinely intended is like the *critical reflection* as seen in adult learning literature which is labelled as a "cognitive activity". Out of hundreds of "spiritual learning environments" which exist or have existed, nine were chosen for brief presentation because of closeness of fit they offer in relation to the values and goals of the population of learners in my research: Moses, the synagogue, Jesus Christ, the Apostles, Augustine, Martin Luther, Ignatius of Loyola, John Wesley, and TEE. They are qualified as "spiritual" because of the deliberate inclusion of God in the learning environment, the inclusion of spiritual learning goals, and the spiritual quality of the learning materials, particularly the Scriptures.

I explore "cooperative learning groups" as a learning strategy for adults like those in existing models – the cultural circles of Freire, the classes, bands and leaders meetings of Wesley, the face-to-face sessions of TEE. Fundamentals of cooperative learning groups include discussions of several types and the abilities of facilitators in conducting them, reflecting, again, the importance of the facilitators in learning settings. Several African educators -- Letseka (2000), Goduka (2000), Mkabela and Luthuli (1997), Gatimu, Gachegoh, Oyiengo, Kithome, Suwa (1997) – see cooperative learning groups and holistic education as very good and necessary for African learners.

I identify at least some of the multiple groups to which the learners of this PAR research belong – Africans, Christians, Nazarenes, Tribal, Bi- or Multi-Lingual, Mozambican. In-group biases, which popularly might be called "group loyalty," can pull the learners first toward one group then another, especially in collectivistic societies. Besides these groups, they are also seen as "learners" and "leaders-in-development", and the fact that they also belong to these groups conditions the expectations of members of the groups to which they belong. Group consensus as a process of approving change is significant not only to the social sub-selves of a person, but also relating to the spiritual self. Some African educators (Gatimu *et al* 1997:26) hold that adult learners are so influenced by community norms and values that they do not accept changes that would isolate from peer groups or local community.

Learning strategies are deliberately chosen activities to facilitate learning in a particular population of learners toward identified and intended outcomes. *Holistic learning strategies* stimulate whole brain learning i.e. learning taking place in both hemispheres, i.e. in all four quadrants. In explaining and defining thirty-one different learning strategies, I use the metaphoric four-quadrant brain model of Herrmann, enhanced by the knowledge from other whole-brain theorists and neuro-scientists, to make informed guesses as to the kind of mental activities

involved in each learning strategy in order to assign each one to one quadrant or more than one. The learning strategies which are like rings of a telescope, one within another, are those most likely to be fully whole-brain, i.e. potentially stimulating to all four quadrants of the brain. These learning strategies are the "holistic learning strategies" and the focus of the research: group discussions, praxis, rehearsing integrity, classical spiritual disciplines, singing for learning, cooperative learning groups and teamwork.

2.7.2 Preliminary Findings: Application of Literature to Research Questions

My research hopes to speak relevantly by attempting to provide theoretical and empirical evidence toward answers to two preliminary and one major research question for three[18] specific audiences – Nazarene educators; all those interested in Theological Education by Extension; and Brookfield and other adult learning theorists. The answers at this point, based on the literature review, are partial – to be moved towards completion by means of the results from the use of other research instruments in the research design which follows in Chapter 3.

The first research question is, "**Do** holistic learning strategies actually facilitate adult learning?" Strategies used in many models of adult learning give considerable evidence from practice that, even though they were not called "holistic learning strategies", strategies which conform to my research definition of "holistic learning strategies" have been used with success for many centuries. **Discussions** of several types, which operate using democratic norms of mutual respect and equality, utilize critical reflection, reasoning, life application, articulation of position, and listening to position of others on the same truths, are widely used in adult learning today and were utilized in the models of Freire, Wesley bands, and Jesus with the Apostles which are known as successful in teaching adults. These same models also utilized other activities, directionally and deliberately: **cooperative learning groups, praxis**, **teamwork**, and **rehearsing integrity***:* hero-modelling / role-modelling / role-taking / self-sacrifice. Martin Luther and John and Charles Wesley did not call their hymn-singing "**singing for learning**" but they carefully put doctrine into easy and pleasing melodies which affected their learners holistically. The activities of solitude, silence, fasting, contemplative prayer, meditation, reflection, spiritual reading, church going and others considered **classical spiritual disciplines** were not only "life-styles" or "vows" of religious groups, but they also match the definition of "holistic learning strategies". Other learning modes are embedded in them, like "rehearsing integrity", "self-sacrifice", "hero-modelling", and "role-modelling".

The second research question is "**To what extent** do holistic learning strategies advance the learning of leaders in development when used by minimally-prepared trainers? The question is conditioned by the fact that the strategies are not being employed by highly skilled professions but by trainers whose level of formal schooling is "minimal" or even "low" by Western standards. Theoretically, according to Brookfield (1986:149) the fact of their schooling does not preclude the advancement of *bona fida* learning. According to linguistic and cultural theories of learning, the fact that the trainers are from the same ethnic group as their learners should benefit learning conditions. I hypothesize that the trainers who belong to very similar groups as the learners are able to very fully "speak

their language," not only in linguistic terms, but terms of application to current situations, in-group pressures and biases, contextualization of Scripture, and future implications. These trainers who are "their own" should not, therefore, limit the extent to which learning is advanced.

Since there was no base-line assessment on the population of learners, the *extent* to which learning is advanced is not quantifiable by comparing a beginning numerical measurement with another measurement taken later. Therefore, *extent* must be interpreted inferentially from words like "poorly" and "greatly". This subjective quantification is targeted in the empirical research. So "to what extent" is not answered in this theoretical portion, but is part of the field research.

The third and principal research question is "***How*** do holistic learning strategies facilitate learning?" I postulate that the words used to describe how the brain functions also apply to holistic learning strategies to help describe how they function to facilitate learning. Among the key words to consider are two sets of words:

- patterning, categorizing and congruent [19]
- relating, connecting and integral.

I propose that holistic learning strategies facilitate adult learning by assisting the learner to make the sub-selves of his or her personhood "congruent" and "integral". The basic brain operations to produce congruency and integrity are patterning, categorizing, relating and connecting.

The brain is always *relating* new impulse to previous impulse, new knowledge to previous knowledge, new images to previous images, comparing the relation of one to another. Synapses are formed to continually connect one dendrite to other dendrites; a greatly magnified healthy adult brain "looks like a dense forest of interlocking branches" (Cohen), everything connected to everything (Restack) like the points of a cube (Pinker). In a parallel way, holistic learning strategies also relate and connect different kinds of experiences which are stimulating the brain, relating new to previous, like to like, unlike to unlike, connecting every experience to every other experience. The result of greater relatedness and connectedness in the brain includes "greater reconciliation between thoughts and feelings" (Cohen 2006); "Making sense out of anything depends upon relating one thing with another, upon discovering or imposing order" (Storr 1992). I want to call this result "greater integrity". In the learning strategy "rehearsing integrity" learners relate intention to action, they connect intention to action, and they reconcile intention with action, producing in them a thorough personal integrity, from the brain level to inter-personal relations, to spiritual relations. In "singing for learning" learners connect the coded meanings of the words to concepts and ideals; they relate the words to rhythm and tone; they activate right and left hemispheres, upper and lower quadrants, establishing dendrite networks, synaptic linkages; they are moved; music produces intrinsic satisfaction (Storr 1992). Brookfield (1995) calls for more attention to the interaction between emotion and cognition, a call for more interaction between cerebral and limbic brains, left and right hemispheres.

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[19] *In geometry angles may be equal and congruent to other angles; if triangles are congruent then the lines and the angles which compose them are equal and congruent. When laid over one another, the shapes match each other.*

The brain is also always pattern-seeking, pattern-making, and pattern-identifying. Matching and categorizing are kinds of patterning. Even though our empirical understanding of how categories are organised in the brain is still lacking, we do understand "categorizing" on a macro level as sorting according to type. Learning strategies are experienced at inter-personal and intra-personal levels but the assignments to the four brain quadrants are based on typical activities at the level of the brain. I am trying to postulate parallelism between what we carry out at what I am calling "macro levels" (levels which are observable to the naked eye) and what the brain carries out at "micro levels" (levels which require brain-imagery machinery to observe)" positioning myself within the "cognitive revolution".

Hence, I return to the concept of personhood becoming "congruent" as the result of holistic learning strategies. Caine and Caine (1994:144) refer to "doubleplanedness" that is a kind of "congruence". In congruent (tri-dimensional) personhood, the selves "match" each other, are "congruent" to each other, there is fit between the social selves, between the social self and the spiritual self and the whole-brain self. There is peace because their centres and patterns overlap without edges causing friction. These selves categorise using the same criteria, and these categorisations are patterns repeated, practiced, rehearsed, known and known again within holistic learning strategies. The person is also "integral" which has to do with pureness of essence; a baby boy is 100% human, integrally human, even though he cannot walk or talk (yet). Relating and connecting results in fullness, lack of deficiency, no holes, completeness, fulfilment, i.e. integrity, a person, fully connected, is in touch with the selves of his or her personhood and God; inter-personal relationships are in tact; life is consistent, a well integrated whole. Holistic learning strategies assist learners to "make themselves whole".

This explanation reminds me of readings I did five years ago and actually surprises me; after these years of wide reviews of literature reading, researching and analysis, I did not expect to find myself aligned with statements I quoted at the outset of my literature review: "Smuts (1926) dealt with the fundamental tendency of 'whole-making'" while Storr (1992:175) declares that "creating wholes" is the "essence of human nature". However, all of the other literature I reviewed puts me on pathways which meander back to this position – whole-making.

In theory, then, holistic learning strategies facilitate adult learning by moving adults toward congruency and integrity in their lives. These strategies used within cooperative learning groups magnify the effect of strategies by multiplying the voices, increasing the weight of approval, and providing a safe, public, mini-society in which individuals can rehearse competencies of all types. When the learning environment is also spiritual, the effect is to magnify yet more greatly the effect of strategies by adding the weight of God's presence and His approval, and providing a theo-centric presence to relate to all of the sub-selves. Theoretically, then, the holistic learning strategies of successful models of adult learning as described in the literature give evidence that these strategies **do** facilitate adult learning. The empirical research will either corroborate or negate this evidence found in literature.

Theoretically, the use of holistic learning strategies by minimally prepared trainers should not affect the extent to which they (holistic learning strategies) advance the

learning of leaders in development. The empirical studies, therefore, not the literature review, are the source of data for answering the second research question: "To what extent can holistic learning strategies advance the learning of leaders in development when used by minimally prepared trainers?"

From divergent disciplines, the literature converges on a plausible explanation for **how** holistic learning strategies facilitate adult learning. They facilitate learning by operating within the learner in ways that are parallel to the internal workings of the brain, that is by categorizing and by other forms of patterning which move the person toward greater congruence between the sub-selves of his or her personhood and by relating and connecting to produce a more integral self. This explanation effectively reduces the importance of "adult", towards supporting Brookfield's proposition that other variables other than the "adultness" of learners are of importance. In this explanation, the significant issues are more the health of the brain and its development, especially in terms of its connectedness, rather than the age of the learner. Continued physical, mental and social activity and "eating right" are good for the maintenance of brain activity (Donavon and Wonder 1994), (Restrak 1994), (Gardner 1997), (Ivan-Smith 2002), (Cabeza 2002) and (Cohen 2006).

In empirical research, statements from participants which indicate greater internal harmony, understanding, maturity, more behavioural connectedness will substantiate the theoretical evidence for this explanation. Quantitative data regarding the value of studying is also pertinent to this question of "how?".

In addition to seeking out more complete answers to the three research questions, there are a few other secondary intentions of this research: 1) to describe the research population accurately, 2) to refine and test the TEE model, 3) to observe how *collectivism* may factor into the learning experience of my population, 4) to respect the plea in the literature to move as close as possible to instruction in the mother tongues, and 5) to provide a public (written) platform for the many voices of learners and educators who participate with me in this Action Research. I have spent most of the last five years listening to them and reading their reflections and opinions. They have valuable contributions to make that many others, too, will want to hear.