CHAPTER 2

CURRICULUM THEORY, CURRICULUM DEVELOPMENT AND CURRICULUM IMPLEMENTATION

2.1   INTRODUCTION

It is normal to discuss curriculum matters, and especially curriculum implementation, without considering the complexities concerned. In Mozambique, for instance, it is widely held that students' poor academic performance is caused by shortcomings in the curriculum when the fault should in fact be sought in the *teaching-learning process,* which is merely a part of curriculum. Macdonald (2006:4) observes that "…a lot of attention is paid to the outcomes or results of our activities in terms of student results, less energy is expended in finding out how well we carry them out". As Hameyer (2003) noted, the quality of a curriculum can only be as good as the quality of the curriculum process, depending on the self-renewing capacity of the individual school. Likewise, Lovat and Smith (2003:74) emphasize that "student achievement can only be enhanced when the nature of the pedagogy required is targeted with precision and implemented with rigour, and with assessment for outcomes that is in tune with the entire process." Therefore, Glatthorn, Boschee and Whitehead (2006:73) point out that it "is essential to develop a fundamental understanding of curriculum theory by the providing the tools necessary when analyzing curriculum proposals, illuminating practice, and guiding reform."

In effect, three distinct levels, perspectives or representations, namely, "intended", "implemented" and "attained" curriculum are often confused in a way that it is easily and superficially concluded from the outset of the initiative that the curriculum change, which is innovation, is doomed to failure. As Lovat and Smith (2003:133) point out, "the truth is that good curriculum is theory-and-development, planning and practice, as one. When we opt for one against the other, we do damage to good learning." Indeed, it is essential for a critical analysis of curriculum implementation to proceed with due deference to this observation.

It follows, therefore, that all curriculum approaches (e.g. behavioural, managerial, systems, academic, humanistic and reconceptualists) must be given their due in

overall curriculum development, and curriculum theory must guide all curriculum activities (Zais, 1976; Marsh, 2004). In light of the above, this chapter is intended to raise awareness of the curriculum in concept and the perspectives and approaches that serve as criteria for curriculum evaluation, with particular reference to curriculum theory and curriculum development.

Thus, accurate analysis and understanding of curriculum implementation is made possible by taking due account of the curriculum concept, the perspectives on and approaches to school curriculum, and curriculum theory and development. That is, before we deal with issues about curriculum implementation in Mozambique, it is worth addressing questions about the purpose and nature of curriculum. Incidentally, Ornstein and Hunkins (1993:184) aver that theoretical perspectives may allow us "to bring to bear our repertoire of habits, and even more important, to modify habits or discard them altogether, replacing new ones as the situation demands". Therefore, the purpose of this chapter is to provide a theoretical background in order to shed light on the nature of the new basic education curriculum in Mozambique and the means required for its successful implementation, to be considered in detail in chapter 3.

So, based on theoretical background incorporated into chapter two, compared with the new curriculum development approach of basic education in Mozambique presented in chapter three, the findings reported in chapter five are critically analysed and discussed in chapter six. Finally, the conclusions, recommendations and implications covered by chapter seven are substantiated.

It will be seen from the discussion of theoretical background that as Posner (2004:4) asserts, "there is no panacea in education and it is reflective eclecticism that is at the heart of curriculum study." In the same vein, Doll Jr (2002:45) avers that curriculum is currently understood as "a process or method of 'negotiating passages'- between ourselves and the text[3], between ourselves and the students, and among all three." It is hoped that the background discussed here will serve as adequate preparation for a

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[3] According to Pinar et al. (1995:48), the term text (discourse) is used "to focus on the language of the field, that is, the scholarly production of the field, to insist the field is its scholarly production. The concept of text implies both a specific piece of writing and, much more broadly, social reality itself."

critical appraisal of the process of implementing the new basic education curriculum in Mozambique.

2.2   THE CURRICULUM CONCEPT

According to Smith (1996, 2000:1) "the idea of curriculum is hardly new - but the way we understand and theorize it has altered over the years — and there remains considerable dispute as to meaning". Therefore, d*efining the word **curriculum** is no easy matter* (Marsh & Willis, 2003:7). It consists of disjunct or fragmentary parts. Ornstein and Hunkins (1993:1) aptly note that "curriculum as a field of study is elusive and fragmentary, and what it is supposed to entail is open to a good deal of debate and even misunderstanding." Lovat and Smith (2003:6) confirm that:

> The word (curriculum) itself is used in many different contexts, by principals in schools, by teachers, by curriculum writers in education systems, and increasingly by politicians. It can mean different things in each of these contexts.

In fact, definitions of curriculum abound in the literature, in various autonomous discourses using key terms in complex and even in contradictory ways (Pinar et al., 1995). The core meaning of curriculum is embodied in its Latin derivation from a "course" or "track to be followed". Marsh and Stafford (1988:2) confirm that "the word *curriculum* comes from the Latin root meaning "racecourse" and, for many, the school curriculum is just that — a race to be run, a series of obstacles or hurdles (subjects) to be passed." Marsh and Stafford (1988) highlight three dimensions of curriculum concept. First, they explicit that curriculum includes not only syllabi or listing of contents, but also a detailed analysis of other elements such as aims and objectives, learning experiences and evaluation as well as recommendations for interrelating them for optimal effect. Second, "curriculum" comprises planned or intended learning, calling attention to unexpected situations which necessarily may occur in the classroom practices. Third, curriculum and instruction are inextricable. Lovat and Smith (2003:16) rightly contend that "curriculum is part of teaching, not separate from it." Therefore, the most agreed basic notion of the curriculum is that it refers to ***a plan for learning*** (Todd 1965; Neagley & Evans, 1967; Zais 1976, Marsh & Stafford, 1988; Van den Akker, Kuiper & Hameyer, 2003 and Lovat & Smith, 2003). This concept of curriculum as (*cf.*Van den Akker 2003:2) "limits itself to the core of all

definitions, permitting all sorts of elaborations for specific educational levels, contexts, and representations." Discussing this curriculum concept, Marsh and Stafford (1988:4) argue that curriculum is "an interrelated set of plans and experiences which a student completes under the guidance of the school." Furthermore, Marsh and Stafford (1988:4-5) clarify the comprehensiveness of this definition as follows:

- The phrase, "interrelated set of plans and experiences" refers to the point that curricula which are implemented in schools are typically planned in advance but, almost inevitably, unplanned activities also occur.

- The phrase "which a student completes under the guidance of the school" is included to emphasise the time element of every curriculum.

- "Under the guidance of the school" refers to all persons associated with the school who might have had some input into planning a curriculum and might normally include teachers, school councils and external specialists such advisory teachers.

Strikingly, in line with this curriculum concept, an encapsulated definition was given earlier by Richmond (1971:87), who stated that "curriculum is a 'slippery' word, meaning in the broadest sense the 'educative process as a whole' and, in the narrowest sense, 'synonymous with the syllabus, a scheme of work, or simple subjects."

However, as Lovat and Smith (2003) point out, the main concern is not to arrive at a specific definition of 'curriculum'; rather it is to be aware that:

- Curriculum means different things to different people; it is therefore important to consider the context in which the term is used.

- The meaning attributed to the word 'curriculum' is associated with particular ideology or set of beliefs about education and the world.

- A number of issues and concerns that are central to the nature of curriculum work itself are suggested by different usages and meanings of the term 'curriculum'.

Incidentally, Middlewood and Burton (2000: xi) make the relevant point that:

> "Debate about the meaning of 'curriculum' is destined to continue, but deciding upon a precise meaning is unimportant compared with ensuring that the learning experiences of children, young people and adults in individual schools and colleges are of the highest order of the appropriate purpose."

Thus, curriculum may be looked at from different perspectives and approaches, which should be clarified if the process of curriculum change is to be understood. According to Van den Akker (2003), a basic analysis concerning curriculum improvement comprises three distinct levels, perspectives or representations, namely: "intended", "implemented" and "attained" curriculum.

In fact, the three salient characteristics of curriculum as stated tend to be modulated by perspective. Nevertheless, they are intrinsically connected to the extent that curriculum implementation cannot be considered without account of the "intended" as well as the "attained" curriculum. I realize that the said three aspects of curriculum constitute a chain with strong links that cannot be ignored in a critical appraisal of curriculum change; hence it is deemed necessary to revisit them to clarify the purpose and direction of the research in hand.

The intended or planned curriculum comprises the ideal or abstractly conceptual curriculum and the formal or written curriculum (Goodlad 1979; Saylor, Alexander & Lewis 1981; Marsh & Willis 1999; Hameyer 2003). The ideal curriculum is the vision, including information that presents an overview (bird's–eye view) of "why", "when", "how" and "what" is supposed to be taught and learned. It is the rationale, the basic philosophy or the epistemological base underpinning the curriculum. The formal, written curriculum covers the practicalities of "why", "when", "how" and what" as expressed, for example, in curriculum documents, syllabi, or in school resources such as textbooks and other materials. Posner (2004) refers to it as the official curriculum. How curriculum is implemented depends on users' perceptions and, therefore, how they are influenced by the implementation, which is the actual process of teaching and learning (the enacted curriculum — Marsh & Willis 1999; the operational curriculum — Hameyer 2003; the observed curriculum — Saylor, Alexander and Lewis 1981). It is the real curriculum, the curriculum-in-action, for

example, how the official curriculum is translated into classroom practices. The users whose perceptions/interpretations of curriculum implementation depend on their various viewpoints are the students or parents (the perceived curriculum — Hameyer 2003 or the experienced curriculum — Marsh & Willis 1999) and the teachers whose influence takes pride of place. Users' views greatly determine how implementation is effected. In other words it is a reciprocal process — users' views are influenced by, and intern exert influence on implementation.

The attained curriculum has a twofold meaning: it comprises an experiential and learned curriculum. The experiential curriculum includes knowledge or skills gained by the learners as a result of learning experiences, which depend in turn on how the curriculum is implemented and therefore also on factors such as overall learning organization and school climate. Hence, one intrinsic effect of the experiential curriculum is the so-called 'hidden curriculum', which according to Glatthorn, Boschee and Whitehead (2006:23) is also referred to as the 'unstudied' or 'implicit' curriculum, which "might be seen as those aspects of the learned curriculum that lie outside the boundaries of the school's intentional efforts".

The learned curriculum is what learners have really learnt. It refers to knowledge, skills and competencies gained by learners as a direct result of the teaching and learning process. As Malcolm (1999:80) observes, "what teachers teach is not necessarily what students learn". This fact should lead us to bear in mind the remark by Broussard (2002:71) that "each student is different, and … each situation is unique and must be handled with lots of thought". Referring to Africa, in particular sub-Saharan Africa, Sedel (2005:31) points out that less than one-third of the schoolgoing learners acquire the knowledge and skills specified in their national primary education curriculum. The learned curriculum is, in the last analysis, the learning outcomes of learners in comparison with the intended curriculum as well as the implemented curriculum.

Summing up the above discussion of the curriculum concept, I agree with Lovat and Smith (2003), who assert with Van den Akker (2003) that curriculum is essentially practical activity, which is creative and artistically informed by theory. Curriculum is concerned with decision-making, with choosing the most appropriate or justifiable

alternatives, given the learners, the teachers, the resources and the learning context (i.e. curriculum work is context-specific), integrating both perspectives of 'intention' and 'actuality', and of 'process' as well as 'product' in classroom practices. Lovat and Smith (2003), referring to interrelatedness of the different curriculum levels, observe that "curriculum at a national, state, system, or even faculty (school) level, can only be as intention. It is only at the classroom level, at the level of experience of teachers and learners that curriculum is not only intentional, but also actual". From discussing curriculum as concept, we may finally come to the conclusion of Doll Jr. (2002:46): "Looking at curriculum- not as a linear course to be run – but as complex and dynamic web of interactions evolving naturally into more varied interconnected forms is a formidable task that will require vision and perseverance". The curriculum concept implies different curriculum approaches as will be reiterated and detailed in the following section.

According to Malcolm (1999:10) "a clear vision of the curriculum in action and good documents are a first step (whether at school or national level). Investments in teacher participation, teacher development and management education are just as important". The Mozambique Education Sector Strategic Plan (ESSP, 1999-2003) under the motto "Reviving Schools and Expanding Opportunities" emphasized the need to review the existing curriculum for basic education to ensure a clear vision of the curriculum in action towards successful change. In fact, there was widespread agreement that the curriculum in force in primary schools was increasingly inappropriate to the rapid transformation of Mozambican society. The efficiency of delivered education was extremely low. For instance, according to ESSP (1999-2003), only six of every hundred students who begin school graduate from EP2 (upper primary level).

It was also assumed that the Ministry of Education should not develop a new curriculum on its own, nor impose a single model on all schools in the country. Therefore, the Ministry of Education initiated a democratic and participatory curriculum process under the leadership of INDE, involving teachers and other stakeholders in the development of a new curriculum framework as indicated in chapter one and described in chapter three. Simultaneously, preparation of the school textbooks and teachers' guides in accordance with the syllabi of the new

curriculum, providing training for teachers (preservice and inservice), as well as enhancing the qualifications and training of principals, were strategies adopted within the remit of efforts to implement the new curriculum.

2.3   CURRICULUM APPROACHES

The curriculum approaches are discussed in this section with a view to provide insights into the nature of the new Basic Education Curriculum in Mozambique. However, the pertinent reflections are made in section 2.3.7. According to Marsh and Willis (1999:18) curriculum approaches are:

> different ways of thinking about curriculum and of connecting thought with practice, whether the many beliefs and ideas that constitute any particular curriculum approach are made explicit or remain implicit.

According to Ornstein and Hunkins (1993) the main curriculum approaches are the following:

- Behavioural
- Managerial
- Systems
- Academic
- Humanist
- Reconceptualist

An expository discussion of those approaches follows:

2.3.1 The behavioural approach

The behavioural approach is the oldest and still the reference approach to curriculum. "Behaviourism is primarily concerned with observable and measurable aspects of human behaviour" (Standridge, 2002:1). According to Power (1982:168), the basic principle of behaviourism is:

> Whatever can be known about human beings must come from an observation of behaviour, moreover, must be conducted according to the strict methods of scientific procedure that is used in the physical sciences."

So, the behavioural approach is logical and prescriptive and grounded on technical and scientific principles. It comprises paradigms or models as well as gradual and detailed strategies for formulating curriculum. This approach is generally underpinned by a plan specifying goals and objectives, contents and sequenced, structured activities, methodologies, and learning outcomes with corresponding criteria and evaluation forms, taking into account the established curriculum goals and objectives. Thus, the behavioural approach covers the curriculum development in its wider sense. It is not restricted to curriculum evaluation only. Williams (2002:2) avers that:

> Behaviourists have a solid conviction that environmental forces responsible for making us what we are must be organized with extreme care and be reactivated in the school's curriculum with the same scientific precision that engineers employ when they design a complicated machine.

In fact, the behavioural approach is orientated to the behavioural objectives, which according to Zais (1976:312) "are simply objectives in terms of the observable behaviour expected of students after instruction." This means that the behavioural approach focuses on what learners should be able to do as a result of the teaching and learning process (Posner, 2004). Indeed, if curriculum workers are to agree on the meaning of the objectives that students are supposed to fulfil, they also need to agree on the operational criteria that express those objectives. In other words, everyone concerned with behavioural objectives, on the one hand, should know exactly what a given behavioural objective means; and on the other hand should be able to determine to what extent it has been achieved after instruction (i.e. teaching and learning process). Furthermore, as Standridge (2002) points out, behaviourists argue that human behaviour is learned although all behaviours can either be unlearned or relearned. This qualification should be taken into account in the process of curriculum development, especially in the curriculum design. At this point it is apposite to recall the observation by Lovat and Smith (2003:17) that "product and process cannot be separated: the process is the product: the way we learn is what we learn: we learn what we do". Hence, the behavioural curriculum approach implies a plan specifying goals and objectives, contents and sequenced, structured activities, methodologies, learning outcomes with corresponding criteria and evaluation forms, as noted above.

Alternative appellations for the behavioural approach are *logical-positivist, conceptual-empiricist, and experientialist, rational-scientific and technocratic* (Ornstein and Hunkins, 1993:2). It has recently regained much of its importance with the movement towards outcomes-based curriculum. These learning outcomes are skills, knowledge and behaviours embodied in the national curriculum and are the basis of all external exams and tests as well as reports on pupils' learning. Moreover, the learning outcomes are fundamental requirements or benchmarks designated to hold schools and teachers accountable in terms of producing verifiable evidence of the adequacy of learners' achievement (Lovat & Smith 2003). A careful reading and analysis of guidelines drawn up for the Mozambican new curriculum for basic education contained in a document titled "Curriculum Framework of Basic Education" PCEB, will recall that the said curriculum is premised on the behavioural approach. However, the teaching methodologies suggested in the new curriculum, specifically in the syllabi or teaching programmes, are clearly constructivist. In fact, the PCB shows that the overall exercise of curriculum change started with a thorough audit of learning outcomes (i.e. skills, attitudes, knowledge) as a measure of the effectiveness of the curriculum declared defunct. The outcomes were measured against the general objectives set up in the National Education System Act for basic education and reelaborated as the foundation stone of the new curriculum. With a view to integrating curriculum through interdisciplinary strategy the reelaborated objectives form the intended graduated profile or outcomes for basic education in that the general objectives are reflected in each curricular subject and specific objectives are derived from them. The selected content and learning activities are aimed at realising the objectives. The syllabi or teaching programmes are the official documents which incorporate the learning objectives in general and in specific terms, the selected content or activities and the foreseen learning time of each selected learning experience. The methodological suggestions, broadly referred to in PCEB, are also included in the syllabi. These methodological suggestions are oriented to student-centred learning, based on a constructivist, reflective, interdisciplinary and spiral teaching-learning approach, designed to develop basic skills, attitudes and knowledge. For instance, in the Natural Sciences Teaching Programme (an integrated component of the Teaching Program for Basic Education in the Third Learning Cycle), the principle is emphasized that the learners, children are not "a clean slate". When they start school they have already acquired a considerable body

of knowledge through observation, activities, games and imitation of adult behaviour. So, the learners normally have an intuitive explanation of some natural phenomena. The teacher must know about these intuitive ideas (preliminary knowledge) and use them as starting point for the construction of a scientific vision. Von Glasersfeld (1996:7) notes in this regard that "the task of the educator is not to dispense knowledge but to provide students with opportunities and incentives to built it up". Simultaneously, the teacher contributes to eliminate students' misconceptions formed by misinterpreting daily life experiences. The teacher bridges the gap between intuitive and scientific knowledge through dialogue and reflection; indeed, this kind of communicative teaching is essential when using constructivist methodology. Incidentally, Von Glasersfeld (1996:7) observes that "language is the most powerful tool available to the teacher, but it does not transport meanings or concepts. Language enables the teacher to orient the student's conceptual construction by precluding certain pathways and making others more likely". Lieberman (2001:160) argues that "teaching is both transmitting and engaging in transactional learning". The Natural Sciences teaching programme refers to this constructivist approach as *mind challenging*, *transposition*, *elicitation* and *consolidation* of knowledge.

The behavioural approach is strongly linked to the idea of efficiency (*cf.* Ornstein and Hunkins 1993; and Smith 1996, 2000) which is largely imported from business, technological and industrial settings, where they are supported by the scientific management theories of Frederick Tailor. In this regard, Ornstein and Hunkins (1993:2) note that "often ensuring efficiency in schools meant eliminating small classes, increasing student-teacher ratios, hiring few administrators, cutting costs in teacher salaries, maintaining or reducing operational costs, and so on, and then preparing charts and graphs to show the resultant lower costs". These measures are also delineated in the Education Sector Strategic Plan (ESSP), 2006-2010/11 (following the previous one covering the period 1999-2003 and applied in the Mozambican education system. Thus, the ESSP (2006-2010/11) recognizes that financial constraints prevent the appointment of sufficient numbers of qualified teachers at schools. In effect, the ESSP (2006-2010/11) indicates that for the projected increase of the new pupils' admissions in the school system during the next five years within the efforts to Education for all (EFA), Mozambique Government would not be able to employ at primary schools graduated teachers from IMAPs, who

currently have a salary equivalent to 10.7 times of gross domestic product (GDP) per capita. Consequently, the ESSP (2006-2010/11) highlights that the affordable teachers, who have now been recruited are less than the real needs (in teachers). In fact, the student-teacher in EP1 ratio has risen from 62/1 in 1999 to 74/1 in 2005 and classes with more than 80 students in a classroom is the rule rather than the exception. (The 2005 Pretoria Declaration on Teachers, of which Mozambique is a signatory, recommends in paragraph 25 that "a useful benchmark for countries with excessive average class sizes would be 40 learners in a classroom".) According to the ESSP (2006-2010/11) the growing deficit in the provision of education will be addressed by introducing measures such as the following:

- Reducing training for basic education (grades 1 to 7) to one year instead of two and lowering the salary accordingly.
- Abolishing the three-year training programme substituting the one-year programme, which meant the entry qualification would be grade ten rather than grade seven which was prescribed for the three-year course, and the starting salary was unaffected.
- Expanding the cost-effective in-service teacher training programmes with adequate resources coordinated by the ZIPs shed light on CRESCER Programmes (Courses of school capacity building: Systematic, continuous, experimental and reflexives).

These decisions may to some extent jeopardize the intended effectiveness of education. For example, effectiveness is by overcrowded classes, low salaries of teachers, unsatisfactory working conditions, reduced initial training periods and financial constraints that inhibit staff development. These problems are not only attributable to the poverty of the country, but especially to the tendency to mistakenly apply economic strategies designed to increase productivity in business and industry (e.g. the principle of measuring efficiency as a function of producing more in less time and also using relatively less resources) to the domain of education.

However, the behavioural approach has the benefit of clarity and precision in the specification of outcomes, although it is also the object of criticism for this very reason. Zais (1976) and Smith (1996, 2000) argue that the benefits of precise

specification are only observable at the lowest level of learning where trivial skills, competencies or outcomes are concerned (e.g. adding numbers, memorizing facts, answering specific questions), which are considered closed-end goals. The higher-order tasks (e.g., critical analysis of literature and art, analytic or synthetic thinking) imply open-ended goals requiring the definition of a vast number of specific objectives, which is impracticable in the process of curriculum development. In this debate, it is worth bringing up Zais's (1976:315) remark in which he emphasizes that:

> Most of the criticism of behavioural objectives is based on what turns out to be a dogmatic application of the operational principle to a pre-Deweyan notion of "ends"- i.e., objectives viewed as independently validated terminal points toward which action is directed.

Thus, it is clear that behavioural approach needs to be updated and improved by applying it critically.

2.3.2   The managerial approach

The managerial approach entails consideration of the school as a social system, based on organizational theory, in which the constituent members (e.g. students, teachers, curriculum specialists, and administrators) interact in harmony with certain norms and behaviours. In this context the managerial approach focuses on programmes, schedules, space, resources and equipment, as well as personnel, requiring cooperation among teachers, students and those who are responsible for curriculum supervision outside of school. Ornstein & Hunkins (1993:3) noted that "consideration is given to committee and group processes, human relations, leadership styles and methods, and decision making". That is to say, the managerial approach gives more emphasis on the supervisory and administrative aspects of curriculum, focusing mainly on the organizational and implementation aspects of the process.

The managerial approach has to do with change and innovation, exploring "how curriculum specialists, supervisors, and administrators can facilitate these processes" (Ornstein & Hunkins, 1993:3). Under this viewpoint, the curriculum specialist or supervisor is regarded as a facilitator, a resource person (person who is available to help teachers or colleagues to achieve curriculum goals), an agent of change. As

noted earlier, the implementation strategies employed o introduce the Mozambican new basic education curriculum as defined in PCEB reflect the managerial approach. Indeed, the PCEB asserts that the success of any curriculum change initiative unquestionably depends on the appropriate use of implementation strategies, for which read a suitably adapted managerial approach translated into effective implementation strategies (see section 3.4 of this report). Above all, the following observation by Hall and Hord (2001:13-14) served as a guiding principle from the outset:

> Administrators also have to secure the necessary infrastructure changes and long-term resource supports if use of an innovation is to continue indefinitely. And finally, yes, policy-makers need to design policies that legitimize the infrastructure changes and innovate practices and encourage the continued use of the innovation.

2.3.3 The systems approach

Among other names, the systems approach to designing curriculum, is also called instructional systems deign (ISD). In accordance with Clark (1989:3), the system approach or instructional design may be understood as:

> "a systematic model used to plan, design, develop, and evaluation training, which includes the following components: (1) a needs analysis; (2) a task analysis; (3) a definition of learning objectives; (4) the development of an assessment plan; (5) the development of learning material; (6) a plan to try out with revision (pilot) and (7) the implementation of the final product.

Clark's definition (1989) of the systems approach classifies it under the behavioural approach since it is designed to achieve clear and measurable ends or objectives. Ornstein & Hunkins (1993) states that the main feature of the systems approach is the interconnectedness of different programs and content areas included in curriculum, while serving as an index of how the school is restructuring and reculturing , for example by introducing a monitoring and assessment system. That is to say, the systems approach involves curriculum integration, relevancy character to participants, monitoring mechanisms, evaluating procedures and practices forming part of curriculum implementation (e.g. systematic evaluation). In this regard, Bradley (2004) considers that by the systems approach the school involves its clients

(students, parents, institutions of continuing education and students' future employers) and stakeholders (people or organizations whose operation is directly or indirectly dependent on the quality of school) as part of the system. This curriculum approach is reflected in the new Mozambican basic education curriculum (PCEB 2003; Bazilashe, Dhorsan & Tembe, 2004; Castiano, Ngoenha & Berthoud 2005), which was crucially informed by a process of policy dialogue and consensus building. The following should be noted in this regard: modalities of consultation and participation in formulating curriculum transformation policy (e.g. definition of basic education objectives, integrated curriculum through interdisciplinarity, relevance of the curriculum to Mozambican society and piloting and monitoring of implementation of the new curriculum)

The literature refers to the ISD approach as especially effective in developing learning experiences that meet the needs of a well-defined target group (e.g. particular learners, Scafati, 1998), but critics of ISD approach complain that it lacks flexibility in the sense that it presupposes a closed and predictable system. That is to say, as Scafati (1998:389) points out, it is presumed that:

> By clearly defining the objectives and the assessment processes of a course or lesson, ISD provides a consistent and repeatable educational experience. Consistency is the sense that any number of students can be exposed to the process and be assured that they will attain mastery of the subject.

Another objection to the ISD approach is that the process from inception to implementation takes too long, given the pressure of occupational demands that teachers have to meet. This time factor has a critical bearing on the efficiency of the system. However, Mingat (2005) notes that the productivity of time can greatly depend on how efficiently is used. In the same vein, Marsh & Willis (1999:94) aver that "… making decisions about how people should use their time and energy involves too many complexities to be reduced to a formula". Therefore, the above criticism is debatable since it does not affect the relevance of the ISD approach.

2.3.4 The academic approach

The academic approach "attempts to analyze and synthesize major positions, trends, and concepts of curriculum."(Ornstein & Hunkins1993:6). It tends to be grounded on historical and philosophical curriculum developments and to a lesser extent on social conditions. This approach is concerned with comprehensive domains of schooling, including the study of education. It is usually scholastic and theoretical, hence, also referred to as "traditional, encyclopedic, synoptic, intellectual, or knowledge-oriented approach" (Ornstein & Hunkins 1993:6). Hewitt (2006:162) suggests that the academic approach is linked to the purposes of the famous Philadelphia Academy created in 1749 by Benjamin Franklin:

> The academy curriculum included the traditional study of English, reading and writing, with attention to grammatical construction, pronunciation, writing style, and correct speech. History was included as the vehicle for learning morality, and new subjects included geography, philosophy, oratory (forensics and debate), politics and human affairs. What was innovative, even radical, was the inclusion of new, practical subjects for study. These curriculum additions proposed by Franklin were agriculture, technology, science, and inventions.

The Academic approach is reflected in the design of the Mozambican new curriculum as the pursuit of three main objectives, namely delivery of (1) basic literacy and numeracy; (2) basic technological skills in the domain of practical activities and arts; and (3) patriotic education expressed in the three comprehensive curricular areas defined in the PCEB as:

- communication skills and social sciences;
- mathematics and natural sciences; and
- practical and technological arts
  (see section 3.3.3 below).

2.3.5 The humanistic approach

According to Ornstein & Hunkins (1993), the humanistic approach is underpinned by child psychology with a view to coping with the needs and interests of children and by humanistic psychology with emphasis on valuing, ego identity, psychological health,

freedom to learn, and personal fulfilment. The teacher therefore serves as facilitator and resource person for students. The curriculum mainly focuses on active interaction among students and teachers, on problem solving, and on inquiry. These procedures are included in the framework of the new curriculum (PCEB).

2.3.6   The reconceptualists

The reconceptualists represent an approach to curriculum design without a model to guide the design (or to deal with technical matters), tending rather to focus on larger ideological and moral issues relating to education (not only curriculum) and economic and political institutions of society (not only of schools) (Ornstein & Hunkins 1993). This approach is rooted in philosophy as well as social and political contexts. According to Jackson (1992:35), it is based on three main characteristics:"(1) dissatisfaction with the Tyler Rationale, (2) the employment of eclectic traditions to explore curriculum, such as psychoanalytic theory, phenomenology, existentialism and (3) Marxist and neo-Marxist trends." In the same vein, Pinar (1991:35) noted earlier that:

> Reconceptualization is an umbrella term to referring to a diverse group whose common bond was opposition to the Tyler rationale, to behaviourism in curriculum conceptualization (including behavioural or performance objectives, quantitative evaluation, mastery learning, time on task), and to the ahistorical and atheoretical character of the field.

Again, Marsh and Stafford (1988:30) pointed out that the "reconceptualists represent a visible and concerted social movement in the 1980s." This was the period, in particular, when personal rights and other social concerns such as freedom, democracy, equality and how to live together were predominant in society.

A basic premise of reconceptualism is rooted in the principle that the more students understand themselves, the more they will understand their world. Thus, curriculum development is politically connected with the historical, economic and contemporary social frame of reference in a national and international context. Hameyer (1991:21) emphasizes that the reconceptualists "criticize schooling and curricula in view of normative assumptions, side effects, and hidden mechanisms that reduce educational quality". The new basic education curriculum in Mozambique reflects this approach in chapter two of the Curriculum Framework of Basic Education (PCEB, 2003) in which the political, economic, socio-cultural and educative contexts are

represented. Chapter three of the same document presents the general policy pursued by the new curriculum, focusing especially on basic education learner outcomes in personnel, socioeconomic, cultural and knowledge development domains. Previously, the ESSP (1992-2003:1) stated that:

> Improving the quality of education that Mozambican citizens receive and providing them with the knowledge and skills that they will need to compete in the global economy is urgently important if they are to keep up with their regional neighbours and ensure sustainable livelihoods for themselves and their children.

As noted by Glatthorn, Boschee and Whitehead (2006:79) the reconceptualists are value-oriented theorists "…primarily engaged in what be termed 'educational consciousness-raising', attempting to sensitize educators to the values issues that lie at the hearts of both the hidden and the stated curricula".

2.3.7   Summary: Brief comment on curriculum approaches

In theory the three perspectives intended, implemented and attained curriculum and concomitant approaches differ in meaning according to the perspective of analysis. However they are intrinsically linked to each other so that it is quite hard to find situations characterized exclusively by one particular approach. Mozambique's new curriculum approach helps to illustrate the point. The design of the Mozambique new curriculum corroborates this statement: it presents features of different approaches. The characteristics of the behavioural approach are evident in the framework and syllabi philosophy of the new curriculum of basic education in Mozambique. Thus, as noted in section 2.3.1, the overall exercise of curriculum change started with a thorough diagnosis of the impact of the former curriculum in terms of its effectiveness in students' learning outcomes (i.e. students' skill, attitude and knowledge). The general objectives set up in the National Education System Act for basic education were reexamined and reelaborated as the foundation stone of the new curriculum. The restated objectives resulting from the employment of an interdisciplinary strategy to integrate the curriculum build the intended graduated profile of basic education or outcomes in the domains of (1) personal development, (2) socioeconomic development, (3) technical and scientific development and (4) cultural development

(PCEB, 2003). Thus, these general objectives/outcomes are reflected in each curricular subject and from which specific objectives were derived.

The defining features of the managerial approach are outlined in section 3.4 of this dissertation. In fact, the PCEB asserts that the success of curriculum change is unquestionably linked to appropriate use of implementation strategies that depend on school support for effective curriculum change. As noted earlier (section 2.3.3), the Systems approach is reflected in the policy dialogue and consensus building that characterized the process of creating the new curriculum. Points worth mentioning in this regard are the modalities of consultation and participation in the envisaged curriculum transformation, the basic education objectives, the interdisciplinary strategy used to integrate the curriculum, the pursuit of curriculum relevancy to Mozambican society, piloting and monitoring of implementation of the new curriculum, et cetera.

The Academic approach adopted in creating the new curriculum consisted in three main objectives, namely delivery of (1) basic literacy and numeracy, (2) basic technological skills in the domain of practical activities and arts, and (3) patriotic education expressed in the three comprehensive curricular areas defined in the PCEB, viz:

- communication skills and social sciences;

- mathematics and natural sciences; and

- practical and technological arts
    (see sections 2.3.4 above and 3.3.3 below).

The humanistic component of the new curriculum is evident in the endeavour to address the critical challenge of ensuring the relevance of the curriculum to learners themselves, to their families and communities, and to Mozambican society as a whole (PCEB, 2003). The new basic education curriculum in Mozambique reflects this approach in chapter two of Curriculum Framework of Basic Education (PCEB, 2003), which presents the political, economic, sociocultural and educative that informed the design. Chapter three of the same document presents the general policy informing the new curriculum, focusing especially on learner outcomes for

basic education in the domains of personnel, socioeconomic, cultural and knowledge development.

The intended, implemented and attained curriculum, as well as the curriculum approaches outlined above cannot be categorically dissociated from each other, particularly, since that could lead to a disjunction between theory and practice. In this regard, Deacon and Parker (1999:67-68) contend that "theory alone is contemplation (rationalism). Doing alone is habit (instrumentalism). The curriculum should be both instrumentalist and rationalist; and the theory/practice divide can be bridged by the production of competence."

Accordingly, it is my contention that the three perspectives may be justified in the light of different approaches and that as noted by Lovat and Smith (2003:21), no definition of curriculum can be complete without addressing the following perspectives:

- Curriculum as product (achievement by students of learning outcomes that are observable, identifiable and measurable);
- Curriculum as process (teaching and learning methods, classroom practices);
- Curriculum as intention (planned curriculum);
- Curriculum as reality (actual curriculum, experience of teachers and learners at classroom level);
- Curriculum as both normative and descriptive (statements of what curriculum should be and descriptions of what curriculum is);
- Curriculum as action of critical reflection allowing selection of the best alternative and evaluation in the light of learners', teachers', and others' experiences.

This understanding of the curriculum as concept and of the curriculum approaches discussed earlier lead us to Stenhouse's (1975:71) conclusion that "our firm knowledge of the educational process is very limited. Large-scale theories have great utility as staging-points in the advancement of knowledge, but the more logically satisfying they are, the less likely they are to be adequate". The following discussion of the nature and functions of curriculum theories serves to pave the way for a discussion of curriculum development and within the present parameters, to deepen insights into the curriculum concept and the curriculum approaches. This knowledge might help us to deal critically with large-scale theories.

2.4 THE NATURE AND FUNCTIONS OF CURRICULUM THEORY

2.4.1 Introduction

This section is intended to lay a theoretical foundation as a vantage point from which to seek an answer to the first research question at issue: "What is the nature of the new curriculum and how far does it prescribe the way it is to be implemented?" The section therefore starts with a brief outline of curriculum theory and how it developed from inception. This is followed by a rehearsal of the functions of curriculum theory in terms of description, prediction, explanation and guidance of the process of school curriculum development. The discussion will then move to the supplementary theoretical section 2.5 (on curriculum development: planning, disseminating, implementation and evaluation) as a further step towards answering first research question.

According to Glatthorn, Boschee and Whitehead (2006:74), "a curriculum theory is a set of related educational concepts that affords a systematic and illuminating perspective on curricular phenomena". Similarly, Beauchamp (1981:60) defined curriculum theory earlier as "a set of related statements that give meaning to a school's curriculum by pointing up the relationships among its elements and by directing its development, its use, and its evaluation". Curriculum theories are classified in terms of what they deal with. Ornstein and Hunkins (1993) identify two major categories of curriculum theories: *design theories* and *engineering theories.*

- *Design theories* are concerned with basic organization of the curriculum plan, that is, with the establishment of curriculum frameworks. The pillars of design theories are philosophy as well as social and psychology theories. Philosophical and humanistic theories are normative. Basing on values, their main function is to guide decisions about:
  - What should be included in the curriculum.
  - What to do or not to do in creating the curriculum, addressing coherence and methodology of acquiring the knowledge, integration of the emotional and physical with the intellectual.

- *Engineering theories* are designed to aid a search for strategies to guide curriculum development activities, explaining, describing and predicting them

through plans, principles and/or methods or procedures. They are partially based on principles relating to measurement and statistics.

Glatthorn, Boschee and Whitehead (2006:74) divide curriculum theories into four categories respectively oriented according to structure, values, content and processes. The first group is concerned chiefly with the task of identifying the elements of the curriculum and how they relate to each other. Structure-oriented theories normally have a descriptive and explanatory function: they describe what theories are. Value-oriented theories are concerned mainly with examining the values and assumptions of curriculum makers and their products. Values-oriented theories tend to have an epistemological and sociological character, that is to say as noted by Lovat and Smith (2003:134): "fullness of ways of knowing and levels of reflection, the fullness of learning combining planning and practice, theory-and-development, as one". So, value-oriented theorists endeavour to raise educators' awareness of the value issues underlying hidden and planned curricula. Value- oriented theorists are known as reconceptualists. Content-oriented theories are concerned primarily with the selection and organization of the curriculum content. Content-oriented theories tend to be prescriptive in nature, i.e., to determine what the curriculum should contain. Process-oriented theories mainly describe how curriculum is developed or suggest how it should be developed, so process theories are descriptive or prescriptive.

However, as Smith and Lovat (2003:43) point out, this division is artificial, because

> ideally, the reflecting which is implied in Curriculum Theory, and the action which is implied in Curriculum Design, development and Evaluation, can only properly be understood as one process, intimately and intricately interwoven. In no way is one necessarily preceded or followed by the other. They are forever tumbling in on each other as the procedures involved in teaching/ learning unfold.

2.4.2 The nature of curriculum theory: categories of knowledge

George Beauchamp (1975, 1981) notes that all theories are derived from three broad categories of knowledge:

- Humanities: philosophy, music, theology, art and literature;

- Natural Sciences: chemistry, physics, botany, zoology, geology and other similar disciplines;

- Social sciences: history, sociology, psychology, and anthropology, and economics, among others of this nature.

  (Ornstein & Hukins, 1993:184; Zais, 1976:75)

Thus, curriculum theory may be regarded as the heart or foundation of education theory. It draws on psychology, sociology and philosophy. The curriculum uses information from various disciplines and sets up rules and procedures for using the knowledge in the realm of humanities, natural sciences and social sciences. Nevertheless, it is essential to bear in mind the following observation of Lovat and Smith (2003: 43):

> Neither Educational Psychology nor Sociology of Education nor Philosophy of Education is an infallible discipline, nor do their practitioners always do their job well. One's experiences of designing, developing and evaluating curricula can, itself, be enlightening showing up weaknesses in one of the foundational theories which might, after all, have been formulated in isolation from a 'live' teaching context."

This important statement of Lovat and Smith (2003) emphasizes the permanent need to be critical with a view to selecting the best options that will be most conducive to effective teaching and learning. For the specific case of the Mozambican new curriculum an integrated (interdisciplinary) curriculum was selected with particular emphasis on the curricular areas described in sections 3.3.2 and 3.3.3.

2.4.3 The functions of curriculum theory with specific reference to description, prediction, explanation and guidance in the process of school curriculum development

Theory comes from the Greek word *theoria* meaning "wakefulness of mind"; it explains reality, making people aware of their world and its interactions.

Many writers identify four functions of theory: (1) description; (2) prediction; (3) explanation; (4) guidance.

- Description is an exact and accurate definition of the terms employed in the theory, classification of data, and reporting of event.

- Prediction consists in forecasting in the sense of indicating foreseen outcomes of planned courses of action.

- Explanation is susceptible to various interpretations. For scholars or writers such as Beauchamp, explanation refers to elaborating predictable relationships, rendering comprehensible in the sense of predicting the behaviour of a phenomenon under a variety of specified conditions. O'Connor (1957), for instance, defines "explanation" as the establishment of a relationship between what-is-to-be-explained and present knowledge, that is to say, associating what-is-to-be in the sense of relating present experience to the phenomena to be explained.

- Guidance comprises the heuristics function, enabling problem solving by learning from past experience and investigating practical ways of finding a solution.

Thus,

> "…the function of curriculum theory is to describe, predict, and explain curricular phenomena and to serve as a policy for the guidance of curriculum activities" (Zais, 1976: 87).

Marsh (2004:199) in discussing the functions of curriculum theory with specific reference to guidance, notes that:

> … the potential use of curriculum theories is very clear. Appropriate curriculum theories (if we had them) could guide the work of teachers, policy – makers, administrators and anyone else involved in curriculum planning and development. They would help researchers analyse data and provide a much- needed impetus and direction for curriculum research with the benefits flowing on to classroom teachers.

2.5 CURRICULUM DEVELOPMENT: PLANNING OR DESIGNING, DISSEMINATION, IMPLEMENTATION AND EVALUATION

2.5.1 Clarifying the concept of curriculum development

According to Oliva (1992), curriculum development comprehends planning, implementation and evaluation, particularly with a view to change and betterment. Curriculum development is therefore synonymous with curriculum improvement. In their explanation of curriculum development, Carl et al. (1988:23), adding the dissemination phase, assert that

> Curriculum development can be regarded as that process during which the phases of curriculum design, dissemination, implementation and evaluation feature strongly. The development that takes place within these phases, aims at more effective teaching and therefore the ability to plan is a strong characteristic of each phase.

In fact, the definitions given by Olivia (1992) and Carl et al. (1988) have essentially the same meaning with slight differences. Hence the following analysis: While in Oliva's (1992) definition , the planning phase seems to bear the same emphasis as the other phases, the definition given by Carl et al. (1988) is based on the assumption that planning is inherent in all phases of curriculum development. More about this in the next section (2.5.2). However, the second definition clearly refers to the design phase, which is apparently omitted or not mentioned in the first one. Thus, the design phase as the thinking stage is essentially the planning phase. This concept will be elaborated further in section 2.5.2. I nevertheless agree with the point that the planning aspect should be a prominent aspect of each phase of curriculum development.

Another important stage of curriculum development, underlined in the second definition, is the dissemination phase, although it is not explicitly mentioned in the first one. The researcher contends that the planning or design phase involves a consultative process (advisable for successful implementation) then dissemination is automatically included. More about this in the discussion of the phases of curriculum development.

In conclusion, it would seem that all phases of curriculum development are intrinsically connected and that there is a dynamic interaction among them. Relatedly, Pinar et al. (1995: 664) define curriculum development as "a generic term which includes curriculum policy, school reform, curriculum planning, design and organization, curriculum implementation, curriculum technology, curriculum supervision and curriculum evaluation."

Marsh and Willis (1999:23) argue that curriculum developers have to ask four big questions concerned with selecting objectives, selecting learning experiences, organizing learning experiences and evaluating. Conversely, Pinar et al. (1995) aver

that defining curriculum objectives, design, implementation, and evaluation are no longer the major concepts of the day. Equally, they argue that, keeping the curriculum ordered and organized, which used to be a critical requirement has now become outmoded. For Pinar et al. (1995), curriculum development has been reconceived as a less hierarchical and more collaborative activity. Today, curriculum development is concerned with curriculum understanding, which implies many degrees of complexity in the meaning of curriculum activity, of being a curriculum specialist, and of working for curriculum change.

Therefore, understanding curriculum means understanding it as institutionalized text in the sense that what happens in schools is translated into institutional and discursive practices, structures, images, and experiences that can be analysed in various ways, for instance politically, phenomenologically, in relation to gender and deconstructively. However, it is important to note that "the field remains interested in serving the daily and technical needs of those who work in schools" (Pinar et al., 1995:32). In effect, a major shift is characterized by the change of relationship between researchers and practitioners to more collaborative action for the benefit of both towards effective curriculum innovation. Currently, everybody who deals with curriculum is both theorist and practitioner. Another important feature of the field is the awareness that curriculum work is evolving in response to the changes operating in the world. In light of this consciousness, the contemporary field is wedded to understanding curriculum historically in the sense of associating curriculum with a particular temporal context or history.

In a nutshell, according to Pinar et al. (1995), curriculum development today implies self-reflection, self-understanding about what happens in school, understanding curriculum as institutional text in terms of the everyday functioning of the school, but without losing sight of the imperative of institutional improvement. In this regard, Pinar et al. agree with Marsh and Willis (1999:95) who state that "contemporary theorizing suggests that curricula can be planned, enacted, and experienced in many different ways appropriate to many different circumstances and people." The next section deals with the phases of curriculum development as deployed by Mozambique according to the Curriculum Framework of Basic Education (PCEB,

2003). This exposition is intended to provide the reader with insights to which the new curriculum prescribes how it must be implemented.

2.5.2 Components and phases of curriculum development

2.5.2.1 Introduction

Whereas the theoretical background given in section 2.4 addresses the first part of the research question (concerning the nature of the new curriculum in Mozambique), the second part of that question (concerning the extent to which the new curriculum prescribes how it must be implemented) is addressed in section 2.5, with particular reference to 2.5.2 where curriculum design (planning) is discussed as the integrating component/phase of curriculum development. The discussion is informed by the reference to relevant literature. Other components considered are dissemination, implementation and evaluation of curriculum.

2.5.2.2 Curriculum design

Pratt (1994:27) asserts that design in general is the essence of all human activity, since

> we plan almost constantly, by giving forethought to our actions,
> predicting consequences, weighing alternatives. This is a part of what
> it is to be a human being. It is an integral part of being a professional.

Glancing at this quotation, one discerns immediately that, in general, undertaking any activity without *design* or *plan* is irrational, because it runs counter to the natural inclination of human behaviour in preparation for any intentional activity. Unplanned activity is unprofessional because it predisposes the relevant activity to failure for lack of vision, clear goals, strategy and stocktaking of required resources to accomplish the relevant assignment. Undertaking any activity without *design* or *plan* is bound to run into difficulties, and the way out of such difficulties is bound to be obscure precisely because of the lack of planning in the first place.

The same writer expresses a preference for referring to curriculum planning instead of design, contending that

curriculum planning might be defined as "the art and science of planning the conditions of learning." These conditions include such considerations as identification of the learning needs to be met; selection of the modes of evaluation to be used; determination of entry characteristics of learners; selection of instruction content and methods; provision for individual differences, and logistical issues such as choice of materials, equipment, facilities, personnel, time and cost (Pratt, 1994:29).

Carl et al. (1988) point out that curriculum design may be understood as the creation or design of a new curriculum as well as the eventual replanning of an existing curriculum following a thorough evaluation of it. The main goal of curriculum design at school level is to enable more effective teaching for the learner.

Thus, Carl et al. (1988) and Pratt (1994) as well as other prominent scholars, such as Klein (1991) and Doll (1992), agree that curriculum design is undertaken with the aim to ensure effective schooling. For instance, whereas Klein (1991:336) avers that "the primary or exclusive basis for making curricular decisions depends largely upon the values of the developer about what the curriculum ought to do for or contribute to the growth of students", Doll (1992:187) correctly maintaining that "curriculum design is a way of organizing that permits curriculum ideas to function."

It can be taken for granted that a good curriculum design will be cost-effective for reasons clearly stated by Doll (1992:187):

> If a curriculum design is to prove genuinely commendable in an era in which universal excellence is prized, it must generate affirmative answers to half-dozen questions: (1) Will this design treat an educational malaise, rather than merely the symptoms of the malaise? (2) Does it go straight toward meeting particular needs of learners? (3) Is it directed toward achieving broad and acceptable goals rather than narrow and selfish ones? (4) Will it innovate all the people who should be involved in planning? (5) Will it lend participants courage and hope and so raise their expectations? (6) Will it contribute to democratic as opposed to elitist schooling?

A curriculum design can only remedy educational problems if it is based on a thorough diagnosis, on appropriate research and on positive and relevant practical experience. It may be expensive at first, but its effect in the long term is

compensatory, making it an affordable initiative. In contrast, a curriculum designed in haste often ignores the real problem and results in ineffective education.

In the final analysis, curriculum policy should provide affirmative answers to the six questions raised by Doll (1992) concerning curriculum design. A similar view is expressed by Pinar et al. (1995), who regard curriculum policy as a body of law and regulation, which:

- establishes standards and procedures for central and local government in relation with each other and with schools;
- defines relationships among school members and stakeholders;
- stipulates school organizational structure and budgeting; and
- sets goals and contents, including values, to be addressed at school.

Thus, Pinar et al. (1995) regard curriculum policy as instrumental and as a product of negotiation among various constituencies.

2.5.2.3 Curriculum dissemination nationwide

Curriculum dissemination is an essential component and phase of curriculum development. It creates a bridge between the curriculum theory and its implementation or practice. Indeed, the implementation of the new curriculum is the realisation of a process of educational change. Hence, the importance of curriculum dissemination strategies. In this regard, Kelly (2004:107) observes that "… a major reason for the failure of the Schools Council to influence curriculum change more directly and more widely was to be found in the dissemination strategies that were adopted".

According to Carl et al (1988) and Leithwood (1991) *curriculum dissemination* or *curriculum diffusion* consists in the distribution or publication of information, reflections and decisions. It refers to the spread of information about curriculum renewal, namely about innovative instruction or instruction-related practices aimed at preparing and informing all those involved with the curriculum change.

Curriculum dissemination turns out to be a prerequisite for a meaningful and successful implementation of curriculum renewal or curriculum change. Researches

show that renewal has often failed due to lack of dissemination or hasty and consequently superficial dissemination. As noted by Leithwood (1991), dissemination is pivotal since it may result in changed practices, for example, by school members, especially if they find the disseminated new ideas acceptable and decide to put them into practice.

Theoretically curriculum dissemination should follow the design phase, but if design is participatory, as it should be, then design blends with dissemination. In this regard, Carl et al. (1988) acknowledge the importance of training users in preparation for the implementation of a new or adjusted curriculum; in fact they emphasize the need to persuade and influence teachers to become involved in the design phase already.

Obviously, teachers' participation in the curriculum design is problematic since, according to Rasool (1999:176):

> Teachers' participation in the curriculum process can only be effected by a system of representative participation as has been the case. Given the numbers of teachers and the complexity of modern society, it is unrealistic or impractical for everybody to be involved in the making of all decisions.

This is a thorny problem that can only be overcome with effective dissemination as a sequel to design. It follows therefore that the critical need for teachers preparation makes them in many senses the most important educational resource we have since it is they who will determine whether the new curriculum succeeds. Monyokolo and Potenza (1999:236) contend in this regard that "the success of the new curriculum depends on the training and support that teachers receive, and their ability to mobilize and manage the resources around them to implement the curriculum". Earlier, Brown, Oke and Brown (1982:6) noted that "the greatest single factor in the teaching process is the teacher. No technique, no device, no gadget can guarantee success - only the teacher can do this. The greatest motivating device yet discovered is the highly motivated teacher".

2.5.2.4 Curriculum implementation: Curriculum context and factors influencing curriculum implementation

The current research literature on implementing curriculum change in different parts of the world refers, with particular emphasis, to **contextual conditions** in which implementation may occur. In this regard, McLauglin (1998) points out that context is a key element that:

- On the one hand, makes policy implementation a " problem"; and
- On the other hand, contributes to the highly variable local responses that trouble policymakers*.*

McLauglin (1998:72) gives reasons for these problems in his contention that the effectiveness of policy implementation depends:

- on how it is interpreted and transformed at each point in the process; and
- on the response of the individual at the end of the line.

It seems, then, that curriculum outcomes depend on how the curriculum change is understood or perceived and implemented at each level, from the Ministry of Education down to the school and more particularly on the response it receives in the classroom, which is the crucial test for the whole process. In corroboration McLauglin (1998:72) notes that "what matters most to policy outcomes are local capacity and will." In further corroboration Darling-Hammond (1998) asserts that the fate of new programmes and ideas is decided by teachers' and administrators' opportunities and capacity to learn, experiment, and adapt ideas to their local context*.*

Meanwhile, Skilbeck (1998:129) points out that

> the responsibility of the school for curriculum development cannot be determined either by the individual school alone or by reference only to what schools do: the school is part of a wider context, usually of a system whose elements interact. But within that system it is not simply a delivery agency; it has to create the curriculum within the national (or state/regional, etc.) framework.

This argument seems to underestimate the role of the individual school, clearly implied by McLauglin's emphasis on *local capacity* and *will*; but Skilbeck's argument in fact means that the degree of "local capacity and will" depends on interaction with other levels of the school system and may therefore be influenced by

the attitudes of school administrators in the immediate school context as well as the wider educational management context.

In this regard, Miles (1998:54) states that school change

> is a matter not just of planning, nor of finding and installing "good practices", but of an organically — led and managed process deeply influenced by the local context, with some predictable regularities and great many unforeseen contingencies. It could be considered "local" reform.

Taking into account the role of teachers and principals in the process of educational change, Lieberman (1998:18) emphasizes the importance of **context,** asserting that their practices and ideas depend on contextual conditions, namely "l*eadership, school culture, staff development, networks of school where topics to be replayed and have continually resurfaced as critical themes in the change literature.*"

So far the contextual conditions referred to have not been clearly defined. Lieberman, however, narrows down the concept to a particular school, referring to the specific features of leadership, school culture and staff development, as well as school networks where critical topics are carefully discussed, examined, exemplified or simulated as role-play. Naturally wider influences should also be given credence: Geographic, socio-economic, cultural and political conditions, as well as interaction between the school and other levels of the general school system.

It seems to me that the success of curriculum implementation depends greatly on our own efforts within the school. This conclusion is considered by Skilbeck (1998:121) who contends that

> none should obscure the fundamental importance of the school itself and of teaching as the focus of effort and activity in nurturing basic educational values, fostering student growth and achieving crucial societal goals."

I also strongly agree with Fullan (1998:222), who states that "the very place to begin the change is within ourselves. In complex societies like our own, we have to learn to cope and grow despite the system." Fullan concludes that "we must then develop our

own individual capacities to learn and keep on learning and not to let the vicissitudes of change get us down." Fink and Stool (1998:306) point out, however, that it is critical to bear in mind, too, that "schools need to be part of a wider system, networking with other schools as well as the school district, community, higher education, and business". Furthermore, as Cherryholmes (1988:274) emphasizes, we cannot overlook the fact that "successful change often requires more inclusive institutional changes."

Still related to contextual conditions, Skilbeck (1998:144) states decisively:

> What is of undeniable importance is the need, in any kind of curriculum development, for well educated, competent, responsive and responsible teachers, well-resourced schools and intelligent leadership.

This apparently obvious statement is susceptible of various interpretations. One of them is to consider that curriculum development is inconceivable without teachers who conform to the stated. A second possibility is to assume that given the essential nature of the stated characteristics, a concerted effort is required to ensure that these characteristics are clearly in evidence to enable curriculum implementation. In fact, as Skilbeck (1998:125) points out, there is a need to ensure the feasibility of the principle that "teacher development and curriculum development, including assessment procedures, must go hand-to-hand."

Likewise, Darling-Hammod (1998:644) recommends that:

> rather than seeking to make the current system of schooling perform more efficiently by standardizing practice, school reform efforts must focus on building the capacity of schools and teachers to undertake tasks they have never before been called upon to accomplish- i.e. ensuring that all students will learn to think critically, invent, produce and problem-solve.

Thus, capacity building should happen primarily within the school. Skilbeck (1998:135-136) expresses the wish in this regard that: "schools would so organize themselves as to facilitate local teacher development groups and effective co-operation in making and using new curricula." Again, Olson and Lang (1999:73) emphasize that "reflective dialogue in association with innovative ideas can give rise

to professional growth; existing frameworks found wanting are revised and become more powerful in coping with the new realities." In fact, the new role of the teacher in education change requires a different teacher profile (*cf.* Olson & Lang 1999:76):

> Often the teacher acts as an authority figure, possessing a superior level of subject competence, but in the knowledge-society and given the demand for student autonomy in learning this notion is becoming increasingly difficult, if not impossible, to sustain. The teacher can, however, become a powerful role model as someone committed to lifelong learning, someone who has acquired the skills of learning and a respect of for knowledge, who is well connected with acknowledged by others who are influential in the community, who knows whom to approach for particular areas of expertise and how to evaluate what is offered.

Furthermore, it is a questionable assumption to speak about well-resourced schools. Skilbeck (1998:134) explains:

> Resource scarcity is a relative concept ("relative deprivation"); teachers and administrators in the technically advanced societies who use this as a reason for didactic, textbook-based instructions or constant whole class teaching need to be reminded of the really serious problems of resource scarcity in the poorer two thirds of the world's nations. Resource constraints of some kind are ever present and while they indicate conditions, they are not a reason for organizational inflexibility.

The question of resources, therefore, may be raised as plain excuse for justifying the lack of necessary initiative to deal with essentially unrelated school problems. Incidentally, Hargreaves (1998:284) emphasizes that "*we need to develop our organizations so that they have improved capacity to learn from and to solve ongoing problems.*" Further on, he states more explicitly:

> Under chaos and complexity it is extremely important to lead by empowering people, releasing their creativity, and finding different ways to bring them together so they can learn to improve continuously, scan the environment and solve problems as effectively as they emerge (Hargreaves, 1998:284).

Thus, without minimizing the importance of resources, the primary emphasis should be on seeking collective and alternative solutions instead of shrugging off the problem by blaming it on inadequate resources "We must then develop our own individual capacities to learn and to keep on learning, and not let the vicissitudes of

change get us down" (Fullan, 1998:224).

We may conclude from the literature that:

Among contextual conditions for successful curriculum implementation, **leadership** plays a very important role, because according to Hargreaves (1998:285):

> managing change becomes a collective process, not an individual one. Initiative and creativity come out of the shadows of coordination and control. Leadership calls for the ability to create underlying senses of basic personal safety and emotional security, in which risk and creativity can flourish. Efforts are coordinated and new directions set by learning, information gathering and dialogue rather than through administrative regulation and hierarchical control.

An analysis of the research findings suggests that the need to create an enabling environment implies re-culturing and retiming as well as restructuring of schools. In this regard, Fullan (1998:226) highlights that:

- Re-culturing transforms the habits, skills and practices of educators and others toward greater professional community, which focuses on what students are learning and what actions should be taken to improve the situation.

- Retiming tackles the question of how time can be used more resourcefully for both teachers and students.

- Re-culturing and retiming should drive restructuring because we already know that they make a huge difference on learning, although they are very difficult to change.

2.5.2.5 Curriculum evaluation

Curriculum evaluation or assessment may be understood as a broad and continuous effort to trace its effects in terms of content and feasibility towards the achievement of defined goals. In this regard, on the one hand curriculum evaluation comprises evaluation or assessment of curriculum as such. It examines the adequacy of the curriculum for the learners, to what extent the curriculum enables or prevents effective teaching and learning. On the other hand, curriculum evaluation explores

the process of monitoring and measurement of learning achievement in classroom practice, that is to say, the support given for the success of the pupils supplemented by suitable measurement following the formative assessment of the student. This component of curriculum evaluation is a crucial aspect of curriculum implementation. After conducting field researches Fink and Stoll (1998:316) assert:

> Efforts to improve schools from within are certainly undermined by inadequate and inappropriate assessment strategies. If we want teachers to do a better job for students then one place to start is with the what, the how, and the why of assessment. Rather than using assessment to find weaknesses, place blame, and promote guilt, change agents need to work with teachers to find more appropriate ways to use assessments to promote students' learning.

The discussion above shows the complexity of curriculum development with its densely interconnected phases. It is clear from the above discussion that reculturing and restructuring of the school have to be a never-ending process, and that support networks around the school have to drive the process. Analysis contained in ESSP (1999-2003), ESSP (2006-2010/11) and PCEB as well as chapters five and six of the present dissertation shows efforts to achieve effective curriculum change should be intensified, especially in the areas of dissemination, implementation and evaluation. The next section will turn specifically to curriculum development models.

2.5.3 The curriculum development models

Curriculum development models are different programmatic plans (various sequences of steps devised with a view to curriculum effectiveness) which implies continuous monitoring of implementation to ensure that relevant considerations receive due attention. Kelly (1985:15) correctly asserts that

> in engaging in curriculum planning, therefore, we need to be clear about the logic of the process and we need to take full account of all those other factors that appear to have some relevance to our enterprise, but we also need some basis upon which we can make the necessary choices and selection, a set of criteria, a framework of values within which to work.

Hameyer (1991:20) likewise asserts that a conceptual curriculum model "provides rules for deliberate interaction and activities, criteria for intervention, and guidelines

for evaluation". It stands to reason that curriculum models must be known and understood in order to evaluate their implementation effectively. An overview of curriculum development models follows:

2.5.3.1 The Taba model

This model is most commonly used. Taba (1962) argues that curriculum should be designed by the teachers rather than handed down by higher authority. In this regard she postulates that the teachers should start the process by creating trial teaching-learning units in their schools rather than engaging from outset in creating a general curriculum design. Unlike the traditional approach which proceeds from the general to the particular, the approach in this case is inductive. It consists of five consecutive steps (see figure 2.1):

1. *Producing pilot units*

    This stage proceeds in eight steps:

    -   *Diagnosis of needs* consisting in a clear identification of the students' needs with due allowance for gaps, deficiencies and variations in students backgrounds. According to Taba (1962:12), "diagnosis, then, is an important first step in determining what the curriculum should be for a given population".

    -   *Formulation of objectives or goals* to be targeted in the light of diagnosis. Taba (1962:12) avers that:

        > In large part the objectives determine what content is important and how it should be organized. For example, if the goal of studying world history is to produce intelligent judgement about the current world scene, certain parts of history are bound to be more important than others. If the goal is to create a common perception of the past, then other aspects of world history and other ways of learning it become important. If reflective thinking is an important goal, a thorough study of fewer topics and greater opportunities to relate ideas would be more important than a complete coverage of facts.

    -   *Selection of contents* by determining appropriate subject matters or topics aimed at defined objectives. This process must take account of different levels of learners' capacity to grasp the content with due attention to level of introduction as well as continuity or sequencing.

- *Organization of content* deciding at what levels, how deep and in what sequences the subject matter will be dealt with or covered.

- *Selection of learning experiences* adopting methodologies or strategies as well as learning activities. Taba (1962:13) asserts that "the planning of learning experiences becomes a part of a major strategy of curriculum building instead of being relegated to incidental decisions made by the teacher at the moment of teaching".

- *Organization of learning activities*: deciding how to engage learners' interest in and commitment to content, and combinations and sequences to be followed, given the characteristics and general background of targeted students.

- *Determining what and how to evaluate with the aid of appropriate techniques* whether and to what extent defined objectives are being or have been achieved.

- *Checking for balance and sequence*: observing consistency among the various parts of the teacher-learning units, with a view to securing adequate flow of learning experiences and a balanced combination of learning types and forms of expression; in brief, ensuring effective interdiscipilinarity.

2.   Testing experimental units

This phase consists in evaluating the validity; teach-ability and adequacy of designed learning units.

3.   Revising and consolidating

After testing the experimental units, they are modified to ensure that they keep pace and are well adapted to variations in students' needs and abilities, available resources and different styles of teaching.
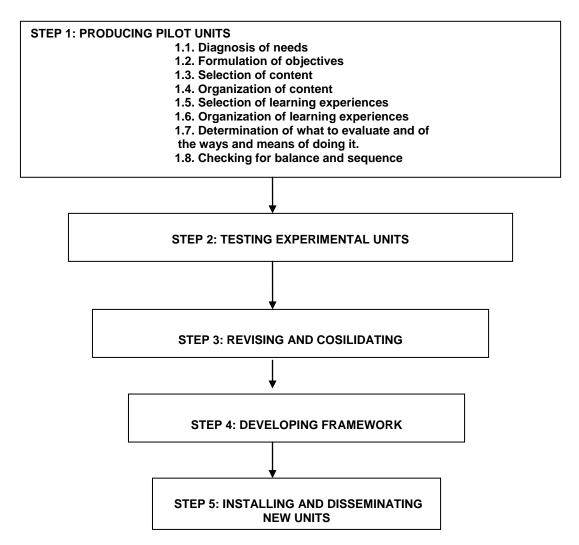
4.   Developing a framework

In light of the overall activity undertaken in the first three-step sequence, curriculum specialists make a draft of a rationale for the curriculum planned.

5.   Installing and disseminating new units

At this stage an appropriate network for in-service training is established so that the teachers can implement pilot teaching-learning units in their classes.

Figure 2.1 Curriculum development model according to Taba (1962)

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┌─────────────────────────────────────────────────────────┐
│ STEP 1: PRODUCING PILOT UNITS                            │
│            1.1. Diagnosis of needs                        │
│            1.2. Formulation of objectives                 │
│            1.3. Selection of content                      │
│            1.4. Organization of content                   │
│            1.5. Selection of learning experiences         │
│            1.6. Organization of learning experiences      │
│            1.7. Determination of what to evaluate and of  │
│             the ways and means of doing it.               │
│            1.8. Checking for balance and sequence         │
└─────────────────────────────────────────────────────────┘
                              │
                              ▼
        ┌─────────────────────────────────────────┐
        │ STEP 2: TESTING EXPERIMENTAL UNITS        │
        └─────────────────────────────────────────┘
                              │
                              ▼
        ┌─────────────────────────────────────────┐
        │ STEP 3: REVISING AND COSILIDATING         │
        └─────────────────────────────────────────┘
                              │
                              ▼
          ┌───────────────────────────────────┐
          │ STEP 4: DEVELOPING FRAMEWORK        │
          └───────────────────────────────────┘
                              │
                              ▼
            ┌─────────────────────────────────┐
            │ STEP 5: INSTALLING AND DISSEMINATING │
            │              NEW UNITS            │
            └─────────────────────────────────┘
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2.5.3.2 The Saylor, Alexander and Lewis model

This model is premised on a deductive approach and the first step, advisedly is to define the major educational goals and specific objectives. Saylor, Alexander and Lewis (1981:31) observe that "examination of past and present practices of curriculum planning indicates a frequent lack of a continuing goals and objectives, which is essential to systematic curriculum planning". The goals and objectives of this approach are framed with reference to four areas: *personal development*, *social*

competence, *continued learning skills,* and *specialization*. The authors warn that the model should be not enforced dogmatically but should make allowances for varied educational settings and adaptive curriculum plans within the stated areas without implicating spheres that are not specifically intended.

Referring to personal development, Saylor, Alexander, and Lewis (1981:34) argue that "in a very general sense the entire purpose of education is to aid the development of the person". Furthermore, they clarify the concept of personal development, asserting that:

> The personal development domain includes a vast array of learning opportunities: basic communication skills; most opportunities relating to the so-called general education objectives; value assessment and development; guidance and counselling services; health and physical education; exploratory subjects; and activities and opportunities that give each individual chances to discover areas of interest for later specialization. Esthetic education plays an important role in personal development (Saylor, Alexander, and Lewis, 1981:34).

Regarding social competence, the same authors observe that, in a society of human beings, and especially in one which prizes democratic values and processes, a continuous and essential goal of education is ever-improving social competence that includes citizenship education, social welfare, human relations, various knowledge areas of social sciences and humanities and languages. Consequently, education towards social competence implies:

> …social interaction and organization within the schools themselves; the participation of students in the various social groups and institutions of their communities; and specific studies and skill-development activities related to particular human relations problems within the school and community, such as those involved in cultural differences and conflicts, and, again, valuing processes.

Particularly note the following observation made by the said authors on social competence: "Efforts to achieve aims associated with the social competence domain can, if narrowly conceived, interfere with personal development." The reference here is to the critical need to release people from confines of their particular place in space and time by widening their frame of reference so that they have latitude for critical thinking and continuous questioning of their immediate

situation as well as the capacity to respond to future changes by reinventing themselves and society as a whole for a better world.

With respect to continuous upgrading of skills, the authors aver that with the ever-increasing changes in today's society, the central mission of schooling is to develop life-long learners by instilling basic skills that will lay the groundwork for continuous self-motivated learning and self-improvement, to which end the authors suggest the following activities and learning experiences: ability in reading, listening, viewing, and speaking, employing of learning skills such as interviewing, discussing, interacting; using various aids to information retrieval, namely information technology (IT) and telecommunications; analyzing issues, selecting alternatives, piloting ideas; and generalizing (promoting generalizability of teaching experiences).

The authors further note that specialization includes traditional school areas, generally classified as prevocational or vocational, music, art, sports, cut-across learning opportunities selected on the basis of individual interest and any field that can be explored by an individual chosen for specialization.

It is up to curriculum specialists to decide on the right learning opportunities and mode of delivery for each domain. In order to implement the mandatory curriculum plan, teachers must produce instructional plans that specify appropriate instructional objectives and methods. Finally, the authors contend that their model is the definitive means of determining whether critical goals and objectives have been achieved.

2.5.3.3 The Tyler model

This model is embodied in Tyler's work titled 'Basic Principles of Curriculum and Instruction' (1949). It comprises the following stages:

1. The first stage includes the selection of objectives by the curriculum planners from three sources, namely the learners, society and the subject matter.
   - The curriculum design starts with research to determine the total range of learners' educational, social, occupational, physical, psychological, and recreational needs and interests. Tyler (1949:6) avers that learners' needs

are the extent to which their existing condition falls short of the prescribed standards or norms. It is recommended that teachers resort to observation, interviews with students and parents, questionnaires and tests to determine needs reliably.

- The next step in formulating general objectives consists of analysis of contemporary life in both the local community and in society at large, classifying it into health, family, recreation, vocation, religion, consumption and civic activities. According to Tyler (1949:16), it is essential to note that:

> The effort to drive objectives from studies of contemporary life largely grew out of the difficulty of accomplishing all that was laid upon the schools with the greatly increased body of knowledge which developed after the advent of science and the Industrial Revolution.

Tyler recommends two approaches to analyzing contemporary life. First, educational efforts should be focused on the complexity and continuous change that characterize life today in order to prevent outdated education delivery that wastes learners' time. Particular attention should be paid to matters of prominence in current affairs, so that learners can be prepared to respond adequately to contemporary conditions. Secondly, students critically need to train specific aspects of the mind with a view to enabling them to meet life on equal terms which students would be more likely to do if they can see the relevance of the instruction they receive to existing conditions around them. That is, (1) life and learning situations must be similar, and (2) students must be given the opportunity to put into practice what they learn at school. Tyler (1949) sees no material difficulty in meeting these conditions, hence their use as criteria to determine learning objectives. Tyler warns, however, that contemporary activities are not necessary indicative of relevance for the purpose of formulating learning objectives simply because the activities are contemporary: it stands to reason that activities may be contraindicative for educational purposes and should therefore be selected with due circumspection. It should be noted too that essentialist critics consider the importance attached to contemporary life as an instance of the cult of "presentism". The essentialists contend that life is dynamic and continually changing. Therefore, it is not advisable to prepare students to solve only contemporary problems, because future problems will be different and

students will be unequipped, therefore, to handle such problems. A related criticism is that adult activities may have little if any relevance to children and should therefore also be discounted for lack of specific relevance.

- Finally, educational objectives are formulated by addressing specific disciplines or by cutting across disciplines. In this regard Tyler (1949) emphasizes the role of subject specialists, who may be able to suggest how their subjects can contribute to the education of young people, who are not necessarily going to be specialists in their field.

It is important to note that once general objectives have been identified, the curriculum planners have to consider the suitability of the objectives in relation to the educational and social philosophy of the school, and in relation to the psychology of learning. As noted by Tyler (1949:5), "no single source of information is adequate to provide a basis for wise and comprehensive decisions about the objectives of the school". The aim of this procedure is to eliminate unimportant and contradictory objectives, leaving those that are the most important and feasible. Following this process, the general objectives are transformed into specific instructional objectives, in the following stages:

2. *Selection of learning experiences*
The learning experiences referred to are activities that should be undertaken by students in the teaching and learning process to achieve prescribed learning objectives aimed at developing learners' thinking skills (concepts), helping learners to acquire information (skills), and developing social attitudes and interests (values).

3. *Organization of learning experiences*
Tyler (1949), Marsh and Stafford (1988) as well as Lovat and Smith (2003) suggest that the organization of learning experiences should integrate curriculum horizontally and vertically. Horizontal integration is characterized by linking what is taught in one subject to another, breaking down the compartmentalization of knowledge. Vertical integration consists in enriching

previous learning experiences or knowledge, or in constructing new knowledge in succeeding lessons units, grades or years.

4. *Evaluation of learning experiences*

    It was noted that the evaluation of learning experiences based on established learning objectives should occur throughout the total planning exercise at regular intervals and not exclusively as the final stage of teaching and learning. The aim is to determine whether learning outcomes are being or have been achieved.

Summing up, the Tyler model consists of the following elements: objectives, activities (learning experiences), organization of activities, implementation of the activities and evaluation. Similarly, this model is premised on a deductive approach to curriculum development. The Tyler model is also called the 'objective model', the 'linear model' or the'ends/means model (Marsh & Wills, 2003:72; Lovat & Smith, 2003:114).

This model is considered the best by many curriculum planners, with particular reference to planning the various phases of outcome-based learning (Oliva 1992; Lovat & Smith 2003). However, some critics have censured it for being linear, oversimplified and technocratic (Ornstein & Hunkins, 1993; Tyler, 1977) emphasized the importance of the student's active role in the learning process and non-school areas of learning as critical considerations in curriculum planning and development (*cf.* Marsh & Stafford 1988:9). The reasoning behind these emphases is that the development of higher–order thinking skills should be encouraged by designing a curriculum that is rich in natural complexity and that teaching of the curriculum should be done with due recognition of the pattern detecting mechanisms of human that is, delivery should take optimal advantage for these mechanisms (Tyler, 1977; Dool, 1993).

2.5.4 Summary: some personal remarks on curriculum models

Oliva (1992) correctly notes that models are not perfect and cannot show every detail and nuance of a process as complex as curriculum development. Ornstein and

Hunkins (1993:188) note in this regard that models have disadvantages: "They can (1) invite overgeneralization, (2) entice people into committing logical fallacies, (3) show the relationships between variables incorrectly, (4) exhibit faulty assumptions about constructs, (5) stress invalid data, and (6) turn useful energy into nonproductive activity." Despite these potential shortcomings, however, curriculum models are important tools to guide curriculum developers, provided they use the models with due circumspection. In this regard, Ornstein and Hunkins (1993:188) note that "models aid comprehension and theory building. They are useful for economically organizing and explaining vast amounts of data." Likewise, Marsh and Willis (1999:98) emphasize that "subtheories and models can provide useful, detailed perspectives on some particulars of the curriculum in action, but not the total".

As far as could be ascertained, curriculum development models are means of mobilising the curriculum approaches outlined in section 2.3. The models present both similarities and differences. For instance, the Taba curriculum development model, unlike Tyler's, distinguishes the learning experience from the content of the learning experience. In fact, a learning experience should be seen as a unity that encapsulates learning content. This distinction, as noted by Lovat and Smith (2003) is neither useful nor tenable. Moreover, Marsh and Stafford (1988) classify Taba's model as one which simultaneously includes descriptive and prescriptive elements, while Tyler's model appears to be essentially prescriptive. Nevertheless, it is also important to note that the value of a specific model is determined within the context of use, since it assumes a certain purpose. The usefulness of any curriculum model should be therefore judged according to the specific context and purpose its use, and not on the grounds of intrinsic superiority. In fact, no model is simply inherently superior to other models. The approaches most commonly adopted to curriculum design are constructivism, deconstructionism or postmodernism. Doll Jr (1993:26) contends that Tyler's strategy is consonant with the new era of intellectual, political, social development in which we are living. In this regard Doll Jr. (1993:26) observes that:

> …modern science and the industrial revolution did bring forth not only material benefits but also concepts of progress, freedom, and individual accomplishment not found in pre-modern thought. Modern thought opened up vistas not accessible by pre-modern thought. However, the operation of this thought has assumed a closed, non-

transformational frame. Hence, while it has accomplished near miracles in the fields of medicine and microbiology, it has been quite ineffective in dealing with growth, development, and personal or physical interactions looked at from a system or network viewpoint. In short, modern thought has not provided a good model for the education of human beings. Its Cartesian methodology has assumed the attainment of certainty, and its Newtonian predictability has assumed a universe stable, symmetrical, and simple in its organization.

Continuing in this vein, the same author asserts that for the most part modern curriculum thinking has tended towards the closed form of knowledge transmission, while post-modernism strives for an eclectic yet local integration of subject/object, mind/body, curriculum/person, teacher/student, us/others, et cetra. This integration is a living process; it is negotiated, not preordained, created not found. Teaching is no longer regarded as didactic in the sense of transmission; rather it is seen as guidance, assistance, stimulation, challenge and self-organization. One important aspect of Doll Jr's (1993) reasoning is that postmodernism looks to the past and simultaneously transcends it, that is, postmodernism often entails the building of the new, quite literally, on the old. Doll, Jr (1993:8) aptly remarks that "in this complex relationship, the future is not so much a break with, or antithesis to, the past as it is a transformation of it". Indeed, as Young asserts (2008:45),

> Within theories of constructivism, learning is understood to be an ongoing and developmental process of active meaning-making undertaken by the learner. Learning is thought to involve a process of building meaning systematically as new knowledge combines with old in a process of restructuring.

It seems, on balance, that the new curriculum development trend discussed above is in line with the conceptual curriculum model propagated by Hameyer (1991) — *Generatives Leitsystem* suggested in 1975 by Frey and Aregger. This system is intended to organize processes of research, theory building, practical problem solving, as well as curriculum development and implementation. Its underlying premises are interaction, collective learning, cooperation, and shared decision-making on common tasks. In light of these premises the *Generatives Litsystem* activates norms, attitudes, meanings, modes of collaboration, and negotiation. And noted by Hameyer (1991:20), therefore, it is a conceptual curriculum model consisting of analytical, developmental, evaluative, and diverse activities that "cannot

strictly be divided or sequenced. However, those activities reappear intermittently during the process". It appears, then, that the aforementioned warnings issued by Ornstein and Hunkins (1993) against the disadvantages of curriculum development models are justified. Thus, the curriculum is conceptualized as a process of reflective interaction characterized by Hameyer (1991:21) as "a multilevel cycle of mutual learning and sustained improvement which occurs stepwise and cooperatively"

In the analysis of curriculum implementation an important question to address is: Which curriculum development model was adopted to guide the implementation process? Or to what extent does the new curriculum evince coherent procedures enabling successful implementation? Or better, what is the nature of the new curriculum and to what extent does it predetermine the process of its implementation?

Answers to these questions are sought in chapter three below with due recognition of the stricture notedly Marsh and Willis (1999) that the main consideration is the continuing process rather than a particular result, and that process should link thought with action, in the sense that the planned curriculum should correlate directly with the implemented curriculum, while both should correlate with the experienced curriculum as discussed in section 2.2 above.

With regard to the Mozambican experience of curriculum development models as discussed in 2.5.3 above it should be noted the inductive approach of the Taba model that is more suitable for countries where school-curriculum development is decentralized. This is not the case in Mozambique. Obviously, the "local curriculum" introduced in the context of the new curriculum of basic education in Mozambique is an important step towards realistic and careful decentralizing of school curriculum development. Incidentally, one of Fullan's (1993) eight basic lessons about educational change emphasises that neither centralization nor decentralization offers a full and final solution for the introduction of educational and therefore curriculum change. Top-down and bottom-up strategies should therefore be combined. In fact, before introducing the new curriculum of basic education, as a result of the general policy of the country in socioeconomic, political and cultural domains, Mozambique had a highly centralized education system, including school curriculum. Following the

changes that took place in the country, for example, and especially, adoption of a multiparty democratic system in 1990, an important consideration that could not be ignored was that Mozambique is a large country with an area about 800 000 square kilometres and about 2500 km of coastline. It is not a homogeneous country, being characterized by different cultural, economic, social and geographic features with varying influences on education, especially on curriculum (see introduction to chapter four). Consequently, with a view to honouring the principle of ensuring equal access to basic education for all, Mozambique opted for a school curriculum consisting of two components: a core curriculum and a local curriculum. The core curriculum is centrally planned by INDE and constitutes 80% of the curriculum. The local curriculum is planned locally (at school level) and constitutes 20% of the curriculum (see section 3.3.5 below). In light of these developments, the Taba Model is appropriate for the Mozambique situation.

The Saylor, Alexander, and Lewis Model as well as Tyler model is deductive — both start by defining major educational goals and specific objectives. A careful analysis of other steps of the Taba model, may enrich and improve the experience of curriculum development in Mozambique. Chapter three will be concerned with policy regarding the new curriculum, its structure, as well as the strategies for its implementation, with particular reference to management, monitoring and support at local as well as a national level. It proceeds, therefore, from the theoretical premises laid down in this chapter (chapter two) critical guidance. As noted by Fullan (2001:49) , these premises are used "… less as instruments of 'application' and more as means of helping practitioners and planners 'make sense' of planning, implementation, and monitoring".