INTEGRATING INFORMATION SKILLS INTO THE CURRICULUM: AN ACTION RESEARCH INVESTIGATION AT AN EX-HOUSE OF REPRESENTATIVES HIGH SCHOOL

by

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" I declare that **INTEGRATING INFORMATION SKILLS INTO THE CURRICULUM: AN ACTION RESEARCH INVESTIGATION AT AN EX-HOUSE OF REPRESENTATIVES HIGH SCHOOL** is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references."

Signed : S. E. Finn

Date: 31.07.997

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LIST OF ACRONYMS AND ABBREVIATIONS

AASL	American Association of School Librarians
	American Library Association
ALASA	African Library Association of South Africa
ANC	African National Congress
ASLA	Australian School Library Association
CEPD	Centre for Education Policy Development
CPPT	Cooperative Programme Planning and Teaching
CRIC	Careers Resource and Information Centre
	Department of Education and Science
ERIP	Education Resources and Information Project
Ex-DET	Previous Department of Education & Training
Ex-HOA	Previous House of Assembly
Ex-HOD	Previous House of Delegates
Ex-HOR	Previous House of Representatives
Ex-SGT	Former KwaZulu, KwaNdebele, KaNgwane, Lebowa, Gazankulu and Qwaqqwa
Ex-TBVC	Former Transkei, Bophuthatswana, Venda and Ciskei
GCSE	General Certificate of Secondary Education
GB	Great Britain
HDE	Higher Diploma in Education
	Her Majesty's Inspectorate
	International Association of School Librarianship
InSCRU	Information Skills in the Curriculum Research Unit
INSIS	Information Skills in Schools (Project)
IPET	Implementation Plan for Education and Training
IT	Information Technology

LA	Library Association (of Great Britain)
	Library and Information Services
LIWO	Library and Information Workers Organisation
	Microelectronics Education Programme
MPMRC	Multi Purpose Media Resource Centre
	National Education Co-ordinating Committee
NEPI	National Education Policy Investigation
	New South Wales
NTEA	National Teacher Education Audit
OAL	Office of Arts and Libraries (Great Britain)
PCT	Personal Construct Theory
PRAESA	Project for the Study of Alternative Education in South Africa
RDP	Reconstruction and Development Programme
READ	Read Educate and Develop
SACHED	South African Committee on Higher Education
SAILIS	South African Institute of Library and Information Services
SAIRR	South African Institute of Race Relations
	The Schools Information Retrieval (Project)
	School Library Association (of Great Britain)
SLASA	School Library Association of South Australia
	Student Representative Council
TRANSLIS	Transforming our Library and Information Services
TVEI	Technical and Vocational Education Initiative
UCT	University of Cape Town
	United Democratic Front
UNESCO	United Nations Education Scientific and Cultural Organisation

USA	United States of America
UWC	University of the Western Cape
WCED	Western Cape Education Department

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SUMMARY

South Africa in 1994 was the year of the first democratic general election in its history. It was also the watershed year in education with the publication of the **Draft White Paper on Education and Training**. There were moves afoot to restructure education which inspired the researcher to examine the existing instructional role of the school librarian.

The traditional role of the school library seen as a "repository" and the traditional roles of the school librarian as "gatekeeper", teaching "isolated" programmes called "book education" were called into question by the study which the researcher undertook at an ex-House of Representatives high school.

The problem of the research was to investigate the impact of initiating and conducting information skills on pupil learning and teacher instruction. This entailed an alternative approach to the traditional library programme, an integrated as opposed to an isolated programme as well as a focus on information rather than books.

At a selected school the research was conducted using preparatory talks, questionnaires, interviews, assessment of pupils' work, diary entries, oral feedback and participant observations. The data collected contributed

to the achievement of the objective of the research.

The emancipatory action research theoretical framework allowed the researcher, as a practising school librarian committed to educational changes in the interest of the previously disadvantaged and exploited communities, to deliberately intervene in her own practices to actively reflect on and self-evaluate whether her teaching was transformative and empowering.

The key elements which comprise the theory of information skills and the information search process were discussed. Connections were made between the concepts of cognitive psychology, critical thinking, problem-solving, resource-based learning, information literacy and information skills.

An examination of the developments in American and British library and information skills instruction from 1969 to 1995 offered a rich insight into their respective successes and failures. These observations were used as a springboard for comparison and contrast when analysing South African and Anglophone African school library instructional programmes.

The change agents in South Africa's education between 1976 and 1996 were addressed as well as the impact of these change agents on school library and information services. Future school library and information instructional

programmes were discussed in the light of past imbalances, the education budget cuts, alternative school library models, standards and the new learner-centred curriculum

The data collected at the school were analysed and the findings presented. Finally, conclusions and recommendations, both for immediate attention and further research, were made

OPSOMMING

Suid-Afrika beleef in 1994 die eerste demokratiese algemene verkiesing in sy geskiedenis. Dit was ook die waterskeidingsjaar op die gebied van opvoeding met die bekendstelling van die **Konsep Witskrif oor Opvoeding en Opleiding**. Daar was pogings om opvoeding in die land te restruktueer wat bygedra het om die navorser te inspireer om die bestaande onderrig rol van die skoolbibliotekaris te ondersoek.

Die tradisionele rol van die skoolbiblioteek, synde as bewaarplek, en die tradisionele rolle van die skoolbibliotekaris as hekwagter, wat verantwoordelik is vir die onderrig van geïsoleerde programme bekend as boekopvoeding, was bevraagteken deur die studie wat die navorser gedoen het by ń gewese Raad van Verteenwoordigers hoërskool.

Die probleem van die navorsing was om die impak van die inisiëring en implementering van inligtingsvaardighede op die leer van leerlinge en onderwyseronderrig te ondersoek. Dit behels ń alternatiewe benadering tot die tradisionele biblioteekprogram, ń geïntegreerde teenoor ń geïsoleerde program met die fokus op inligting in plaas van boeke.

Die navorsing was gedoen by ń geselekteerde skool deur gebruik te maak van voorbereidende praaitjies, vraelyste,

onderhoude, evaluering van leerlinge se werk, dagboek-inskrywings, mondelinge terugvoer en deelnemende waarneming. Die data wat op hierdie manier versamel is, het bygedra tot die bereiking van die doelwitte van die navorsing.

Die bevrydingsaksie navorsing teoretiese raamwerk het die navorser in staat gestel, as ń praktiserende skoolbibliotekaris wat verbind is tot opvoedkundige veranderings veral onder gewese benadeelde en geëksploiteerde gemeenskappe, om opsetlik in te gryp in haar eie praktyke en om op haar onderwys aktief te reflekteer en om self te bepaal of haar onderwys bemagtigend en transformerend was

Die hoof elemente wat die teorie van inligtingsvaardighede en die inligtingsoekproses insluit was bespreek. Die vergelykings was getref tussen die konsepte van kognitiewe sielkunde, kritiese denke, probleem-oplossing, bronne gebaseerde leer, inligting geletterdheid en inligtings-vaardighede.

ń Ondersoek na die ontwikkeling in Amerikaanse en Britse biblioteek- en inligtingsvaardighede instruksie van 1969 1995 het ń goeie insig gegee in die lande se onderskeie suksesse en mislukkings. Hierdie waarnemings is gebruik as basis in die vergelyking en kontrastering tydens ń analise Suid-Afrikaanse en Anglofoon Afrika skoolbiblioteek

onderrigprogramme

Die agente van verandering in Suid-Afrika se opvoeding tussen 1976 en 1996 word aangespreek sowel as die impak van hierdie agente van veranderinge op skoolbiblioteek en inligtingsdienste. Toekomstige skoolbiblioteek en inligting onderrigprogramme word bespreek in die lig van ongelykhede van die verlede, die opvoeding begroting besnoeiings, alternatiewe skoolbiblioteek modelle, standaarde en die nuwe leerdergesentreerde kurrikulum

Die data wat by die skool versamel was, is geanaliseer en die bevindings is weergegee. Laastens was gevolg-trekkings en aanbevelings beide vir onmiddellike aandag en verdere navorsing gemaak.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND TO THE PROBLEM

We stand now at the crossroads in the history of education in South Africa. The politics of struggle for basic rights to an equitable education in a non-racial, non-sexist, democratic South Africa has dominated the lives of concerned educationists for the past few decades.

Since the first general election for all South Africans in April 1994, the way forward - socially, politically and economically - is proving tough to negotiate. In retrospect it seems easier to criticise and theorise about problems in education than to build and reconstruct anew given real conditions. This must not detract from the fact that theory and criticism have its place in the development of change.

With our inexorable drive forward in the new democracy, we cannot ignore the disparities which we have inherited from apartheid education. These would include amongst an endless list well documented by the annual Race Relations surveys, the lack of facilities, the lack of qualified teachers and the lack of books. Given the overwhelming number of disparities, which specific problems ought we to focus on first? Schools which had been disadvantaged under Apartheid education are at different points on the continuum of

redress. For some the major obstacles may be a lack of desks or even electricity, whilst for others, the lack of laboratories or sports equipment may be the major gripe. Would it be expedient to be questioning learning and instructional strategies in the face of urgent, basic needs of schooling in some ex-departments and geographical areas and imbalances in the education arena in general?

The answer to this question lies both in the past and the present. People's education popularised the idea of a curriculum in which the content should be devoid of eurocentrism and party political bias structured under a method of resource-based learning as opposed to exam-oriented learning. The draft White Paper on Education and Training (published September 1994) stated that

> exams and teaching methods have encouraged memorisation ... and discouraged both teachers and students from developing their initiative or critical thinking (South Africa, Department of Education. Draft ...1994:9).

It continues further (1994:13) stating that

> the curriculum and teaching methods should encourage independent and critical thought ... the capacity to question, enquire and reason, to weigh evidence and form judgements, to achieve understanding, and to recognise the provisional and incomplete nature of most human knowledge.

Although the White Paper does not spell out what the changes in curriculum and teaching methods are to be, a

resource-based approach is the one used world-wide with much success.

If resource-based learning and teaching is the way of the future, then it is indeed pertinent to be looking at the role of school library media centre development and the role of the school librarian in fostering resource-based education.

Most educationists agree that a school library is an asset. Yet, under the ex-House of Representatives (ex-HOR) Department of Education, school library provision depended on the value and importance that individual principals placed on it. Most school libraries became storehouses of books locked away.

From 1987 all ex-HOR senior secondary schools with 500+ pupils could advertise for a "teacher-librarian". Qualified, experienced school librarians were rare then. Not even 10 years have passed and within that time many (exact figure unknown) school librarians have taken early retirement in the light of retrenchments in the last 2 years. Thus school library development under the ex-HOR has been stunted before it has passed infancy.

Where school librarians still exist, what have they been teaching in the school library? The book education syllabus which most school librarians in South Africa teach is an

extension of what they learned at library schools at university or college. By the mid-1980's in countries like the United States of America (USA), Canada, Australia, New Zealand and Great Britain (GB) attention had turned to information skills and away from book education skills. Central to the shift in focus was an acceptance of the information age and of the lack of transfer of skills taught in the library to other subjects in the curriculum. Thus, school librarians in ex-HOR schools are equipped with an outmoded understanding of present trends in school libraries worldwide.

1.2 LITERATURE REVIEW

1.2.1 INTRODUCTION

The literature, standards, curricula and guidelines from four continents were surveyed with specific reference to information skills and literacy in high schools from the perspective of school librarianship. The major contributors to the ideas came from North America and GB, where the concepts and practice of information skills and literacy have been in existence for at least 20 years already. Research into this field in Anglophone Africa has been scant due to circumstances and priorities peculiar to underdeveloped countries.

The nature of the research in this field has been primarily

qualitative - case studies, observation reports, action research, longitudinal studies. Few quantitative research studies exist and the reasons for this will be explored later. What seems to be the case with information skills is that it emerged in practice at individual schools and despite its undisputed worth, it still needs hard empirical research to support its base.

Four themes will be explored which appear repeatedly in the literature:

1. the nature or content of information skills
2. the integration of information skills across the school's curriculum
3. the role of the school librarian in information skills instruction
4. the value of information skills instruction as an essential part of the educational programme.

1.2.2 THE NATURE OR CONTENT OF INFORMATION SKILLS

What characterises information skills most is an approach to learning as a series of steps in a process. Several models have been developed which may use different terminology and sub-divide the process at different intervals, but generally the scope of the process looks similar. While Marland's **"9 Question Steps"** (INFORMATION ..., 1981:50) are often cited as having originated the "steps in the information skills process", the universality

of the process model using "steps" can be found as far afield as Australia and New Zealand. Examples from the USA (Kuhlthau, 1985a:37), GB (Brake in TOOLS..., 1986:23) and New Zealand (Gawith, 1991:16) suggest just how much they overlap (see table 1).

TABLE 1: MODELS OF THE INFORMATION SKILLS PROCESS

Kuhlthau	Brake	Gawith
1. Initiation	1. Thinking Ahead	1. Deciding
2. Selection	2. Finding information	2. Finding
3. Exploration	3. Using Resources	3. Using
4. Formulation of focus	4. Recording information	4. Recording
5. Collection	5. Using information	5. Presenting
6. Presentation	6. Communicating	6. Evaluating
7. Assessment	7. Thinking back	

The implications of the similarities of the models are that school librarians can adopt and adapt a model or models as they see fit. Endorsement for this theme can be seen in the American Association of School Librarian's (AASL)

Information Power, the guidelines for school library media programmes in the USA (1988:29-30):

> ... the objective is to help (students) to develop a systematic mode of inquiry to gain physical and intellectual access to information and ideas that reflect diversity of experience, opinions, ...
> Skills to be mastered include ... most importantly, the development of higher-order thinking skills for the organization, evaluation and use of information and ideas as an integral part of the content and objectives of the school' curriculum.

The only literature in South Africa which talks directly to this theme is the **Core Teaching Programme for Information Skills** (South Africa. Department of National Education. Core ... 1994)(see **APPENDIX 1**). It has 6 steps like the Gawith model and was intended to be implemented in ex-House of Assembly (ex-HOA) schools.

Of the process models, only Kuhlthau's **"Information Seeking Process"** model and the Australian NSW Education Department's model **"Skills for Information Literacy"** have been tested empirically by Kuhlthau and Todd respectively. The other models have evolved from practical experience.

Research questions lacking in the literature along this theme are:

* How widespread is the process approach used in practice?
* Are particular skills or steps in the information skills process more difficult or easier to

develop in students?

* Can an adapted model of the information skills process work even in under-resourced conditions?

There is a dire need for testing the process models in actual situations (Eisenberg and Brown, 1992:104).

1.2.3 THE VALUE OF INSTRUCTION IN LIBRARY AND INFORMATION SKILLS AS AN ESSENTIAL PART OF THE SCHOOL'S EDUCATIONAL PROGRAMME

There are a limited number of studies which focus directly on the impact and worth of library and information skills instruction at the high school level. In 1987 Goodin completed a study on the transferability of skills from high school to college (Eisenberg and Brown, 1992:104). In 1989 Kuhlthau started a longitudinal study of how students approach the information search process. She sought to determine the correlation between their confidence and their outcomes.

In 1991 Todd, Lamb and McNicholas undertook a longitudinal study into information literacy at Marist Sisters' College in Woolich, Sydney. They first set up the infrastructure at the school to facilitate this integration of information literacy competencies into all curriculum areas and levels of secondary schooling. In 1992 the research focused on a qualitative study of the impact of integrated information

skills on learning. In 1993 a more systematic quantitative analysis was undertaken.

conclusion of this study which focused on the discipline of science was that using the information skills approach integrated into science, positively and significantly impacted on the mastery of science content and skills. Regarding performance-based academic self-concept and perceptions of sense of control over learning, the treatment group scored lower than the control group. The author feels this is cause for concern given that information skills are supposed to enhance students' ability to learn independently and to take charge of their learning (Todd, 1995a:64-65). His concluding remarks urge

> longitudinal studies and testing in a range of settings and across academic levels

Perhaps the dearth of research studies on the worth or impact of library and information skills is a reflection of the difficulty of measuring it. "We need to develop reliable and valid measures of information skills competence" (Todd, 1995a:65).

1.2.4 THE INTEGRATION OF INFORMATION SKILLS ACROSS THE CURRICULUM

This theme, although based on little documented research, is an assumption which has pervaded "the professional practice" (Todd, 1995a:56-57) of school librarians since the 1980's. The theme of **integration** was popularised by Marland's **Information Skills in Secondary Schools** in which he devotes an entire chapter to the "whole-school policy on information skills". Educationists were discovering that isolating information-handling skills to a traditional library period resulted in the non-transference of skills to other areas of the curriculum. Thus in the 1980's school librarians began developing programmes which allowed greater integration between library and information skills and subject disciplines.

The Canadian, Ken Haycock, was the pioneer who took the ad hoc relationship between teachers and school librarian to the new height of Cooperative Programme Planning and Teaching (CPPT). The Australians Todd and Henri in their respective ways make a case for integrating the information skills programme with school subjects. Todd (1995b:133-138) supports the argument for integrated information skills instruction based on the success of his study at the Marist Sisters' College. Henri (1990:43) offers a model which demonstrates a continuum of the types of cooperative planning programmes (see table 2 on page 11). Loertscher's

Taxonomy of the School Library Programme (see page 84) proposes a similar continuum of the school library programme. The more integral the library & information skills programme is considered in the curriculum, the closer to type 4 of cooperative planning will be in evidence.

TABLE 2: TYPES OF CO-OPERATIVE PLANNING

	TYPE 1	TYPE 2	TYPE 3	TYPE 4
DEFINITION	CONSULTATION LEADING TO PROVISION OF RESOURCES.	CONSULTATION LEADING TO ENHANCEMENT OF CLASSROOM PROGRAM.	CONSULTATION LEADING TO ENHANCEMENT OF CLASSROOM PROGRAM THROUGH TEAM PLANNING\TEACHING.	CONSULTATION LEADING TO EQUALLY ENHANCED RESOURCE CENTER AND CLASSROOM PROGRAMS THROUGH CO OPERATIVE PLANNING,TEACHING AND EVALUATING.
TEACHER-LIBRARIANS ROLE	PROVIDES RESOURCES UPON REQUEST OR SUGGESTS RESOURCES.	PROVIDES RESOURCES AND RELATED UTILIZATION IDEAS INFORMALLY CONTRIBUTES TO CLASSROOM PROGRAM.	SLOTS INTO PLANNING/ TEACHING SITUATIONS AS REQUESTED,NEEDED OR APPROPRIATE.	FULL PARNER WITH TEACHER IN PLANNING, TEACHING AND EVALUATING.
TEACHERS ROLE	ASKS FOR RESOURCES WHICH ARE OFTEN TAKEN TO THE CLASSROOM. OR RESPONDS TO SUGGESTIONS RE SUITABLE RESOURCES.	TALKS WITH LIBRARIAN ABOUT CLASSROOM NEEDS/ PROGRAM.	TEACHER DEVELOPS UNIT/ PROGRAM AND CONSULTS WITH TEACHER-LIBRARIAN IN REGARD TO SOLICITIC ACTIVITIES THAT WILL BE PLANNED/IMPLEMENTED COOPERATIVELY.	COOPERATIVELY PLAS, TEACHES AND EVALUATES UNIT WITH TEACHER-LIBRARIAN.
RESOURCE CENTER PROGRAM PROFILLE	CAN RANGE FROM SKILLS IN ISOLATION TO PARALLEL TO NO PROGRAM AT ALL. SKILL DEVELOPMENT THROUGH LITERATURE APPRECIATION IS ONE RECOMMENDED APPROACH.	CAN RANGE FROM SKILLS IN ISOLATION TO PARALLEL TO NO PROGRAM AT ALL. SKILL DEVELOPMENT THROUGH LITERATURE APPRECIATION IS ONE RECOMMENDED APPROACH	LIBRARY PROGRAM AND CLASSROOM PROGRAM ARE INTER-RELATED-MORE CONSCIOUS INTEGRATION OF LIBRARY-RELATED STRATEGIES.	COMPLETE INTEGRATION OF RESOURCE CENTER AND CLASSROOM PROGRAM.

In the literature emerging from South Africa, Olën's (1994: 75-78) study of the role of the school media centre and the

information literacy programme in initial teacher training looks at the necessity for integrating information skills into subject teaching. Olën makes a strong case learning information skills in the context of subject content rather than as a stand-alone, separate subject taught as part of the library programme alone. Job (1993), in her study on the **Influence of change on the role profession of the media teacher**, also identified a lack of integration of the library and information skills programme (called the media programme) with subject learning as one of the arguments for the waning role of school librarians.

Researchers in GB have highlighted a major problem in putting into practice the idea of a whole-school curriculum on information skills. Hounsell and Martin (1983), Best, et al 1987 and Brake in Heeks, 1989:19) all refer to whole-school policy problems in their research. Working with a new paradigm of learning within the confines of a traditional timetable, exam-oriented curriculum, teaching methods and mindset of teachers can easily spell disaster for full integration. Best,... et al (1987) on the Essex Secondary Schools Education/Library project, highlights the failure of new curriculum initiatives to include the role of the school library in an integral way. Hounsell and Martin (1983) in their research conclusions call for a gradual introduction of information skills rather than a whole-school approach.

Future research into this theme could possibly look at the questions of:

* How effective is the integration of information skills into subject areas if the integration is only done with projects and not the entire content area?
* What is the correlation between the degree of integration and academic achievement?
* Strategies or models to guarantee that integration will take place.

1.2.5 THE ROLE OF THE SCHOOL LIBRARIAN IN INFORMATION SKILLS INSTRUCTION

literature conveys an evolutionary pattern in the instructional role of the school librarian. S/he started as a proprietor of books teaching pupils how to use specific sources of information like a dictionary or an encyclopaedia. This "tools" approach developed into a more sophisticated "pathfinder" approach as the librarian started presenting pupils with a research strategy model.

most sophisticated instructional role the school librarian has reached is that of "instructional consultant". At this level s/he is not merely ensuring that location and utilization skills are being honed, but also critical thinking and production skills. This last "process" approach places emphasis on the analytical axiom of ideas not the tools.

The research emanating from the USA focuses closely on the progressional instructional role of the school librarian. Research of the literature done by Craver (1986) drew the conclusion that in the late 1970's the roles of library and librarian were marginal in schools and that the most accepted role of the school librarian was as provider of informational resources. Several studies in the late 1970's showed that school librarians were not practising the new instructional role as described in the literature (Craver 1986:188). The latter can be understood if, according to Turner (1982:275), the majority of library schools and masters level school library media programmes did not offer instructional design competencies! Where they were offered, the more traditional competencies were emphasised. While the literature and standards dictated one thing, reality lagged far behind.

In GB there is little research which examines the role of the school librarian in terms of the instructional consultancy role. Most research projects do not use school librarians as a point of departure, but teachers. This is part of the historical legacy of school librarianship in GB. Research undertaken there which examines the role of the school librarian are:

the **Essex Secondary Schools Education/Libraries Project** (Best, 1987)

the **School Librarian's Day** by A.Irving (1986)

Developing resource-based learning - the Margaret Dane

School Project 1981-3 (Heeks, 1989:76)

Valentine and Nelson's 1988 study entitled **Sneaky Teaching.**

(For more details of these studies see Chapter 3).

Hounsell and Martin (1983:64) comment in their research that librarians themselves see their chief role as "meticulous custodians" and only if time is left do they attend to their instructional role.

Valentine and Nelson's 1988 study at a school where information skills had taken off well comments that the librarians lacked the confidence to cross that barrier between traditional library skills and the new information skills.

Fredericks' 1994 research looks at the general role of the school librarian in education focusing mainly on ex-HOR schools in the Western Cape. The school librarians in his study (1994:280) refer to their main instructional functions as teachers of "book education" (60% of respondents), "reference work " 43% of respondents) and "reading" (30%). From this data it can be deduced that school librarians at ex-HOR schools are at the rudimentary level of their evolutionary instructional role. This is due to a similar situation in the USA in the late 1970's as described by Turner(1982). Schools of Library and

Information Science in South Africa were offering source or "tools" approach of "book education" and school librarians implemented it.

The most recent research located on the consultation and instructional roles of the school librarian was completed by Van Deusen, Donham and Tallman (1994 In their investigation they examined the relationships between methods of scheduling timetabling) pupils into school libraries and consultation activity and information skills instruction performed by the school librarian.

One of their main conclusions is that the optimum situation for implementing the consultation and teaching roles as defined in **Information Power** includes flexible timetabling, a full-time certified school librarian who meets with teams of teachers to plan instruction (1994:37).

1.2.6 CONCLUSION

The lack of research into information skills/literacy the instructional role of the school librarian has a definite effect on the development of this crucial aspect of school librarianship because without research there can be no verification. Not only must there be more research but it must be undertaken in a systematic, co-ordinated way that builds on previous research. In the South African context, no research within schools has been completed

which centres on this feature of school librarianship.

1.3 STATEMENT OF THE PROBLEM

If we accept that we are living in a communication technology oriented world, then we have a duty to prepare students to cope with this ever-changing information rich environment. To equip in-service teachers and school librarians with the skills of information literacy, will need to be primed through workshops, continuing education, bridging courses, pilot studies and so on concepts of information skills and information literacy need to be mooted both in schools of library information science and schools of education at universities and in teacher training colleges.

At a volunteering high school the researcher will initiate information skills teaching through the existing school subjects. This approach will be different from " education" teaching which is done only in the school library. Neither will this approach be limited to school library and the school librarian. An extensive literature search has revealed that the idea of an integrated skills approach with co-operative teaching i.e. teaching information skills through the subjects using the subject teacher and the school librarian simultaneously, is receiving the most favourable attention.

The problem of this research is to investigate the impact of initiating and conducting an integrated approach to information skills on pupil learning and teacher instruction.

1.4 THEORETICAL FRAMEWORK

For the purpose of this research, the theoretical paradigm of action research has been defined as:

> a deliberate, group or personally owned and conducted enquiry. It is undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices and the situations in which these practices are carried out
> (Boomer, 1987:8; Kemmis, 1984:79).

The choice of action research as the theoretical framework arose from the special features which it offers:

1. As a sub-category of naturalistic research (Henri, 1987: 20) which focuses on practitioners themselves involved in research into the practices within their field (here education), action research is also the antithesis of research undertaken by outside experts.
2. Action research is deliberate learning. Educationists deliberately intervene in their practices to actively reflect on and self-evaluate for the ultimate objective of effective teaching and learning (Boomer, 1987:4).
3. There is no one specific way of doing action research. There is no set method or model. Different people emphasize

different aspects of it. It is therefore not prescriptive The research design changes and adapts as the investigation proceeds (Huysamen, 1994:176).

4. Unlike research with a "big R" Boomer, 1987:7 , action research is owned by the person/s doing it. It is their own research into their own problem so that the consequent action is also "owned". The result is to affect or modify one's own behaviour. This type of research cannot be disowned. "Big research" may be aimed simply at the generation of knowledge. Problems usually relate to somewhere or someone else. Thus, to a degree researchers tend to be detached from the problem.

5. Because action research is personally owned, it is always oriented towards solving an existing problem, although the outcome may create new knowledge, new problems or new questions (Boomer, 1987:7; Cohen and Manion, 1980:174).

6. Action research is participatory: within education, the teachers, school librarian and pupils are not subjects, but participants (Huysamen, 1994:176)

Grundy 1987:11-17) describes three modes of action research - the "technical", "practical" and "emancipatory" Technical action research is what outside "experts" engage in and distribute to teachers in pre-packaged form for them to implement in the classroom. This technical form excludes the teacher's own understanding and contribution to practice. By following the "rules" the teacher is rendered

"efficient and effective" (Walker, 1991:159). The teacher as an educator has negligible value within the technical interest. Teachers are seldom placed in a position to address the power relationships implicit in their institutional and social situation. In the end teachers are instruments of change rather than agents of change and the nature of change is reproductive.

Practical action research fosters the development of the teacher's judgment and understanding in decisions about classroom change in the educational interests (as s/he sees it of the pupils. Proposals for action claim to be intelligent rather than correct, to provide guidance rather than direction. The focus is on practical and informed action to promote change in the classroom (Walker, 1991:160

In both practical and technical action research there is a lack of critical focus on how classroom action is structurally located. Practical action research is governed by consensual norms, a " consensus which can be false when powerful interests are participating in the meaning-making and agreement process" (Jeftha, 1990:39).

Although the focus of the research is on changing learning and instructional strategies both within the classroom and the school library, the researcher is aware of the pitfalls of not locating the research within the broader context of

the sociopolitical structures. Contextualising the teachers' or school librarian's educational work within the political sphere is what Grundy 1987:11 calls **emancipatory action research.** Emancipatory action research is a strategy for improvement and transformation educational practices. In the South African context, teacher who is interested in emancipatory action research would be committed to educational changes in the interest of previously disadvantaged and exploited communities. The teacher would engage in pedagogical research practices as a way of knowing whether her/his teaching was indeed transformative and empowering (Walker, 1991:160).

Most teachers presently employed in education in South Africa are the products of inferior apartheid schooling. Despite the existing constraints viz. overcrowded classes, minimal resources, minimal inset support by educational authorities) in most South African state schools which militate against developing critical teaching a good place to start intellectual training is in the classrooms Here teachers and school librarians can begin to be applied educationists in the sense that they can deliberately and self-consciously begin to implement the research mode Being a progressive teacher in a political sense does necessarily presuppose that you employ progressive pedagogical practices in the classroom.

1.5.1 SCHOOL SELECTION AND DELIMITATION OF THE STUDY

The school selected had to fit the following criteria:

1. The principal had to volunteer the site of the school for the purposes of the research. The researcher had to have free access to the site.
2. The school had to have a school librarian of at least 5 years standing and a functioning library. The librarian needed to be experienced.
3. There had to have been designated library periods for classes so that pupils would have been introduced to basic library skills.
4. The school could not be a private school, semi-private school nor an ex-HOA school. The researcher wanted the study to take place at a school with limited but organised and managed resources in a central library. It had to be a school which under Apartheid education suffered the consequences of an inequitable distribution of resources.
5. It had to be a high school as the researcher was familiar with this working environment and she wanted the study to be transferable
6. The standards/levels to be used were to emanate from the standard seven to nine group. Standard six pupils come from diverse backgrounds and not all have been exposed to library skills. The standard ten pupils are too pressurized by their matric examinations

7. Three teachers, the school librarian and pupils had to volunteer. Because of the constraints of fitting into an existing timetable and because the researcher had to be present at most if not all the lesson periods, the lesson periods of the three teachers could not be allowed to overlap.
8. The three teachers had to represent three different subjects from the broad disciplines - viz. languages, social sciences, life sciences, pure sciences. The idea was to ascertain the difference in approach and emphases used in the disciplines to accomplish research.
9. The three classes of pupils could not overlap. This was to permit information skills to be introduced to as many pupils as possible.

The researcher was aware that this was an exploratory qualitative research. A more formalised and systematic study using quantitative research would have yielded a more definitive study. The former was very necessary though, as it lay the foundation for the more sustained, longitudinal study.

1.5.2 QUESTIONNAIRES AND INTERVIEWS

The rationale for using questionnaires and interviews was to address the problem under investigation. The structured interview was used to gain insight into the teachers':
1. present instructional strategies

2. perception of the transition period in education
3. use of resources and different types of libraries
4. view of the information world vis-a-vis education

The structured interview was also used to gain insight into the school librarian's:

1. role in the school curriculum
2. relationship with the teachers
3. perception of her job
4. knowledge of the changes in her field and in the curriculum
5. use of resources and different types of libraries

A pilot interview was conducted to gauge any problems with, amongst others, language, logic or sequence. The structured interview as a form of data collection is advantageous because all interviewees (of the same category are asked the same questions; the interviewer is in complete control of the situation; it ensures that no one else has answered on behalf of the respondent; the rate and quality of response are generally high and by directly confronting the person means the interviewee cannot elude you (Huysamen, 1994:144-147)

Of the 87 pupils in the study 84 completed questionnaires. Three pupils were absent on the day the questionnaire was completed. The choice of a structured questionnaire for the pupils was mainly the time-consuming nature of the

interview. All pupils might not have been able to express themselves verbally.

The questions were a combination of open-ended multiple-choice types. By choosing multiple-choice type questions the researcher hoped to avoid too many inappropriate responses. In order to counter presumptuousness, a choice at each multiple-choice question allowed the respondent to express alternative options freely

Pupils opined on issues of learning styles, teaching styles encountered, projects, library lessons, themselves as information users and their perception of the information world

1.5.3 DATA COLLECTION PROCEDURE

Within the framework of action research the context of the participants becomes the direct source of data. This qualitative research method relies predominantly on a descriptive style of reporting.

At the volunteering school, the three teachers, the school librarian, the pupils in the three classes and researcher were involved in the investigation. Data were collected using:

interview and questionnaire responses

participant observation by the researcher

pupils' work

diary entries of pupils

discussions

1.6 POTENTIAL VALUE OF THIS RESEARCH

The potential benefits of this research could be viewed from two angles: 1) that of the in-service teacher and school librarian, and 2) that of the teacher and school librarian in training.

Whilst resource-based teaching is not a new concept at university schools of education, information skills and information literacy is. If courses in colleges of education and university schools of education take cognisance of the move into the Information Age and accept to prepare future teachers (and hence pupils) to deal with an information rich environment adequately and effectively, then this research, and others like it, should make a contribution to the new perspectives

In the same vein, university and technikon library and information schools in South Africa may be encouraged to change their course content to that which addresses the present and future needs of students entering an information driven world

It is ironical that the literature (Aaron, 1981; Dickinson, 1981; Radebe, 1994 should identify tertiary institutions complaining bitterly about the inability of students, especially at the undergraduate level, to undertake a successful research project. Here the lecture style of instruction persists and has not been challenged by way of critiques for its weakness as a learning strategy.

At the site (school) itself, the researcher will endeavour to challenge existing views, roles and perceptions. hopes the study will promote co-operative teaching between school librarian and teacher as the desired and not merely the arbitrary choice of instructional strategy. The effect could be to enhance the role of the librarian in the curriculum by her advocacy of a resource-based learning philosophy. Resource-based learning may affect the growth of the school library as its role becomes central to learning and teaching.

The ultimate challenge which this research offers is for the school to adopt, in the words of Michael Marland (INFORMATION ..., 1981: 26), a "whole-school policy" or "cross-curricular approach to information skills". This implies that the school head and senior staff accept notion and philosophy of resource-based learning and foster it through the entire curriculum.

DEFINITION OF TERMS

Terminology within the field of school librarianship has developed and changed dramatically over the last fifteen years. The growth of the information age, the role of and attitude towards persons running the library and the library itself are all reflected in the changes.

1.7.1 SCHOOL LIBRARY AND RELATED TERMS

School library is the generic term understood worldwide and popularly used in the UK, Australia and parts of South Africa. Historically, it denotes the traditional collection of mainly printed media, but generically it covers all types of media (print, audio-visual, electronic) and the necessary equipment for their use.

School library resource centre was a term coined in the UK in the 1970's to describe an agency which actually created resources as well as collected them. Few schools in the UK developed school libraries along these lines (Herring, 1988: 5-7

The term **school media centre/ school library media centre** arose in the USA from the desire to expand the concept of traditional school library. The term is used to describe a learning centre which is not limited to printed media only, but which incorporates audiovisual resources

as well.

Olën 1994:12 and Stander (1992:10) refer to the term **school information centre** and **school information service** respectively. The broader literature the researcher has read makes no reference to this usage. The researcher will consistently use the generic term **school library**, unless quoting directly.

1.7.2 SCHOOL LIBRARIAN AND RELATED TERMS

The personnel who run the school library are variously described as **school librarians, teacher-librarians, library media specialists** and **media teachers. School librarian** is a term used in the UK to denote a graduate professional librarian working in a school. S/he may also have a teaching qualification (Herring, 1988:6)

In Australia and in certain quarters in South Africa, term **teacher-librarian** was adopted. It is used to describe the dual qualifications of a school librarian, who in South Africa must firstly have a teaching qualification secondly a library qualification

In the USA, the term used is **library media specialist.** is a member of the teaching faculty who has broad professional preparation in educational media, is a certified teacher and is knowledgeable about

educational processes and methodology.

Although the term **media teacher** is used widely in some quarters in South Africa, the researcher prefers to use the term **school librarian** in its generic sense. Job 1993:19) justifies the term **media teacher** on the basis that history or science teachers are not referred to as historians or scientists. On the other hand, with terminology changing so rapidly, we may soon see the appearance of the term **information teacher.**

1.7.3 INFORMATION

Two broad views of information exist. One definition sees information as an object which can impart information. It exists in objects like books or videos which can be stored transmitted, lost or destroyed (Todd, 1995a:55).
Information is detached from people who are seen as passive recipients. The focus is on the task of delivering information and being informed is seen to ensue directly from its delivery.

The second definition views information as something which is intangible, something people construct subjectively (Todd, 1995a:56). The crux of this definition lies in the creation of meaning. Meaning does not happen simply by transmitting information; rather it is constructed by people by making links to their existing knowledge

structures. "Information is the process of becoming informed" (Gawith, 1987:1). Here the emphasis is on recipient and not the source as in the former definition

1.7.4 INFORMATION SKILLS VERSUS LIBRARY SKILLS

Library skills are those skills a pupil needs to find information in a library and to effectively use the information for educational, recreational and other purposes. Information skills are those skills needed to make efficient and effective use of information. The shift of focus goes beyond the use of libraries to the abilities of pupils to define, analyze, synthesize, organise, present and evaluate information.

1.7.5 RESOURCE-BASED LEARNING VERSUS RESOURCE-BASED TEACHING

Beswick as quoted in **RESOURCE-BASED learning: information literacy: training** ...(1993:63 defines resource-based learning as the

> methodology that assumes students will learn from their own direct confrontation, individually or in a group, with a learning resource or set of resources and activities connected with them rather than a conventional exposition by the teacher.

The difference between resource-based learning resource-based teaching is in emphasis. In resource-based

teaching the emphasis is on the teacher and the way teacher creates the learning environment through the use of resources (Gawith, 1987:5). The two are supplementary and complementary.

1.7.6 INFORMATION LITERACY

Information literacy is the ability to use information purposefully and effectively. An information literate person is one who has learned how to learn. The information literate is empowered for life-long learning because they know how to find and use information for any necessary or decision.

1.7.7 CURRICULUM VERSUS SYLLABUS

Syllabus is the narrower term referring to the course content of a subject taught at school. Curriculum or curricula refer/s broadly to all aspects of schooling -like teaching methods, philosophy or ethos of the school or punishment - not merely to course contents.

1.8 EXPOSITION OF CHAPTERS

In Chapter 1, the researcher describes the background to the problem, reviews the literature, states the problem and the purpose for the investigation. Potentially problematic concepts are defined and the theoretical paradigm of action

research is briefly outlined. Finally, the research methodology, limits and benefits of the study are explained.

Chapter 2 will offer an in-depth discussion on information skills which will include such areas as information literacy, critical thinking, problem-solving and resource-based learning. Both theoretical and practical aspects will be addressed.

Developments in school librarianship with specific emphasis on the evolution of skills instruction in the last twenty years in the USA and GB are discussed in Chapter 3. Countries like the USA and GB offer the most research and progress in this field in the English speaking world

The topic in Chapter 4 is on education and school library developments in South Africa, especially in ex-HOR schools The topic will also examine the Anglophone African experience

A presentation, analysis and interpretation of the data collected at the school will be explored in Chapter 5. Chapter 6 renders a concluding statement and makes recommendations for further research.

CHAPTER 2
INFORMATION SKILLS

2.1 INTRODUCTION

A thorough understanding of the key elements which comprise the information skills debate needs to be gained. This chapter will examine in some depth the connections between concepts of critical thinking, problem-solving, resource-based learning, information literacy and information skills. In particular, the development of the theory of library and information skills instruction and the evolution of a new paradigm in the information search process will be dealt with. Finally, a brief overview of putting information skills into practice will be outlined.

2.2 CRITICAL THINKING

2.2.1 THE EMERGENCE OF THE CRITICAL THINKING SCHOOL

In the early 1980's the critical thinking school gained popularity due to a convergence of social forces amongst others declining test scores, national reports of the crisis in education, collaborative emergent theories of learning in both the fields of psychology and education, basically trying a new way to make students think in the face of past methodological failures (Sternberg, 1985:194).

It dawned on people that we had moved beyond the industrial society to a complex, technologically-driven information society in which it is not enough any longer for individuals only to gain societal knowledge but to be able to evaluate information and apply it appropriately. As Smith (1986:286) comments, citizens need to be able to

> analyse, appraise, compare, discriminate and question what s/he sees and hears. ... need to question the values of sports heroes endorsements of products, recognise questionable premises in a statistical claim, assess pros and cons of an investment plan, etc.

For this reason thinking skills have become synonymous with survival skills. Thus if we want citizens who need to make informed decisions, then continuing to locate education in the old paradigm or traditional curriculum would not be useful.

2.2.2 TRADITIONAL VERSUS THINKING CURRICULUM

Langrehr (1994:9) lists 10 ways the traditional curriculum differs from the thinking curriculum (see page 36):

Traditional curriculum	**versus**	Thinking curriculum
students learn new content		vs students make connections between related content
students answer the questions of someone else about a topic		vs students ask their own probing questions about a topic.
students recall & apply prescribed content		vs students analyse & judge content using many core thinking processes
there is competition and the comparing of student memories at points in time		vs there is growth in the individual's thinking processes over a period of time
focus is on unconscious, private thought processes		vs focus is on conscious, shared thought processes
focuses on writing verbal summaries and explanations		vs focuses on summarising key terms & their connections on mental maps
uses methods for helping recall of content		vs uses metacognition for improving mental thinking processes
8. focuses on passing standardised or public exams for selection purposes		vs focuses on developing adults who can think independently, creatively and critically
9. there is a belief in a single intelligence that is relatively fixed in time		vs there is a belief in multiple intelligences that can change with effort and instruction
10. test items use unreal, artificial problems or situations		vs test items are based on " authentic" assessment

The thinking curriculum is not something you can tack onto the traditional curriculum (Callison, 1993:79).

2.2.3 THE CORE THINKING SKILLS

What kinds of core competencies or core thinking skills do people need for critical thinking? Both Mancall, et al 1986:21) and Langrehr 1994:9) have determined similar competencies subdivided into:

1 thinking processes which involve **analysing parts /relationships** in information e.g. distinguishing facts from opinions or warranted from unwarranted claims; identifying ambiguous arguments;

2) thinking processes for **judging** information using relevant criteria e.g. detecting bias; determining factual

accuracy of a statement;

3) thinking processes for **breaking away from traditional patterns** of thinking e.g. suggesting creative alternatives, creative combinations, creative reversals or creative explanations

2.2.4 A TAXONOMY OF COGNITIVE SKILLS

What is the basis for the "thinking curriculum" and core thinking skills? At the root of this theory is the assertion that more complex cognitive skills (skills involving analysis, comparison, inference, interpretation and evaluation) decline much slower than recall or recognition skills (skills involving retention of knowledge, comprehension and application) (Semb and Ellis, 1994:267 and INFORMATION ...1990:73).

According to Bloom's as referred to by Quellmalz, 1985:30) hierarchy of cognitive processes, the latter defined as the way we assimilate and accommodate information (Smith, 1986:289), the simplest cognitive level is knowledge i.e. factual learning. The second level is comprehension which involves interpretation. The third level of application involves using what you've learned and applying it in new situations. These three form what is termed the lower order thinking skills. Much of education i.e. the traditional curriculum is geared towards these cognitive levels. But, it's the remaining so-called

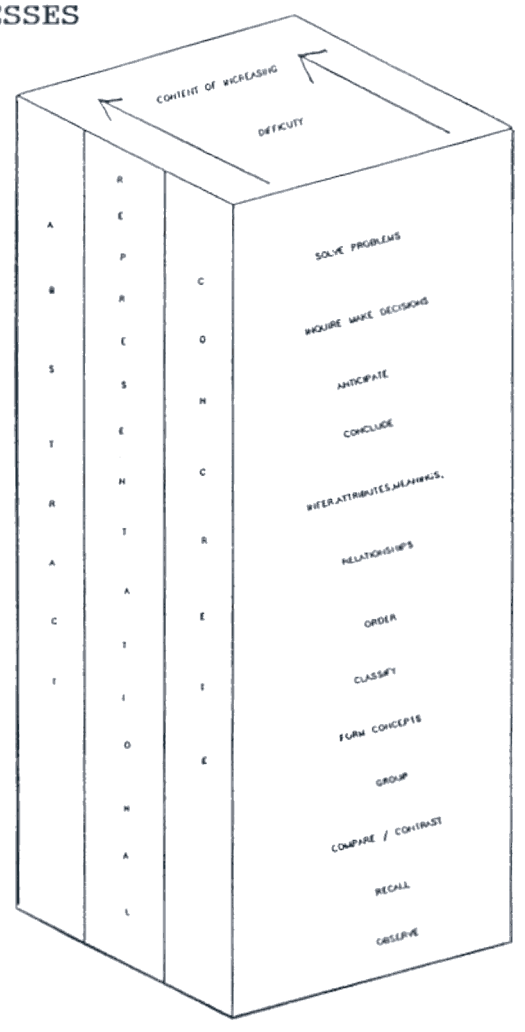
higher-order thinking levels which stimulate students the "how to think" framework. In Bloom's taxonomy of cognitive processes, the higher-order thinking skills analysis, synthesis and evaluation. Yet, higher-order thinking skills depend for its success on lower-order thinking skills (Quellmalz, 1985:30)

When introducing the critical thinking curriculum, bear in mind that Bloom's hierarchy uses Piaget's theories of the sequential stages of cognitive development and its understanding of the development of the reasoning process. Hughes (1986:35) has gone a step further and designed a three dimensional table illustrating the developmental structure of thinking skills and processes (see figure 1 on page 39).

2.2.5 LEARNING THEORY

Within the school of cognitive psychology is the theory of schema. Schema or schemata are the building blocks of cognition. Schema theory offers a perspective on the people think and learn and provides a way of understanding the process of learning through experience (Kulleseid, 1986:41). Both schema theory and metacognition theory together offer insight into how individuals reflect their own thought processes and become aware of their own thinking patterns. Intelligent behaviour is about the ability to transfer problem-solving strategies.

FIGURE 1: THE DEVELOPMENTAL STRUCTURE OF THINKING SKILLS AND PROCESSES



(Hughes, 1986:35)

Metacognition simply defined is thinking about your thinking. Within higher-order thinking it is an elusive skill and one dependent on the developmental readiness of a child. Most younger children think without thinking about their thought processes. Metacognitive skills include planning, self-monitoring and revising/reviewing skills (Quellmalz, 1985:30). Older children from about 11/12 years can learn to harness these skills in process-based education

Educators should be aware that pupils have individual learning styles. Most educators do not adjust their teaching style to accommodate varying cognitive styles of pupils. Cognitive style is the characteristic way in which an individual conceptually organises the environment (Kulleseid, 1986:46).

Gawith (1991:7-9) identified 10 approaches to learning: linear, lateral, visual, verbal, holistic, multi-sense, symbolic, head, individual and social. Most people combine more than one of these approaches.

Gawith in all likelihood based her learning styles on the theory of multiple intelligences developed by Harvard psychologist Howard Gardner in 1983 in his book entitled **Frames of mind: the theory of multiple intelligences** (N.Y.: Basic Books). His theory countered the narrow concept of intelligence which centred on language and maths skills. His broadened definition covered 7 traits which account for a range of human intellectual abilities. They are linguistic ability, logical-mathematical skills (included in normal Intelligence Quotient tests), spatial intelligence (ability to visualise and manipulate forms in space as in a game of chess), interpersonal intelligence (ability to understand the motivations of others), intrapersonal intelligence (the ability to understand oneself), musical intelligence (melody, rhythm and pitch) and bodily-kinesthetic intelligence (athleticism).

2.2.6 NOVICE VERSUS EXPERT

In examining the theory of critical thinking it became evident that each broad discipline e.g. sciences, social sciences, literature demands quite specific processes of reasoning. It was therefore reasonable to assume that students or novices copy/model their information-seeking strategies or modes of thinking on the perceived experts in their respective fields. In this way novices could pick up problem-solving strategies. But, experts have advantage of a sound knowledge base in their field and have internalised problem-solving strategies. If novices are to learn from these experts, then the experts themselves need to metacognitively examine their information-seeking behaviour.

2.2.7 PROBLEM-SOLVING

There are many authors who use the terms critical thinking and problem-solving interchangeably, yet the two are quite distinct concepts. Problem-solving is a progressive, narrowing process whilst critical thinking is an expanding, exploratory process. It is one of several thinking or reasoning skills which can be included in the instructional process (Olën, 1994:17). Problem-solving was first used in business and industry and adapted to education bibliographic instructional programmes. It evolved from systems analysis as the theoretical base of computer

software (Mellon, 1982: 76).

Sternberg (1985:195-197) is one of the many critics there of what passes for problem-solving in schools says that the real world is very, very different e.g. in the real world the first and sometimes most difficult step in problem-solving is to recognise that a problem exists i.o.w. pupils need to be taught not only how to solve problems, but also how to find problems that are worth solving. Or, he claims, solutions to every day problems depend at least as much on informal knowledge as on formal knowledge.

2.2.8 WHAT CAN RESEARCH ON CRITICAL THINKING TELL US?

1. The nature of the questions posed and the way lessons are structured significantly affect the level of thinking that pupils do (Hughes, 1986:34; Mc Gregor, 1994:130).

2. In order to apply critical thought processes you need knowledge of the subject matter (Smith, 1986:288).

3. Critical thinking requires that you have a critical attitude and disposition in all aspects of life i.o.w. that you enter into the spirit of critical thinking (Norris, 1985:44).

4. Critical thinking is sensitive to context (Norris, 1985:44).

5. Critical thinking is not nurtured enough or popular enough and the test scores are normally poor. The more well known critical thinking tests are the Cornell Critical Thinking Test; Watson-Glaser Critical Thinking Test and the New Jersey Test of Reasoning (Quellmalz, 1985:30)

2.2.9 CONCLUSION

Critical thinking skills can be applied across the curriculum to include not only the sciences and social sciences but also literature. Vandergrift (1987:90) says that literature is often treated like "artifacts of the author's meanings" and that pupils are expected to "discover these, remember them and repeat these authorised meanings". In her **reader-response theory of criticism** readers are encouraged to acknowledge that they bring meanings to a work as well as take meanings from it therefore encouraging metacognition.

2.3 A NEW THEORETICAL PARADIGM IN THE INFORMATION SEARCH PROCESS

2.3.1 INTRODUCTION

In the library and information services (LIS) world we have

inherited a perspective of information use and provision which focuses on the technology or the technological system. We have failed to make the connection between way people use information and the way library information systems provide information (Kuhlthau, 1988: 258-9). At the root of the problem is the definition of the concept of information. When information is viewed as a fact or a product then we are viewing LIS from the system's angle. But when information becomes defined as a way of constructing meaning, then the focus shifts to the user of information.

When the individual undertakes a search, it is not only the intellectual or cognitive processes which come into play, but also the emotional or affective domain. The affective domain determines motivation, the personal perspective and aspects of cognitive styles (Kulleseid, 1986:46). Recent research into emotional intelligence as opposed intellectual intelligence, popularly called EQ vs IQ, highlighted this neglected aspect of human intelligence. In his book **Emotional Intelligence** Daniel Goleman defines emotional intelligence broadly as the ability to know oneself. This includes traits like self-awareness, empathy, optimism, impulse control and the ability to manage anger and anxiety. Intelligence quotient on the other hand defines our ability to think cognitively, our analytical thinking skills

The traditional bibliographic paradigm of LIS sought construct an ideal search strategy which everyone could learn to follow and which was based on certainty and order (Kuhlthau, 1993:8). Human beings are however not governed solely by their intellectual processes but their emotional processes too. The individual brings to each search process a perspective, background and knowledge unique to that person's past personal experience. Each search is therefore subjective and dependent on the personal constructs of the individual i.e. the patterns one formulates to make sense of the world (Kuhlthau, 1993:19).

The process of construction of new meaning is fraught with uncertainty and confusion. Studies in information seeking behaviour and library skills instruction have highlighted the anxiety which accompanies initial information seeking. This anxiety is not due to interaction with new resources and technology, but seems to be an integral part of the learning process

2.3.2 A THEORY BASED APPROACH TO LIS

Kuhlthau is the main protagonist of this new theory based approach to LIS and library and information skills instruction. If citizens are being regarded as life-long learners, then basic to their lives is the ability to seek and use information effectively, efficiently critically. Hence we need to develop a LIS from the user's

perspective. In order to perfect the practice, we need a good theoretical base. Theory " enables us to see patterns and understand principles on which to base purposeful, productive action" (Kuhlthau, 1993:14

Kuhlthau 1993 examines two library services viz. reference service and library skills instruction which takes place in schools. Reference services promulgated by Katz is still fixed in the source orientation and bibliographic paradigm. Library skills instruction emphasized teaching individual sources and information seeking as a standardized path to be learnt. However, a new theory based model for library skills instruction is emerging which involves using information, interpreting information and finding meaning in information.

For this model Kuhlthau (1993:17-19) has borrowed from the field of cognitive psychology. More precisely, she looks at the constructivist theory of learning which gives more insight into an individual's experience through the process of learning. The educational theorist and philosopher John Dewey (1859-1952), the clinical psychologist George Kelly (1905-1966) and Jerome Bruner's 1915-) cognitive psychology and contribution to curriculum design in schools all contribute insights into the constructivist view of learning.

Dewey's contribution is his foresight in viewing education

as a means to coping with change in the world. Learning is seen as a "continuous process of reflective experience in which a person is actively constructing his/her view of world"

George Kelly in his **personal construct theory** (PCT) proposes that constructs are built out of a person's experience in order to anticipate future events. Our behaviour is determined by the constructs we hold and is highly individual (Kuhlthau 1993:17). This theory is in contrast to Skinner's behaviourist theory of learning which states that we learn in response to external stimuli.

Kelly was greatly influenced by John Dewey's teachings. Kelly's main contribution is his emphasis on the influence of feelings in the construction process. There is interplay of the thoughts, actions and feelings in process of construction i.e. the whole person comes into play, not just thoughts.

Jerome Bruner pays tribute to Dewey and Piaget, especially the latter's theory of the human being as a critical thinker from birth i.e. one who constructs a coherent order and builds on experience throughout a life-time (Kulleseid, 1986:41). Bruner's research confirms that individuals are active participants in sense-making of the world rather than passive receivers of information. His findings verify Kelly's PCT which states that individuals are constantly

revising and reconstructing their world. For Bruner too feelings play a vital role in motivating and directing our learning.

Dewey, Kelly and Bruner all identified the "classic triad" of thought, action and emotions as a unified whole all view learning as an active, engaging process. In the pursuit of learning individuals engage in a process of construction which goes through a series of stages with distinct changes in feelings, thoughts and actions.

2.3.3 KUHLTHAU'S MODEL OF THE SEARCH PROCESS

On the basis of the theoretical foundations of constructivist approach to learning, Kuhlthau undertook a series of longitudinal studies beginning in the early 80's to validate a model of the information search process. This model emphasises both the cognitive and affective domains of a user-based approach.

The existence of other models of the information search process underpins Kuhlthau's approach. Taylor's approach (as mentioned in Kuhlthau, 1990:8-9) looks at the level of information need of the user. He introduced this psychological approach to information seeking behaviour in the reference interview. The first level is the "visceral" or unexpressed need. The second is the "conscious" need which when verbalised is filled with ambiguity. This is

followed by the "formalized" need in which the user formulates a statement of an expressed need. The final level is the "compromised" need which is the manipulation of a question to present to the information system

Belkin's (1980:133-43) approach similarly follows the user from an "anomalous state of knowledge" to a final level of "specificity". Dervin's model views information seeking as a process of sense-making in which the person forms a personal point of view. In this model information is viewed as a process of construction of the user (Dervin, et al, 1982: 419-420).

Kuhlthau's model is unique in the sense that it is a **theory** based model for library instruction and information services in general. Her model of the research process describes the actions, thoughts and feelings commonly experienced through six stages (Kuhlthau, 1987a:26). See page 51 for her model of the search process.

Stage one is **task initiation.** This is characterised by feelings of uncertainty and apprehension. Stage two, **topic selection,** embraces more optimistic feelings.Stage three, **prefocus exploration**, is a period of great confusion and frustration for students and they often doubt their ability to complete the task. At stage four, **focus formulation,** students have a feeling of clarity as they reach the juncture where they have formulated a personal perspective

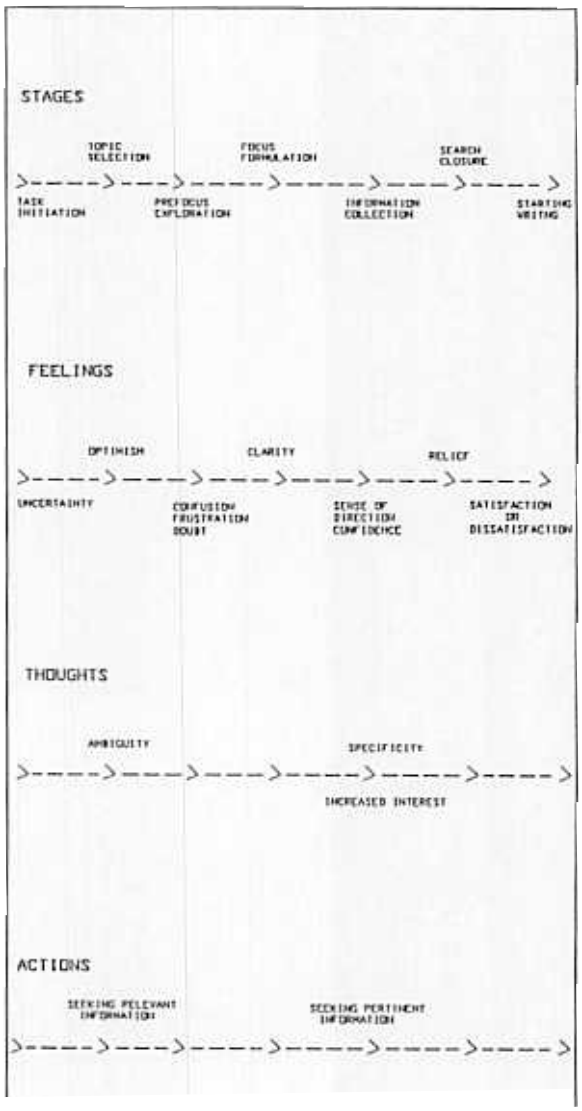
on the topic. This stage is regarded as the turning point in the research process. The **information collection stage** (stage five) sees students develop a sense of direction and increased confidence. The final stage six, **search closure** gives the student a sense of relief and students frequently express either satisfaction if all has gone well or dissatisfaction if things have gone wrong.

Thought processes progress from ambiguity in the beginning to specificity, the latter especially after the focus has been formulated. The actions the researcher is involved in, in the initial three stages of the search, are to seek relevant information. In the last three stages the searcher seeks information pertinent to the focus formulated (Kuhlthau, 1990:11; 1988:262-8).

The significance of the theory based Kuhlthau model is its implication for practice. Here is an emerging theoretical base for library instruction in school libraries which provides a framework for assessing existing instruction and developing new programmes (Kuhlthau, 1987a:27). As school librarians we have to overhaul our approach to assignment setting to accommodate the triad of thoughts, feelings and actions. Students need opportunity to reflect on their thought processes and deeds as they conduct research so that they learn for the future. Assignments need to be challenging, especially incorporating the higher-order thinking skills. Chapter 3 will address how this model and

its variations have been applied in practice in both the USA and GB.

FIGURE 2: KUHLTHAU'S MODEL OF THE SEARCH PROCESS



2.4 RESOURCE-BASED LEARNING

2.4.1 THE NATURE OF RESOURCE-BASED LEARNING

Resource-based learning has been defined by Beswick (1977) as

> ...the methodology that assumes students will learn from their own direct confrontation, individually or in a group with a learning resource or set of resources and activities connected with them, rather than by the conventional exposition by the teacher.

In the process of learning students acquire skills which, if practised and refined, enable them to take responsibility for their own learning on a life-long basis (PARTNERS..., 1988:3).

Much of the discussion gone before in this Chapter centred around the information search process and the enhancement of the so-called higher order thinking skills. The information search process involves interaction with resources, be they in the printed format, audio-visual format, electronic format or human format. Resource-based learning is the flip-side of the coin of the information search procedure

There is a profound overlap between the resource-based approach to the curriculum and the critical thinking curriculum. Both are pupil centred as opposed to teacher centred. Both de-emphasize the textbook and encourage access to a broad range of materials. In resource-based learning the pupil is an active learner and involved with her/his peers on an inter-active basis, role-playing discussing, deciding and solving problems together. As in the critical thinking curriculum, the teacher is the facilitator of learning.

The resource-based learning approach is not:

1. teacher oriented
2. passive reception of lessons
3. media driven lessons
4. about the "coverage of content"
5. group work + resources thrown together wishing for a miracle to happen
6. the traditional "research project" (Haycock, 1991:16-19)

Resource-based learning is about the content as well as the process of learning. The library or media centre) is regarded as a "learning laboratory" in which resources/materials are used for meaning making by pupils rather than being regarded as a storehouse of resources. Because resource-based learning is pupil driven, the different learning styles can be accommodated and promoted e.g some children may be multi-sensory learners, others better visual learners. Resource-based learning allows pupils to explore a host of different stimuli to learning through their confrontation with resources which a teacher with a particular teaching style (e.g. linear style) may not tap into

2.4.2 RESISTANCE TO RESOURCE-BASED LEARNING

Resistance to resource-based learning will come from both teachers and school librarians. For teachers noise equals chaos whilst management equals control and silence.

Teachers fear that giving up their role to merely facilitate or mediate means no meaningful learning can be happening. This to them is proven when pupils do not "perform" in examinations. Teachers are not questioning the value of the exams they are setting, as they are fixed in the old paradigm of measuring success and achievement only with the memory/knowledge type of exam question. Likewise, school librarians may be unable to shift their focus from a "tools" approach to teaching pupils skills for handling and evaluating information.

To combat resistance important changes have to be made. The learning process, the learning environment that encompasses that process and the pupil-teacher relationship has to be reconstituted. It's especially the latter which needs a shift in emphasis. At teacher training level teachers are seldom taught facilitation competencies as the emphasis is on presenting content (Hall, 1986:12-13). Nor are resource-based learning techniques and the role of the school librarian in teaching and learning the cornerstone of pre-service training.

To be a good facilitator the teacher needs to prompt and prod pupils with questions which in turn will stimulate their cognitive thinking. Being a good facilitator also means good pre-planning: identifying exactly what the learning objectives are and scanning the resources for appropriateness of level. Instead of using an examination

as the only method of assessment, adopt a system of continuously assessing the pupil throughout the resource-based learning task.

2.4.3 COLLABORATION BETWEEN TEACHERS AND SCHOOL LIBRARIANS

Ken Haycock (as referred to by Henri, 1990:42) has linked the philosophy and practice of resource-based learning to an effective use of the school librarian and the library programme. Resource-based learning is the ideal vehicle for collaborative teaching practices between school librarians and teachers. The co-operative programming planning model in both Canada and Australia is in its infancy, yet it is receiving a positive response from educators. It means that teachers and school librarians together structure the learning programme and take joint responsibility from start to finish. The advantages are of course that pupils have increased contact time with educators and they observe as novices the "experts" approach to collaborative teaching teamwork) and their information search strategies.

The school librarian is the "expert" on learning resources would be able to develop and implement study units which integrate research and study skills (or information skills along with teachers the content "experts"). Resource-based learning ultimately provides the opportunity students to become independent and life-long learners through the control they exercise over the strategies and

processes of learning (PARTNERS..., 1988:4)

INFORMATION SKILLS

2.5.1 INTRODUCTION

Information skills simply defined is the effective and efficient use of information for a given purpose. Information skills encompass library skills, study skills, computer skills, research and inquiry skills and life skills (Hall, 1986:8). Information skills are best viewed information handling skills. They are process-based skills - strategies for learning or the "how to do" of resource-based learning.

A skill is defined as the ability to do something with a degree of expertness in repeated performance - a skill is an ability (which implies learning); it involves "expertness" (which implies mastery) and it involves repetition (Lundin, 1990:82).

Information skills must be seen against the background of the information explosion and the acceleration of new knowledge. Whereas before it was desired to know a body of knowledge, now with the rapid turnover of information and a greater and more efficient access to global information, that previous concept of learning remains an ideal rather than a reality today. People need information skills today

to enable them to consciously control knowledge (Mancall et al, 1986:23

People need to be competent

1. assessing information sources and tools
2. location skills and the ability to operate equipment
3. techniques for interpreting and using information
4. strategies for applying capabilities to actual situations in which information is needed (Kuhlthau, 1987b:6).

2.5.2 BENEFITS OF INFORMATION-SKILLED PEOPLE

Given the ever broadening horizons of the information highway and the quantum leaps in information technology e.g. today the Internet, what are the advantages to people who use information effectively and efficiently?

1. They acknowledge that learning is lifelong.
2. They recognise that information skills as a tool of learning is a valued competency.
3. They set store by creative and critical thinking in the information process.
4. They accept that information has multi-purposes: personal, cultural, recreational and vocational.
5. They see the need to experiment with new techniques and skills as information technology and social institutions change.

6. They continuously add to their core knowledge.
7. They employ a variety of information sources
8. They are capable of processing information
9. They use information effectively and confidently
10. They are able to evaluate & reflect on their learning

(South Australia ...1992:10)

2.5.3 THE SKILLS DOMAIN

Information skills are the tools for the inquiry or resource-based learning curriculum. The skills domain has been characterised as receptive skills, reflective skills, expressive skills and personal/social skills (PARTNERS..., 1988:2-3).

1. Receptive skills are:
   - reading skills
   - listening skills
   - observation skills
   - data gathering (search or location) skills
   - quantitative skills
   - time and space skills
2. Reflective skills:

   These internal, personal skills bring the isolated bits of information into meaningful relationships. They are:
   - problem identification and problem-solving skills
   - critical thinking skills, especially inference, interpretation, association, assumption, analysis,

synthesis and evaluation

- lateral thinking skills

3. Expressive skills:

Enable pupils to organise and pass on knowledge gained through receptive and reflective skills. They are:

writing skills

speaking skills

recording skills

presentation (including production) skills

4. Personal/social skills:

These are forms of expressive skills which colour other processes. They are:

manipulative/ technical skills

interpersonal skills

community participation skills

At school level these information skills competencies be achieved through an information management programme, preferably a cross-curricula implemented co-operatively planned, managed and evaluated programme. In the USA, Canada, Australia, New Zealand and parts of GB information skills programmes have been successfully implemented by school librarians. In GB the implementation of information skills has been carried out by teachers in the main. Different models for the information search and use process have subsequently developed both through theory practice. The development and implementation of information skills programmes in the above-mentioned countries will be

dealt with in Chapter 3

2.5.4 SCHOOL LIBRARIAN VERSUS PUBLIC LIBRARIAN

It is the instructional side of the school librarian which separates her/him from public librarians. Instruction in school libraries started out as the teaching of the workings of reference material. It progressed from here to bibliographic instruction and broadened even further today to information handling skills. The public library is still regarded as mainly a storehouse of resources. The school library on the other hand is considered as an extension of the classroom and of the teaching and learning process itself. Hence the concept of the school library as a "laboratory" or "conceptual base" in which thinking and learning takes place (Haycock, 1991:20).

2.5.5 A SEQUENTIAL INFORMATION SKILLS PROGRAMME

An essential aspect of the information skills programme is that it must correlate with the cognitive level of development of the pupil. This makes a sequential information skills programme imperative so that students can progress when they are developmentally ready (Haycock, 1990:86). There is no such thing as a "generic" standard 7/ grade 9 pupil. A school-based continuum of information skills allows for:

1. the spiral curriculum - the same skills which

pupils use in an increasingly sophisticated way as they proceed through their school years

2. greater standardization e.g. form of the bibliography

The sequential information skills programme below adapted from Gwen Gawith 1987:11 illustrates the increasing sophistication of the base skills:

Age 11 - 13	Age 14 and older
1. with the assistance of the teacher deciding your existing knowledge on a topic & stating what you need to find out	1. Independently deliberating on topic scope, end product & existing knowledge
- is able to identify different information sources like books, people, TV, newspapers,etc. - can use catalogues & indexes + understands that a single book is only one opinion on a topic - uses key words to locate information on topic	2. - is able to appreciate that different sources offer different information - can compare and choose amongst sources depending on purpose
3. is able to extract information using clues and cues like indexes, captions, contents pages, etc.	3. is able to process by skimming, scanning, viewing information using techniques like keywording, scanning, etc. and thereby contrast, analyse, etc.
4. can make notes from a variety of sources in in own language and can write a simple bibliography	4. is able to record selectively keeping research purpose in mind
5. starts to distinguish between narrative and explanatory presentations and puts forward substantiated points of view	5. presentation shows a range of oral, written and media competencies & communication demonstrates sense of audience, medium & message
is increasingly aware of oneself as a researcher, but needs teacher to point out strengths & weaknesses at different stages of research	6. has a sense of self as independent researcher & is able to evaluate one's own strengths and weaknesses in research

2.5.6 CONCLUSION

The information society in which we find ourselves today dictate that to ignore information technology we do so at our peril. Information technology like the printed and audio-visual media is an aid. We have to master the mechanics of information technology, but that alone does not make us more critical users of information

2.6 INFORMATION LITERACY

2.6.1 INTRODUCTION

The term information literacy was first coined by Zurkowski in 1974 (Doyle, 1993:134). A working definition drawn up by Martin Tessner in 1985 reads: " information literacy is the ability to effectively access and evaluate information for a given need" (Kuhlthau, 1987b:8).

The concept of literacy is a social phenomenon which has shifted in meaning and nuance. Before, the class which owned power and literacy was a privileged elite. Today, it is not only a symbol of empowerment for everyone but is regarded as a basic survival skill. Today a literate person knows that information in any "captured form is dated, inconclusive in and of itself and usually presented in a biased manner" (Callison, 1993:79).

2.6.2 CHARACTERISTICS OF INFORMATION LITERACY

Information literacy is generally developed through a resource-based learning curriculum, the latter employing an integrated information skills programme to drive it. Information literacy is characterised by:

1. an integration of the knowledge of tools and resources with skills
2. the acquisition of such attitudes as persistence, attention to detail and scepticism
3. time- and labour-intensive input
4 a needs-driven approach
5. a relationship to both literacy and computer literacy

(Breivik, 1985:723)

purpose of information literacy is to meet an information need. It enables a person to use information making decisions and solving problems. Information literacy is not only knowledge of resources, neither is it library dependent as the sole source of information. It is about understanding, interpreting, evaluating, synthesising, using and communicating information. It incorporates literacy skills (for understanding, learning and communicating) and information skills i.e. the tools for learning concepts and communicating ideas) (Kuhlthau 1987b:2).

The American Library Association (ALA..., 1990:68) defines

information literate people as

> those who have learned how to learn. They know how to learn because they know how knowledge is organised, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for life-long learning because they can always find and use the information needed for any task or decision at hand.

2.6.2.1 SKILLS AND KNOWLEDGE

A knowledge of the tools and sources of information is basic to information literacy because it facilitates access to information. Coupled with the latter are the information handling skills which provide the research strategies for effective access to and use of information.

The introduction of new information technology requires new competencies to be mastered. The computer as a tool has opened up new media of communication e.g. electronic mail, online searching, CD Rom, the Internet.

But it is not only the mechanics of operating the computer which need to be learned. The information accessed needs to be interpreted, accepted or rejected, synthesised reorganised and a new product borne. There is still too much fascination with the technology itself rather than seeing it as a mere tool (Brock, 1994:19 and Kinnaman 1994:94)

2.6.2.2 ATTITUDE AND INFORMATION LITERACY

affective or emotional side of learning has long been overlooked in the total learning process. Today we realise cognitive abilities are coloured by affective behaviour. Correct attitudes instilled over time help to internalise information seeking behaviour. Attitudes of persistence, attention to detail and a healthy scepticism to simply accepting information at face value are reinforced in a sequential programme of learning (Kuhlthau, 1987b:7)

2.6.2.3 TIME AND EFFORT AS A CHARACTERISTIC OF INFORMATION LITERACY

information literate person becomes aware through experience and reflection that the information search and process is a triad of thoughts, feelings and actions. A planning guide to the entire search process must include both a time-line and a stage-by-stage plan of work sections to be completed (Kuhlthau, 1987b:8). It is especially the beginning stages of initiating and deciding on the parameters of a topic which involve much time often considered a wasteful squandering of time. Yet it is a natural and important phase, if not a crucial phase of the research process.

2.6.2.4 THE NEED FOR INFORMATION AND INFORMATION LITERACY

needs driven characteristic of information literacy is rooted in a personal desire to pursue a course of action. Students must feel that they own that need and will therefore pursue the information in a problem-solving way.

strategies which they internalise they then transfer to other problem-solving activities.

2.6.2.5 THE RELATIONSHIP OF LITERACY AND COMPUTER LITERACY TO INFORMATION LITERACY

Basic literacy is the ability to read and write and these skills are a prerequisite for information literacy. In the information age using the new information technology viz.

computer has become a modern day prerequisite for information literacy. The ability to read with understanding and the ability to use the computer as a tool both help the information literate person to solve problems, make decisions, think critically, synthesise information and create new knowledge.

PUTTING INFORMATION SKILLS/THE INFORMATION CURRICULUM INTO PRACTICE

2.7.1 INTRODUCTION

A prerequisite for initiating and implementing the information curriculum is an acceptance that we are living in the information world/age. The success of instituting an information literacy programme depends on a number of issues which include:

1. developing a policy and vision for the school based programme;
2. support from the department of education;
3. entire staff participation;
4. collaboration between teachers and school librarian; and
5. the development of an information literacy curriculum.

2.7.2 CREATING A WHOLE-SCHOOL POLICY AND VISION

success of the information curriculum is directly proportionate to a school's vision in creating a whole-school policy on information skills (Crowley,1995:12). Although a curriculum committee draws up the policy, the entire school must be part of the decision making and planning. Information skills should be an integral part of the entire curriculum. The policy should include:

1. overall aims and a list of objectives;
2. the processes and skills which pupils have to master;
3. resource collection development to implement the information curriculum;
4. advocating the usage of emerging information technology;
5. adequate staffing arrangements to develop an information management programme whilst administering and maintaining facilities;
6. flexible timetabling; and
7. supporting ongoing staff development in areas of technological innovations, pedagogy and other education related fields.

(INFORMATION..., 1981:26-29; Mancall et al, 1986:26)

A pupil-centred curriculum like the information curriculum should also spell out those educational aims and objectives which will contribute to making pupils independent, life-long learners. They are, amongst others, developing a sense of self-worth and self-confidence; developing esteem for the customs, cultures and beliefs of others; developing a set of personal, ethical and social values; developing decision making and problem-solving skills; developing resourcefulness, adaptability, imagination and powers of creative self-expression and developing the skills, attitude and basic knowledge to become a productive member of society selected from the policy documents of the Education Department of South Australia and the Ontario Ministry of Education in Henri, 1990:39-40).

The timing of such policy statements is crucial and should capitalise on moments like the issuing of national reports, white or green papers on education or libraries, a education act and so on. The political implications of such a policy at school is the need for strategic action on all levels whether at school governing board level, Parent Teacher Association level, Fund raising committee level or whatever. All stakeholders need to be convinced of this policy.

2.7.3 THE ROLE OF THE DEPARTMENT OF EDUCATION IN PROMOTING THE INFORMATION CURRICULUM

In government schools the education department can be of tremendous support in legislating that all schools entitled to a library of minimum standard and a trained librarian. They have the power to:

1. ensure adequate staffing in conjunction with guidelines;
2. determine minimum size of libraries and resource collections;
3. influence timetabling schedules for optimum library use;
4. ensure that all schools have access to the new technology;
5. insist that teacher training institutions include a compulsory unit on information, resources and learning in their pre-service programme;
6. offer ongoing in-service training of teachers and school librarians to reinforce strategies for information

skills teaching;

7. make teachers and librarians aware of new research in education and related fields; and
8. be at the forefront of change and innovation

Hall (1986:56 together with a UNESCO working group drew up the following broad aims for a teachers' training course of one semester:

* to outline the role of information transfer in national development;
* to develop skills in using and selecting teaching/information resources and consider their relationship to strategies in teaching and learning;
* to develop confidence and competence in information seeking/handling strategies;
* to become aware of a range of teaching /information resources available and consider teachers' concerns and use of information in professional development;
* to develop skills and confidence in handling information for the gathering, preserving and using of local resources, e.g. oral history, local artifacts, etc.;
* to become aware of the school library as a resource centre and a potential focal point of information within the school and community;
* to analyse an information skills programme and consider ways of developing a whole school policy to implement this across the curriculum; and
* to demonstrate the above in lesson preparation and

practice teaching.

2.7.4 THE ROLE OF THE PRINCIPAL, TEACHERS AND SCHOOL LIBRARIAN IN THE INFORMATION CURRICULUM

2.7.4.1 THE PRINCIPAL'S ROLE

The first and most important person on the staff to be persuaded to the information curriculum is the principal because s/he is in the strongest position to implement new innovations in the school. Principals have the political clout to create a climate for the successful initiation and execution of such a programme. They can create a climate of collegiality, communication and trust. They have the authority to create mechanisms for time, opportunity, interaction, technical sharing & assistance and ongoing staff development (Haycock, 1995:230).

2.7.4.2 THE SCHOOL LIBRARIAN'S ROLE

The school librarian's role in instituting the information curriculum comes in with the curriculum planning and development. The librarian should be conversant with all subject syllabi at all standard levels for team teaching to be a success. A good political strategy is for the librarian not only to be part of the co-operative programme planning, but the assessment of projects too. Teachers put a lot of store by marking so that librarians marking puts

on par with teachers

nature of the librarian's work puts her/him in the forefront of knowledge about information literacy. It is part of her/his role to ensure that teachers are kept informed of developments in the field and to assist with workshops and talks on information literacy.

The librarian provides a curriculum support and enrichment service. The selection and acquisition of collections which adequately support the curriculum, especially those areas earmarked for indepth resource-based learning, is a vital role for the librarian. This has become known as "collection mapping" (Callison, 1993:83).

librarian could also directly and in a fun way introduce higher-order thinking skills into the information management programme by having a " thinking skill of the month " e.g. categorisation, analogy, inference, verification, etc. (Jay, 1986:30). Not only through subject syllabi can information literacy be pursued but also through literature.

2.7.4.3 THE TEACHER'S ROLE

Teachers first have to understand resource-based learning, critical thinking and related concepts and then accept to work in a completely new paradigm. If teachers are to act

as mentors by modelling the information search process, they have to shrug off the old paradigm of " pupils learn teachers teach". To nurture novice scientists or biologists teachers as "experts" have to "do" the research process so that pupils can emulate. Above all, teachers need to give students time for reflection as it is through reflection that students gain confidence, learn to question develop.

2.7.5 CO-OPERATIVE PROGRAMME PLANNING AND TEACHING (CPPT)

Conducting an information curriculum in a school is a collaborative process involving all parties. All have to be responsible for identifying resources which:

* exist in the school
* can be developed
* are obtainable from outside sources
* should be recommended for purchase

Exemplary school libraries are characterised by strong administrative support (Lance, 1994: 188-197

CPPT was pioneered by Ken Haycock of Canada. CPPT is an instructional strategy at the core of the success of the information literacy programme. CPPT entails thorough pre-planning and both teacher and librarian have to have command of each other's roles (and not merely respect for each other's roles). Sessions have to be set aside to work curricular themes, skills, attitudes, teaching &

learning strategies, resources and presentations. Team teaching can take the form of teaching side by side, parallel teaching or incidental teaching (Tarasoff and Empiringham, 1994:25). Team teaching provides good opportunity for modelling (i.e. the novice/expert interface). Finally, CPPT involves collaborative appraisal of student learning and the CPPT process itself (Callison 1993:85; Lundin, 1990:83-84; Tarasoff and Empiringham 1994:24).

2.7.6 DEVELOPMENT OF THE INFORMATION CURRICULUM

The success of the information curriculum is dependent on:

1. a sequential information skills programme linked to the developmental levels of the child;
2. the sustained repetition and practice of skills within a spiral curriculum;
3. mediator (teacher & librarian) and learner having frequent contact during the process;
4. allowing different learning styles to develop and not only one teaching strategy to dictate;
5. advocating working in small groups so that students can verbalise and share their thinking processes;
6. including information skills objectives into standard levels and subject levels to ensure a uniform approach across the school curriculum e.g. having standardised formats for writing the bibliography or a policy on plagiarism; and

7 the inclusion of content which is global or universal so that students develop skills, knowledge and attitudes to cope with global human, environmental, economic, political and military problems e.g. human rights, genocide, apartheid.

(Farmer, 1991:3-5; Gibbons, 1985/6:72-75; Markusson, 1986:38; Morgan, 1994:11-13; Vandergrift, 1987:86)

2.7.7 EDUCATIONAL POLICY AND EDUCATIONAL CHANGE

Pioneering the information curriculum in a school means convincing staff through systematic and ongoing training, pressure and support. Before effective co-operation between educationists is achieved, the school needs a policy in place which everyone accepts. The primary aim of this educational policy should be to inculcate independence in the student for life-long learning. Educational change and innovation is a lengthy process requiring tenacity and creativity on the part of all participants.

2.8 GENERAL CONCLUSION

Literacy is a heavily politicized term. The definition has changed over time as society changed. At one stage it was enough to be able to write your name. In the 1970's the term "functional literacy" usurped basic literacy as the politically correct term. Functional literacy embraces the belief that it is not enough simply to be able to read and

write at a rudimentary level. People need to be literate enough to perform usefully and successfully in society. Today, pressurized by the technologically-driven information-abundant world, the concept has evolved into "information literacy"

At these various points in history the word "literacy" had a social class connotation distinguishing between those people in society who were either "literate" or "illiterate" (Arp, 1990:47). With the proliferation of information today the disadvantaged class is going to be those who don't have access to information. Hence the term "information poor". But, as Ford suggests, greater physical access to information using technology does not necessarily improve intellectual access (1990:100). One needs information skills to access information, especially of the scientific and technological kind. Today, information control of a discipline is not as important as understanding the structure of information (Ford, 1995:99). Hence, allowing pupils to practise information skills is a means of empowerment for them. It allows them to experience the excitement of their own successful quest for new knowledge

CHAPTER 3

THE DEVELOPMENT OF LIBRARY AND INFORMATION SKILLS INSTRUCTION FROM 1969 TO 1995 IN THE UNITED STATES OF AMERICA (USA) AND GREAT BRITAIN (GB)

3.1 GENERAL INTRODUCTION

The choice of concentrating on the USA and GB is based on these two English speaking countries' well and long established educational systems. The vigorous debates in their literature over the last twenty years offer healthful insights into the shortcomings, the economic impact on, the historical momentum and the successes in education, especially the development of library and information skills instruction and the instructional role of the school librarian.

The observations of American and British developments will be used as a springboard for comparison and contrast in Chapter 4 when analysing the less developed, Third World countries of Anglophone Africa. In turn, what can South Africa, which is in a state of transition and a mixture of both First and Third Worlds, learn from the likes of the USA or Anglophone African countries? How should we embark

on an information literacy programme? What should we use, adapt or change?

3.2 THE UNITED STATES OF AMERICA

3.2.1 INTRODUCTION

The development of the "teaching" component of the school librarian in the USA has an interesting history. It is that role which distinguishes school librarians from public librarians. In an attempt to address the subject of the instructional role of the school librarian in the USA, the literature consistently looks at the following issues and questions:

* Can we talk about the evolution or revolution of the instructional role of the school librarian?
* Why is there a discrepancy between policies and the literature and what happened in reality?
* What kinds of problems or hindrances to change were there?

For the purposes of this study the researcher will first examine the effects of societal changes on the instructional role of the school librarian. This will be followed by a chronology of changes which took place in the instructional role of the school librarian. Finally, the problems or hindrances to change, whether perceived or real, will be addressed

3.2.2 SOCIETAL CHANGES AND ITS IMPACT ON THE INSTRUCTIONAL ROLE OF THE SCHOOL LIBRARIAN

In the 1960's the USA school LIS received an injection of federal funding which helped expand the services tremendously (Marchant, 1984:20). This decade also saw the introduction of audiovisual media into schools. Hence the 1969 guidelines for school libraries were called **Standards for School Media Programs** drawn up collaboratively between the AASL and the Department of Audiovisual Instruction (DAVI, now AECT i.e. Association for Educational Communications and Technology (AASL ..., 1969). Both print and non-print media were given equal status. The newest role awarded the school librarian related to the use of, instruction in and production of resources in all media and not only the printed medium. The librarian's main role was still regarded as supplier of media and as passive resource consultant (Craver, 1986:188).

Funds for education in general started drying up in the latter half of the 1970's (Baumbach, 1986:278). Given these cutbacks, school librarians needed to be made accountable In this respect the 1975 standards went a long way towards enhancing the instructional role of the school librarian which the 1969 standards had inadequately addressed. The two functions given more emphasis now were 1) instructional design and (2) consultation. These standards changed the role of the library programme from a support

to an integral part of the total instructional programme of the school (AASL, 1988:vii). By the end of the 1970's both Biggs 1980:36 and Kuhlthau 1985a:40) are mentioning the lack of transference of traditional library instruction. Teaching is for life-long learning (Biggs, 1980:34 and we need a theoretical base to inform us of appropriate strategies of instruction (Kuhlthau, 1987a:22).

The decisive agent of change in the 1980's in education was the 1983 **Nation at Risk** report. It cited everything was wrong in education e.g. 40% functional illiteracy. Although it did not cite libraries per se, it prompted responses from school librarians for changes (Craver, 1990:10). The timing was right both politically and instructionally. Declining test scores were highlighted in this national report. **Nation at Risk** led to establishment of a core curriculum, improved research on critical thinking teaching and hence a general improvement in instruction in schools. Given all these impetuses librarians were jolted into re-evaluating their programs of the 1970's to meet a world of constantly changing information needs. They were forced to review their information management skills, curricula and programmes and offer fresh insights into teaching critical thinking skills (Mancall et al, 1986:23).

The 1980's saw the introduction of a new technology: microcomputer. By the early 80's already, more than half

school districts were using computers (Craver, 1990:10). **Nation at Risk** simply forced schools to relate computer usage to educational objectives (Craver, 1986). In a way, the automation freed school librarians to rethink their objectives by the late 1980's (Kuhlthau, 1993:187).

last standards to come out of the USA to date were in 1988. **Information Power - Guidelines for school library media programs** elaborated on the instructional consultant role of the school librarian. The 1988 standards refined the instructional consultancy role and integrated it fully into the school curriculum. The 1988 standards formalised the responsibilities of the instructional consultancy role

Baumbach 1990:16) is of the opinion that it will receive wider implementation in the 1990's. Feeling very positive for the 1990's, she adds:

> societal changes, emergent technologies and advances within the profession may now empower the school librarian to be more proactive, particularly in consulting with teachers.

3.2.3 A CHRONOLOGY OF CHANGE IN THE INSTRUCTIONAL ROLE OF THE SCHOOL LIBRARIAN

It seems that the role of the school librarian and the development of skills instruction are tightly interwoven. The traditional school librarian of the 1960's was considered a proprietor of books whose duty it was to provide a service (Turner, 1982:276). The school librarian

taught library skills using the source or tool approach. The tool/source approach centres on helping students to use their particular library and its specific sources by improving their location skills.

With the Knapp report 1966) and the introduction of audio-visual media, the role of the school librarian evolved further. Knapp's "pathfinder" approach teaches the research strategy by presenting a model search e.g. students go from general to specific sources. This helps them to understand

relationship among sources in the library. Source utilization and locational skills are emphasized (Kuhlthau, 1993:12)

highest level of evolution reached is the "process" approach to skills instruction. The information search process goes beyond mere locational and utilization skills to include comprehension and production skills (Kuhlthau, 1987a: 23). This sees a move from lower level locational skills to higher level intellectual skills (Liesener 1985:15). At this level of sophistication, the school librarian assumes the role of an instructional consultant

The instructional consultant's role establishes the school librarian's position as one who is on an equal footing with teachers. S/he is an integral member of the instructional team involved in applying professional skills to the process of improving instruction (Baumbach, 1990:21). The

school librarian assists teachers in determining instructional strategies and identifying appropriate resources, paying particular attention to information skills. Instructional consultancy means serving on curriculum development teams, assisting students teachers with media productions and providing professional help to enhance the teachers' knowledge and skills. The roles and responsibilities of the school librarian spelled out in more detail in **Information Power** (AASL 1988:38-39).

The consultancy role which in the 1970's was a "simple suggestion of a few resources" evolved into the 90's "participation in design and evaluation of various instructional strategies". The teaching of library skills evolved through three models (source, pathfinder, process) to the teaching of information skills, the accent in the latter being on the "analytical precept of ideas" not the tools

The two taxonomies of Turner and Loertscher show instructional design for school librarians to be implemented at the school level. They describe a graduated level of involvement in instructional development which accurately reflects the evolution of this role (Baumbach 1990:17)

TURNER

Action Education - Library media specialist works as part of a team, implementing a number of the steps in the instructional design process. Often the purpose of involvement at this level is to increase the teacher's ability to perform one or more of the steps.

3. **Reaction** - Informal response to random request for assistance from a teacher.

2. **Passive Participation** - Involves little or no interaction between the LMS & the faculty member. The LMS selects and maintains materials, equipment, and facilities which assist the faculty in implementing a particular step.

1. **No Involvement** - No intervention is required, the teacher has not requested involvement by the centre, or the LMS is unwilling or unable to intervene.

LOERTSCHER

11. **Curriculum Development** - Along with other educators, the library media specialist contributes to the planning and structure of what will actually be taught in the school .

10. **Instructional Design Level lI** - The library media centre (LMC) staff participates in resource-based teaching units where the entire unit content depends on the resources & activities of the LMC programme.

9. **Instructional Design Level I** - The LMS participates in every step of the development, execution, & evaluation of resource-based teaching unit. LMC involvement is considered as enrichment or as supplementary.

8. **Scheduled Planning in Support Role** - Formal planning is done with a teacher or group of students to supply materials or activities for a previously planned resource-based teaching unit or project.

7. **Evangelistic Outreach** - A concerted effort is made to promote the philosophy of the LMC programme.

6. **Planned Gathering** - Gathering of materials is done in advance of class project upon teacher request.

5. **Cursory Planning** - Informal & brief planning is held with teachers & students for LMC involvement.

4. **Spontaneous Interaction and Gathering** - Spur-of-the-moment activities & gathering of materials occur with no advance notice.

3. **Individual Reference Assistance** - Students or teachers retrieve requested information or materials for specific needs.

2. **Self-help Warehouse** - Facilities and materials are available for the self-starter.

1. **No Involvement** - The LMC is bypassed entirely

3.2.4 OBSTACLES TO THE EVOLUTION OF THE INSTRUCTIONAL CONSULTANCY ROLE OF THE SCHOOL LIBRARIAN: PERCEIVED OR REAL

As with any developments in a field, there will always be hindrances to change. School LIS is no different. The literature has identified four broad obstacles to the progress of the new role of the school librarian viz. that of instructional consultant:

* the traditional role of the librarian and a library in a school;
* the perception of staff teachers & administration);
* the education of the school librarian; and
* the lack of research in library & information skills instruction.

3.2.4.1 THE TRADITIONAL ROLE OF THE LIBRARIAN AND LIBRARY IN A SCHOOL

Even by the mid 80's in the USA the school library was still seen as part of the "passive culture of repository" (Liesener, 1985:13). Of course this outmoded image of the school library would have made it redundant given the information rich and fast changing world we live in

Similarly, the stereotypical librarian of yesteryear also proved a hinderance. The 1975 AASL standards officially endorsed the instructional consultancy role of the school

librarian but this was not widely practised in the 80's. There is a "gap between the initiation and the acceptance of an idea" (Craver, 1990:9). School librarians lacked knowledge of the curricula at schools and they had a low level of awareness of teachers' needs. School librarians needed to work more closely with teachers in order to integrate instruction of information skills into all areas of curricula AASL News, 1994:73).

School librarians were hanging on to teaching library skills as an independent unit of the rest of the school programme and trying to foster the idea of self-sufficiency, rather than themselves as information intermediaries.

3.2.4.2 PERCEPTIONS OF THE STAFF

How the school librarian perceives her/his role, however advanced, can be dampened by the perceptions of her/his role by the rest of the staff especially if they lack information about progress in the profession and thus have perceptions steeped in past experiences of school librarians. Somehow staff need to be convinced of this newly emerging instructional consultant role of the school librarian through pre-service and in-service training of teachers (Hodges, 1981:282

The 1980's saw a 5 10% decline in the numbers of

librarians entering the profession. The most talented were not going into school librarianship any longer. Reasons cited were the climate of "infantilism" which pervaded at schools, the low status, low financial incentives and high performance expectations (Liesener, 1985:17-18).

Further problems involving teachers are the misguided objectives in the setting of library assignments Traditional library assignments don't encourage the process approach to information seeking and teachers never provide sufficient time and caring guidance to develop strategies at each stage of the research process (Kuhlthau, 1989:23 Often, school librarians have to confront old paradigms when implementing new programmes e.g. the constraints of finishing a subject syllabus for examinations.

3.2.4.3 THE EDUCATION AND TRAINING OF THE SCHOOL LIBRARIAN

The standards of 1975 were already calling for the instructional consultant role although not as explicitly as the 1988 standards. While the literature by the end of the 1970's was calling for more intervention in the instructional role, school librarians on the ground had not been trained to act out the new part. Library schools of that decade were offering courses in audiovisual media but formal courses in instructional design were lacking (Turner, 1982:276). Royal's studies of 1984 showed that there were few opportunities for librarians to receive

training in this new skill either by pre- or in-service education. Liesener (1985:18) also hints that librarians were entering the field via undergraduate programmes following training in other fields and that it needed to move to graduate level professional training. In fact, the literature seems to indicate that changes at library school level only took off after the 1988 standards.

3.2.4.4 THE LACK OF RESEARCH IN LIBRARY AND INFORMATION SKILLS INSTRUCTION

Part of the problem of resistance to change may very well be the lack of much-needed research related to library and information skills instruction (Eisenberg & Brown, 1992:103 . Research involves theory and measurement, the former informing practice, the latter informing the worthiness of a programme of learning.

3.3 GREAT BRITAIN

3.3.1 INTRODUCTION

Developments in library and information skills instruction charted a different course in Great Britain. The reason for this may lie in the under-representation of qualified librarians in schools. It was not statutory for schools to have libraries (Pain, 1987:1), hence the fragmented state of school librarianship in Great Britain.

Beswick (1991) and Marland (1992 laud the successes of school librarianship in the USA and bemoan its retarded state in Great Britain. Coupled with the latter was the lack of an official national policy on school libraries for all state schools. Whereas in the USA the AASL plays a dominant role in policy initiatives and is regarded highly within the education fraternity, the SLA of Great Britain seems not to carry such weight. Many of the library and information skills project and research initiatives which could have been conducted by the education library services division were instead carried out by non-library divisions e.g. the Information Skills in the Curriculum Unit (InSCRU) and the Information Skills in Schools (Project - (INSIS).

Although the above picture of developments in Great Britain looks quite different from the USA experience, there are still many commonalities when issues of "obstacles to progress" are compared and analysed. Firstly then, which indicators incidents, reports, legislation can be identified as giving impetus to change?

3.3.2 FACTORS WHICH PLAYED A ROLE IN THE DEVELOPMENT OF LIBRARY AND INFORMATION SKILLS INSTRUCTION

3.3.2.1 THE SCHOOLS COUNCIL RESEARCH PROJECT

The 1970's in Great Britain saw the strengthening of the role of resource centres in schools (media centre

equivalent in the USA) as the **Schools Council Research Project** scheme got under way with its emphasis on research projects. This scheme imitated the American model of resource-based learning. In the 1960's Jerome Bruner and his educational development team initiated the enquiry (or discovery) method of learning. This theory of learning embodies ideas of "process over product, provisionality over certainty and appeal to evidence rather than the acceptance of opinion by virtue of appeal to authority" (KNOWLEDGE ..., 1987:20

The introduction of the enquiry curriculum in Great Britain in the '70s was fraught with problems and successes. Beswick (1991;10) criticises the British approach on two counts: British school libraries lacked the stock, staff, equipment, space funding and back-up services of the American campaign. Secondly, resource packages were compiled by the support system of the Schools Curriculum Project and teachers used them as teaching aids Effectively, this ended up as resource-based teaching rather than as resource-based learning.

The successes of the new curriculum approach are visible, for instance, in the **MACOS** (Man: a course of study) project and the **Schools Council History 13-16** project (KNOWLEDGE..., 1987:19 & 74). Interpretation of learning theory was an important factor in the success of its application. Too often teachers thought that replacing a

single textbook with several resources would automatically make learning radically different. Vital elements in Bruner's teachings like the path to building knowledge the process of enquiry and a view of knowledge that is temporary were overlooked.

3.3.2.2 THE BULLOCK REPORT

In 1975 the **Bullock Report** on the teaching of language across the curriculum made a critical comment on the poor level of library provision in schools. One recommendation was that school librarians should be full-time professional librarians with a seat at all head of department meetings and equivalent head of department status (Irving and Snape, 1979:87

3.3.2.3 LIBRARY ASSOCIATION GUIDELINES

From the professional organisation side, the **Library Association** brought out guidelines and recommendations for school libraries in 1977. As far as the instructional consultancy role of the school librarian is concerned, the guidelines limit curricular involvement to provision of resources and library skills instruction (Pain, 1987:16 & 75-76

3.3.2.4 IRVING AND SNAPE BRITISH LIBRARY REPORT (1979)

In the year 1977 Beswick published his book **Resource-based Learning** - this despite his own admission of the failure of resource-based learning initiatives in the early 1970's.

The last milestone of the 1970's was the 1979 **Irving & Snape British Library Report** on school libraries which looked at resource-based learning occurring in schools. One of the negative comments from the report was the unstructured and unassisted form of project work which pupils undertook: " ...it was unusual to encounter any formal structure for pupils in how to do project work" (Cooke, 1987:76).

Interestingly, the report talks about **study skills** and **research skills** rather than **information skills.** Study skills was a concept originating in the USA and in vogue during the '70s and early '80s in Great Britain. It has been defined as " any technique which leads to efficient and effective studying e.g. advanced reading strategies, library use including information retrieval" (Irving and Snape, 1979:102). Research skills are subsumed under study skills

A recurring theme in the literature and highlighted by the Irving and Snape report 1979:88) is the small proportion of schools with any kind of successfully functioning school

library and if there are any, they are concentrated in the capital.

3.3.2.5 DES REPORT ON SECONDARY SCHOOL LIBRARIES

The next decade sees a hive of activity in curriculum and Information Skills development. Much of the research was supported by the British Library Research and Development Department. In 1981 the **Department of Education & Science (DES)** published its report entitled **Secondary School Library Survey**. Their findings were truly dismal. Eighty three percent of school libraries had 10 hours or less of access time per week. Over 73% of the personnel running school libraries were teachers with no professional library qualifications. Only 16% of schools had professional librarians (Pain, 1987:1).

In 1982 the **Office of Arts and Libraries (OAL)** as part of the DES drew attention to the "uneven development of school libraries" (Pain, 1987:7). Unfortunately, the **Education Act** did not explicitly mention library provision in educational institutions administered by local authorities. Hence, although lip service is paid to library provision, money budgeted as per recommendation of reports is not spent accordingly.

2.6 GCSE AND TVEI

Curriculum development was at its peak between 1983 and 1988. The **General Certificate of Secondary Education (GCSE)** **the Technical and Vocational Education Initiative (TVEI)** formally ushered in the process curriculum model with its emphases on skills, attitudes and values. The GCSE national criteria (1985) in its general aims and objectives in courses points out on numerous occasions information handling, resource-based learning, problem-solving and the identification of bias (Scarsbrook, 1988:92).

Beswick 1988:6) calls the new GCSE curriculum a "direct gift" around which to centre the campaign for school libraries and information skills instruction. GCSE explicitly mentions Information Skills in almost every subject area. It is the first curriculum that requires in its formal examinations that attention be paid as much to the processes of gathering, handling and using information as to the information itself (Irving, 1990:1). Despite these optimistic utterances about the seemingly direct link between the curriculum and information skills, the desired effect on developing school library services did not occur Phtiaka, 1991:17 & 25).

3.3.2.7 OAL AND HMI REPORTS

In 1984 and 1985 studies of school libraries were undertaken by the **OAL** (now independent from the DES) **Her Majesty's Inspectorate (HMI)** respectively. The study reported in **School Libraries: Foundations of Curriculum** had positive spinoffs for the status of school librarians. The HMI survey depicted a sorry state of affairs for secondary school libraries and called for a school library policy "setting out the place and purpose of the library" (Pain, 1987:3-8)

The British library research division unearthed through their surveys, projects and investigations a tremendous amount of information which advocated changes in school librarianship. Despite all the research and reports undertaken in the '80s and the push for more chartered librarians defined as a person qualified academically and by experience to practise as a professional librarian and as inscribed on the Library Association's Register Chartered members as an Associate or a Fellow of the Library Association) in schools, the literature in the '90s still reflects a state of neglect in this regard. Irving (1992:44 describes the position of school librarians: " in the United Kingdom there are about 800 librarians in 8 000 secondary schools and less than 10 in 20 000 primary schools".

3.3.2.8 INFORMATION SKILLS

The early '80s marks the transition in the literature to the articulation of **information skills** for the first time. There is a period of overlap in the early part of the decade with the preferred term **study skills** (Irving's 1982 book is called **Starting to teach study skills**). Cooke (1987:77) identifies this shift with the changes in the world outside the classroom viz. the information-rich environment requiring students to be more versatile and to continuously face retraining. This in turn requires of them to be information literate to meet new demands of the job market.

Cooke (1987:79) describes information skills as being the broadest of three views of what skills are involved. The first and traditional approach sees information skills as library skills. The second approach, study skills, links the use of libraries to the wider skills of reading development, taking notes and generally skills for independent learning. The last approach, information skills, enables students to cope with an information environment outside school. In this sense it is a "life skill" and not limited to the academically connotated word "study skills" (Irving, 1990:4).

3.3.2.9 INFORMATION TECHNOLOGY (IT)

The '80s was also the decade of the introduction of **information technology** (IT)into schools. The first half of the '80s IT was rarely used in schools (according to an HMI report in Heeks, 1989:39). Within two years thereafter computers became an "expected and accepted part of information provision". The IT used in education (1986) was

1. the microcomputer - for databases; games and simulation; teletext emulation; word processing
2. Prestel;
3. Teletext (Ceefax and Oracle); and the
4. Video.

(Carter and Monaco, 1987:1).

The major initiatives undertaken by the DES (with support from the British Library) was the **Microelectronics Education Programme (MEP)** (1980-6 and 1987-9) to promote the use of IT in education. This was not library specific, nor was the **Schools Information retrieval (SIR)** project (1983) which teachers found worthy as a way of encouraging pupils to use a wider range of information and as a way of introducing computerised information systems (Heeks, 1989:41). The Carter/Monaco study (1987:5 & 6) found to the contrary that the new technology did not motivate pupils any more or less and their information retrieval skills were not improved by the new technology.

is the relationship of IT to information skills and role does it play in school library development? rving (1990:9) claims that "IT did not create but highlighted the need for information skills". Carter & Monaco (1987:5) agree that the same skills and approaches are needed for print-based sources as for IT and the existence of technology increases the need for information skills.

Irving (1992:38) writes about the "de-skilling of librarians ... and that information systems are diminishing the need for access to a library or librarian... students of tomorrow will be information skilled". She has a seemingly fearful approach that IT will make the librarian's role redundant. Kuhlthau (1993:49-50) in response says that better technology does not make for better learning. Access to lots of information actually increases the need for interaction with the librarian. Here the librarian would act as counsellor who helps to intervene in the process of learning from information.

3.3.2.10 EDUCATION REFORM ACT OF 1988

The last major change indicator for the '80s was the **Education Reform Act** of **1988** and the resultant **National Curriculum Act**. The National Curriculum, according to the LA (LIBRARY ..., 1991:2), establishes that

> all pupils have a broad and balanced curriculum ... helps to develop the pupil as an individual, as a member of society and as a future member of the community. The National Curriculum moves towards independent learning bringing library and information services into the centre of the learning process...

The **LA Guidelines** introduce a new curriculum called the **Learning Skills Curriculum.** The LA claims that traditionally library skills, user education and information skills sessions concentrated on finding information with little emphasis (sic)" on defining what information was required or on how to use and evaluate information effectively" (1991:4). Hence the new term **learning skills**, which sounds very much like what **information skills** ought to have been.

3.3.3 OBSTACLES TO THE DEVELOPMENT OF THE SCHOOL LIBRARIAN AS INSTRUCTIONAL CONSULTANT

3.3.3.1 INTRODUCTION

It is not unusual for any process of change to have its major and minor hiccups. Many of the hurdles which had to be cleared in the USA are to be found in GB too e.g.:

- the traditional role of the school library and librarian
- teachers' perceptions of the role of the school librarian
- the education and training of the school librarian

But there are problems which are specifically raised in the literature in GB:

- the low representation of qualified librarians in schools
- the lack of a policy and support for school libraries and librarians
- the traditional curriculum and timetable
- terminology confusion

3.3.3.2 THE TRADITIONAL ROLE OF THE SCHOOL LIBRARIAN AND LIBRARY

Could the perception of the librarian's chief role as "custodian" be considered a hinderance to the instructional consultancy role and the success of implementing information skills? Allen (1990:98), Hounsell & Martin (1983:65-66) and Marland (1992:11) are in the affirmative. There are those school librarians who have not accepted the new instructional consultancy function i.e. being involved at the curricular planning and development level with other senior staff; and holding a central position in the school's planning and implementation of resource-based learning and information skills. Marland (1990:22) claims that the school librarian's role has not been worked out as clearly as the American model. Yet, the LA, SLA and the OAL have been at pains to thrash out a role for school librarians akin to the American one. The visible successes of the new role can be seen in individual schools only -

Margaret Dane School in Hertfordshire; **Park Comprehensive** in Nottingham and **Wandsworth School** in London (Pain, 1987:72-82).

3.3.3.3 THE EDUCATION AND TRAINING OF THE SCHOOL LIBRARIAN

The education and training of librarians going into schools may not be adequate enough to fulfil the role of instructional consultant. School librarians who have a general training in library and information science may choose electives in management, organisation or selection of materials in school librarianship, but there are no courses in instructional design or curriculum planning except at the Masters level at the University of Aberystwyth in Wales [M.Ed. in Curriculum Studies (School Librarianship). Fifty percent school librarianship and fifty percent education] (Pain, 1987:99-107).

As Beswick (1988) says, the key element lacking in the school librarian's qualifications are indepth knowledge and skills in curriculum studies, learning theory and teaching methodologies. It appears that many librarians enter schools without a training in education. This is a hinderance in an educational environment. Ray (1987:17) recommends part-time or modular courses through distance learning for teachers who want to become school librarians. But if the DES does not recognise the additional qualification for remuneration and status, no teachers will

embark on that idea.

3.3.3.4 TEACHERS' PERCEPTIONS OF THE ROLE OF THE SCHOOL LIBRARIAN

While there are school librarians attempting to make great strides in the new role, there are at the same time, teachers who cannot envisage librarians in this instructional role. This attitude has implications for the professional training of teachers. At the training stage already teachers need to inculcate an understanding and appreciation of the role of the school library and librarian in the learning process. Best et al (1990), in their research on teacher training and the place of library and information handling skills in the Bachelor of Education courses, maintain that there is a high correlation between the absence of the use of libraries for teaching and information skills purposes and bad or futile explorations of libraries at college or training level.

Since the lobby for information skills in schools has progressed more amongst teachers, it makes sense to include study and information skills in both initial teacher training and in-service teacher training (Brake, 1980:46; Marland, 1990:23).

3.3.3.5 THE LACK OF A POLICY AND SUPPORT FOR SCHOOL LIBRARIES AND LIBRARIANS

Since Marland's **Information skills in the secondary curriculum** (1981), the literature has documented the idea of a "whole-school cross-curricular information skills policy". Cooke (1987:81) has even gone so far as to detail what the policy should cover: viz. aims & objectives; a skills taxonomy; a curriculum outline; a resources directory and an evaluation strategy. Nowhere in the literature does there seem to be a secondary school which has successfully integrated information skills across its entire curriculum. Gibbs (1990:137), on **Pudsey Grangefield School**, documents that no across the curriculum policy on information skills exists because of pressures of other issues.

Hounsell and Martin (1983:66) in their project on **Developing information skills in secondary schools** claim that in their experience it is best to proceed piece-meal with information skills. Introducing information skills across the curriculum while teachers are still ill at ease with the concept and where there has been no in-service training is a recipe for disaster. Todd's (1995a) experience in an Australian school is similar to Hounsell and Martin's. A whole-school policy is desirable, but the path must be a realistic one to follow.

6 LOW REPRESENTATION OF QUALIFIED LIBRARIANS IN SCHOOLS

The one peculiarity of British schools which arises time and again in the literature is the abysmally low number of qualified professional librarians in schools. Given the history of neglect of libraries in British schools, a coping mechanism for advancing the ideas of information literacy and information skills has been the co-option of teachers to "spread the word". But the absence of functional libraries and qualified librarians has been to the detriment of information skills in schools. Beswick, (1988:6) believes that for GCSE to succeed you need organised resources as in a library and an information intermediary (a qualified school librarian). Without this "GCSE is being botched up".

The professional isolation of the school librarian makes a good support system an imperative. The present education system falls down here because HMI does not have a contingent of inspectors who are themselves qualified librarians. The result is inconsistency amongst inspectors about the importance of qualified or chartered librarians in schools. Campbell (1989:93) writes that, because inspectors are not librarians, they do not have the clout and the expertise to convince teachers and heads. In terms of support from the OAL, this is only in resource provision - this at a time when school librarians are being urged to

go beyond resource provision and organise more directly in curriculum development (Heeks, 1989:

3.3.3.7 THE TRADITIONAL CURRICULUM AND TIMETABLE

Traditional approaches to teaching, timetabling and assessing are hindrances to the implementation of an information skills curriculum for more on the information curriculum see 2.7 The traditional 30-40 minute period is not enough time for the practice and reflection required for information skills teaching. The short single periods are better suited to exam oriented learning (Hounsell and Martin, 1983:55)

Traditional teaching methods which focus on textbooks e.g. in science, rob pupils of the opportunity to learn the "basics and essential language of the discipline" through intellectual enquiry (KNOWLEDGE ..., 1987:21). Pupils need to learn the language of science through reading periodicals as scientists do. It is a misconception that scientists discover by experimenting alone (Marland, 1990:21).

The traditional library/study/information skills lesson as a separate subject from the rest of the curriculum has been given the thumbs down throughout the literature. The argument is that transference and application of skills to other subjects do not occur. Hence the call for an

integrated approach to information skills.

The problem of an exam-oriented curriculum as experienced by Hounsell & Martin in 1983 has been overcome by the new National Curriculum of 1988. The emphasis of this curriculum is on continuous assessment. Project work needing information-handling competencies are for the first time "explicitly and statutorily" being targeted for assessment (Best, et al, 1990:96-97). Examinations, called Standard Assessment Tasks (SATS), are only taken at key stages 7 years, 11 years, 14 years and 16 years of age (LA 1991:1).Thus extrinsic learning has been cut down dramatically.

3.3.3.8 TERMINOLOGY CONFUSION

In the British literature many writers and researchers raise the problem of terminology confusion. In the latter '70s while school librarians were talking about user education, teachers were talking study skills. During the early '80s the term information skills emerged alongside library and study skills. Educationists could not distinguish between the differences (Heeks, 1989:9). Hopkins (in KNOWLEDGE ..., 1987:18) reckons that there is an "unresolved dichotomy and confusion" between the idea of information skills as library skills or as higher order thinking skills. When information skills was first bandied about, there was not enough understanding of the essence

of information skills which led people to latch on to the library skills component of information skills - i.e. the locational and retrieval skills because it was more familiar and less intellectually challenging than interpretation, analysis or evaluation skills.

Terminology confusion certainly impeded progress in the implementation of information skills. Perhaps that is the reason the LA now talks about "learning skills" with information skills being a sub-set of it.

3.4 CONCLUSION

The literature dealing with school librarianship in the USA sets much store by the AASL's influence in educational matters than do the British by the LA's and SLA's. According to Knuth (1995:265-282) there are a host of possible reasons for the unhealthy state of school librarianship in GB. Central to the impeded state of school librarianship in GB is the existence of two rival bodies representing the profession of school librarianship - viz. the LA and the SLA. The two organisations, instead of reaching consensus on issues of standards, certification and training or a philosophy of school librarianship, vie against each other. This has been to the detriment of school LIS in GB.

The dynamic debates engendered around the evolution of the

instructional consultancy role of the school librarian did not occur in GB as it did in the USA. In the USA school librarians have a dual qualification - as a teacher and as a school librarian. In GB the majority of schools have "teacher-librarians" or teachers who have no librarianship training but who run school libraries (Knuth, 1995:273). These "teacher-librarians" are represented by the SLA. The LA on the other hand (with its allegiance to librarianship and not education) has been pushing for more chartered librarians in school libraries despite their lack of pedagogical training. This has retarded the progress towards the newly desired role of school librarians: viz. as information specialists, as curriculum consultants, as resource experts and as knowledgeable in information handling skills.

Much of the debates around school librarianship and library and information skills instruction are conducted by educationists (both teachers and school librarians) and to a lesser extent by librarians alone. Again, this may be because qualified school librarians are a scarce commodity in British schools and by necessity the debates had to be taken up by educationists. In the school library sphere there seems to be a lot of mimicking and borrowing from American examples. The changes, initiatives and developments in library and information skills instruction in GB don't seem to emanate from a natural evolution of the profession.

Does the formation of the learning skills curriculum imply that information skills from the perspective of the school library profession has failed in Great Britain? The LA seems to think so 1991:4 and so does Heeks (1989:66) Perhaps the failure of information skills in Great Britain can be measured more in its ineffectuality in promoting the school library and the instructional consultancy role of the school librarian.

CHAPTER 4

THE DEVELOPMENT OF LIBRARY AND INFORMATION INSTRUCTIONAL PROGRAMMES IN SCHOOLS IN SOUTH AFRICA AND ANGLOPHONE AFRICA

4.1 GENERAL INTRODUCTION

Compared to the USA or GB, most of the South African and African school library programmes are still at the embryonic stage. It will become abundantly clear in this Chapter that school libraries in Anglophone Africa are mere ideals. The concept of information skills or information literacy is illusionary in most of Anglophone African countries - the exception rather than the rule.

Twenty to twenty five years ago, the general milieu in South Africa was entirely different to that in the USA or GB. Educational debates and issues started twenty years ago in places like GB and the USA are only now featuring in our education system e.g. enquiry based learning and the skills based approach to learning.

The researcher will focus on the plight of and improvement or transformation of previously disadvantaged communities in South Africa. This approach is in accordance with the

emancipatory action research framework which locates research within the broader context of the sociopolitical structures.

Hence, this chapter focuses on the years of Apartheid from the 1970's and the effect it had on educational matters. The 1990's are regarded as the transition years from Apartheid education to education under the first democratic government in South Africa. The 90's are the era of reconstruction, development and redress. It is a most difficult time because realities come into play - the Reconstruction and Development Programme (RDP) versus the decline of the Rand; Western Cape Party politics versus the education reforms (the study under investigation takes place in the Western Cape). How much we can learn about school library programmes from Anglophone Africa will be sketched in this chapter. Similar circumstances in Africa exist in many provinces in South Africa. Can we overcome the challenges and pursue a school library skills programme in the worst of scenarios?

In conclusion, the researcher will examine the value of looking at the development of library and information skills programmes in the U.S.A. and Great Britain for the South African context.

4.2.1 EVENTS CULMINATING IN THE JUNE 1976 STUDENT UPRISING

At a time when America and Britain were introducing innovative educational changes (1970's), South Africa was beset by fundamental politically-based problems. Education is inextricably linked to the politics, economics, culture and social structure of any country.

South Africa in the early 1970's saw the phoenix-like rise of Trade Unions. Two countries bordering South Africa, namely Mozambique and Angola, gained their independence at the time. The regaining of worker power and the throwing off of the yoke of colonial oppression (by those two countries) were confidence boosters for the oppressed masses in South Africa.

When new regulations were introduced in 1976 by the Department of Bantu Education which sought to impose compulsory use of Afrikaans as the medium of instruction for maths, social studies, history and geography, there was an immediate reaction from the students. Black education, already perceived as inferior, felt further burdened by the imposition of the Afrikaans medium. This resulted in a country-wide demonstration on June 16, 1976 in protest against this coercion. This was a major change indicator not only for education in South Africa but also the

political mobilisation of people against the Apartheid regime.

The educational reforms which resulted were largely cosmetic and mainly to placate a growing tide of resistance. In the main, black education remained poorly funded, understaffed, staffed by underqualified personnel and with appalling physical conditions for schools depicted in a lack of facilities like playing fields, laboratories, halls, libraries, even basic classrooms, textbooks, lighting and seating.

But not withstanding the culture of repression, there was a stronger culture of resistance. The year 1976 was the beginning of the tide of the student movement which challenged the essence of the school curriculum. Students took it upon themselves to oppose an education system which only served to further oppress them. They recognised that:

1. the end goal of their education produced semi-skilled labourers (Hyslop, 1990:97)
2. their education was qualitatively inferior to that of whites.
3. they were to be at a further disadvantage if the language of instruction was to be Afrikaans.
4. disparities between white and black education was stark.
5. textbooks were written from the ruling class perspective.

Students were helpless when it came to rectifying certain aspects of their education like the sciences because it meant capital expenditure for equipping and building labs. Above all, trained teachers in the sciences were a scarce resource. Thus they resorted to tackling the more accessible and what they considered more fundamental aspects of education - the ideological framework. They did this by finding out the people's history of South Africa not to be found in textbooks. They challenged the entrenched race and class ideology in subjects like geography, social studies and economics. They soon recognised the subtleties in language studies which undermined their culture, customs and so on. The language of prejudice, crude or disguised, was exposed and eradicated.

Students became acutely aware that the only way to change education was to gain full political rights in South Africa. Henceforth, the student struggles for a better education became closely aligned with the struggle for full democratic rights for all South Africans.

4.2.2 CHANGE INDICATORS OF THE 1980'S

4.2.2.1 THE 1980 SCHOOL BOYCOTT

There was a definite qualitative progression in the kinds of demands students made under Apartheid from 1976 to 1980

to 1985/6. In 1976 the most popular student slogan went: " Down with Bantu Education, down with Afrikaans". By 1980 the student struggles included the organisation of alternate programmes in schools with an emphasis on "relevancy" of content. The 1985/6 student revolt ushered in a quite different approach of a co-existing, alternative parallel education system to apartheid education. This new strategy not only challenged the authoritarian style management of schools and methods of teaching but also the emphasis on individual achievement and passive rote learning. It went a step further from mere reaction. What became known as People's Education was conceptualised.

4.2.2.2 THE NECC AND PEOPLE'S EDUCATION

The social movement around education was led by the National Education Crisis Committee (NECC). Where the 1976 and 1980 student struggles tended to alienate parents and workers, the 1986 education struggle under the guidance and auspices of the NECC served to unite students with workers, teachers and communities on educational issues.

People's Education was both a political and an educational strategy. It was linked ideologically, organisationally and strategically to the national liberation struggle (Unterhalter, 1991:11). However, the effect of the state of emergency 1986-1990 was to reduce the political nature of People's Education in favour of its educational aspects

(Unterhalter, 1991:12).

The aims of People's Education were:

> to eliminate illiteracy, ignorance, exploitation and individualism, and to develop an equal education for all. Collective input and mobilisation for participation were integral to the way People's Education was conceptualised (Stadler, 1991:19).

People's Education was put into practice formally through its English, History, Maths and Geography workshops (for examples see 4.3.5 **Resource Centre Projects**).

People's Education soon developed into a theoretical concept detached from its mass base. What was gained from People's Education for future educational policies are:

1. its emphasis on the democratic management, administration and decision-making in schools viz. community control of schools, and
2. an acceptance of a curriculum content devoid of eurocentrism and party political bias and structured under a method of resource-based learning as opposed to exam-oriented learning.

4.2.3 THE 1990'S: PERIOD OF TRANSITION

4.2.3.1 THE NATIONAL EDUCATION POLICY INVESTIGATIONS (NEPI)

The 1990's saw People's Education moving from a mainly political mobilising strategy to a contributor to the

theory and praxis of education when the NECC undertook the National Education Policy Investigations (NEPI). The NEPI undertakings provided policy options for a future education system envisaged under a post-Apartheid dispensation. The following areas within education were researched: teacher education; the curriculum; adult education; early childhood educare; language; support services; human resources development; education planning, systems and structure; post-secondary education; governance and administration and library and information services.

The culmination of these reports were published by Oxford University Press in 1992. The idea behind this kind of research was to include opinions from academics, political tendencies and grassroots workers i.o.w. inclusivity and consultation was paramount in the process. For South Africans steeped in repression, shrouded by mysteries, used to authority, this transparent, honest, forward-looking attempt at the reconstruction of our crumbling education system was a hint of positive contributions one could play in the future. A sense of continuity was provided between People's Education and NEPI in the latter's research content and process by its adherence to the 5 basic principles of non-sexism, non-racism, redress, democracy and equality.

4.2.3.2 THE IMPLEMENTATION PLAN FOR EDUCATION AND TRAINING (IPET)

In April 1994 all South Africans went to the polls for the first ever general elections in its history. It is a truism that a change in the nation has spin-offs in education too The change agent for the Americans was Sputnik in 1959 when they realised that they were being left behind in the space race. The impetus for change in South Africa was the installing of the new democracy.

While the NEPI reports provided the broad framework for education, its format was more conducive to discussion and questioning. It was the IPET reports finalised in 1994 which provided the input for the Draft White Paper on Education and Training published on September 23, 1994. The Draft White Paper provided a vision of a non-racial education system within the reconstruction and development of South African society and a commitment to the principles of basic human rights, democratic governance, access equity and accountability.

4.2.3.3 THE NATIONAL QUALIFICATIONS FRAMEWORK

The most recent education document to emerge in 1996 is the National Qualifications Framework (NQF . It provides a new approach to education and training which allows learners regardless of age, circumstances and level of education and

training to engage in life-long learning.

Under the Apartheid system, Christian National Education and Bantu Education stunted the approach to learning which fostered analysis, criticism and creativity. Under the previous education policy, the possibility for learners to move from one area of work to another was curtailed and acknowledgement for experience gained and transferred to a new work situation (or learning) was nonexistent or extremely limited. Particularly pertinent for education at school level is the challenge by the NQF to existing knowledge school learners are gaining i.o.w. is the content they are learning and the learning strategies preparing them for work, life and further study. The NQF in essence is an integration of the two areas of learning previously separated viz. education, where one supposedly gains knowledge and training, where one gains skills (UNDERSTANDING ..., 1996:1-2).

4.2.3.4 OUTCOMES-BASED EDUCATION

The new curriculum with its outcomes-based approach to learning and teaching provides the substance for the NQF's education phases and categories. The outcomes selected are determined by the broad educational goals to be served (South Africa. Department of Education. National... 1997:18). The outcomes are split into *essential* and *specific* outcomes. *Essential outcomes* express the intended

results of education and the *specific outcomes* are context linked and based on learning outcomes of the individual areas of learning (see 4.2.4 for the 8 areas of learning).

4.2.4 LEARNING AREAS AND THE IMPACT OF TEACHING AND LEARNING

Within the school arena the introduction of an impending new curriculum in 1998 implies that progress is being made in education. Forty one subjects are to be reduced to 8 areas of learning or knowledge areas:

1. communication, literacy and language learning
2. human and social sciences
3. technology
4. numeracy and maths
5. physical and natural sciences
6. culture, arts and artistic crafts
7 economic and management sciences
8. life orientation

The rationale for the new curriculum, linked to the NQF, represents a holistic approach to education and training, linking school and work and also crediting people for work experience through a process of certification (Bell, 1996:8).

teachers it means shifting from the idea of syllabuses to learning programmes. The problem that the educational

authorities are facing is that these programmes have yet to be developed and tested

4.3 THE IMPACT OF CHANGE AGENTS IN EDUCATION ON SCHOOL LIS IN SOUTH AFRICA

4.3.1 INTRODUCTION

In tangible terms little changed between 1976 and 1996 in School LIS within schools under government control. The most effective changes came from pressure outside. The lack of access to information for most South Africans gave rise to the formation of Resource Centres which were non-governmental organisations. They went some way to closing the information gap. Even if the challenges did not produce palpable results, the educational and subsequent political battles were to surface in the LIS sector too forcing library and information workers to confront their role in a changing society and contribute to the transformation process.

The position in which school LIS find themselves today is the direct result of apartheid policy which discriminated against school library provisioning for non-whites but which favoured the provisioning of school libraries for whites. Previously, the 19 different racially based ex-education departments administered the funds and policies relating to school libraries.

4.3.2 SCHOOL LIS IN THE 1970'S

For the vast majority of South Africans school LIS was nonexistent. In schools for white pupils the concept of "media centre" was already in place by the end of the 70's (Beswick, 1981:5). Before the white education department gained control in the 1950's (1960's for the Cape), private initiative had laid the basis of a book stock and service placing them at a clear advantage. Not only had the library evolved into an audio-visual centre, but the idea of library instruction had changed from "book education" to "media education". Clearly, for the privileged minority a system of school LIS was in place roughly comparable to that in the USA and Great Britain.

4.3.3 THE UNDERDEVELOPMENT OF LIBRARIES FOR BLACKS AND THE ROLE OF THE READ TRUST

Black high school student numbers grew phenomenally in the 1980's. Between 1976 and 1980 the number had risen from 389 000 to 555 000 and by 1985 there were more than a million black students (RACE..., 1986:376). The per capita expenditure on a black student in 1976 was R48,55 or 7,5% the expenditure on a white student. The per capita expenditure in 1980 had increased to R176,20 or 17,3% and by 1986 the increase to R476,95 or 19% the expenditure on a white student was still totally inadequate in addressing black education (Pillay, 1990:31).

In terms of school library provision for blacks, the first articulation occurred in 1983 under the ex-DET, but by 1987 few school libraries had materialised. In fact, it was through the intervention and foresight of the Read Educate and Develop (READ) organisation that the rise and establishment of school library projects got under way in South Africa's malresourced black schools.

READ, originating in Johannesburg, spread its activities to the rest of South Africa in 1983. It is an independent, non-racial, non-profit, professional organisation funded by the private sector. READ's main aim was to help people read, write and speak with confidence.They achieved these aims through their integrated approach of involving the whole school community: principal, teachers, librarians, pupils and parents. Central to READ's programme was the use of books and other media. They provided primary schools with a "box library" i.e. a collection of fiction and non-fiction books for each class. At high school and college levels they contributed to a centralised core collection (READ Trust report, 1991).

The ex-DET, suffering from a shortage of funds, failed to release monies for library development. The services they provided were totally inadequate. Book stock was inferior, usually the result of relying on donations or centrally controlled selections. Teacher-librarians were the exception rather than the rule and buildings were decrepit

ill-equipped (Stadler, 1991:16).

Statistical information re school libraries remains elusive. Overduin and De Wit completed a full South African study of school LIS in 1986. Krige surveyed KwaZulu-Natal in 1990. In 1993 Job completed her research on the role and profession of the Media teacher in South Africa using schools which had the best library services in the various ex-departments of education and Fredericks completed research on school LIS in the Western Cape in 1994. In general, however, access to quantitative data of the ex-departments of education was near impossible because they either flatly refused or they only permitted access if they had control over the outcomes (Bawa, 1993:9).

4.3.4 SCHOOL LIS DEVELOPMENT UNDER THE EX-HOR

As the focus of this research is a school which fell under the authority of the ex-HOR, it would be useful to describe the developments of school LIS under this ex-department very briefly.

The responsibility for school libraries started with the ex-HOR's predecessor, the Department of Coloured Affairs in 1964. Back then, the Cape Provincial Library Service stocked school libraries with books. In the 1970's the first senior subject advisor for school libraries was appointed. Schools would raise funds for books and the

education department would match funds on a rand for rand basis. No school librarians could be appointed and training courses for school librarianship only started in 1976, for example, at the University of the Western Cape. Thus, schools which had a semblance of a library were not necessarily organised or used.

The volatile 70's, especially the 1976 student uprising was met with state repression and censorship. Not surprisingly, books deemed "hot" i.e. censurable (e.g. political books especially those of a socialist or Marxist nature; books which discussed or questioned religion; books which challenged racism or the state) bought with school funds had to be temporarily removed from school library shelves before school library inspections took place.

The student struggles of 1980 received tremendous support amongst coloured high school students in the Western Cape. Growing numbers of students crowded into high schools coupled with the steadily rising unemployment and under-employment of school leavers boiled over into what became known as the **1980 schools' boycotts.**

The per capita expenditure on a coloured child in 1980 was R286,08 or 28% that of a white child (Pillay, 1990:31). Given these figures there was deep resentment of the apartheid government. Compared to white schools coloured schools lacked qualified teachers, a favourable pupil-

teacher ratio, facilities like halls, laboratories, sports fields and libraries and resources like textbooks, audio-visual and sport equipment.

In terms of school libraries, only from about 1985 could all senior secondary schools with 500 or more pupils and a library (a special room) appoint a teacher-librarian. According to Overduin and De Wit (1986:809-810) only 38% of ex-HOR schools had qualified teacher-librarians with 49% having less than 2 years experience of managing a school library. Many teachers who trained as school librarians used the qualification merely to increase remuneration and did not apply their skills in the library after qualifying.

The research completed by Overduin and De Wit, even if sketchy for ex-HOR schools, provides the best source of data to date. Feedback from the ex-HOR recommended a floor-space for school libraries of 70m but reality painted a different picture. School libraries were often half the recommended size and because of a shortage of classrooms, libraries were more often utilised as classrooms (Overduin and De Wit, 1986:811-812).

Funds for school library book and periodical purchases were at an optimum in the late 1980's (compared to the previous decade or the 1990's). The ex-HOR initially granted R400 plus R2,00 per pupil per school. In 1986 the new arrangement granted schools R4,50 per pupil. Whilst the

allocation of funds was exemplary, teacher-librarians had to adhere to a prescribed departmental booklist. This infantile treatment of trained school librarians was part of the authoritarian, bureaucratic style of management in the education department.

The real start of school libraries in ex-HOR schools only gained momentum with the appointment of teacher-librarians from 1986, whilst in white schools teacher-librarians were in those posts in 1970 already. This disparity in the development of school libraries is evident in:

- books to pupil ratio
- the provision of space for a library
- the quality of book stock
- media centre space for audio-visual materials
- computerisation

In 1974 UNESCO recommended an average ratio of 12 books per pupil in school libraries. The ratio at white schools in 1986 was 12,8:1 and at black schools under the ex-DET the ratio was 2,4:1. For coloured schools it stood at 3,5:1 in 1994 (Stupart, 1994:1). Tötemeyer (1990:14) recommends that considering the bad economic state of affairs in Africa, the minimum target should be altered to 5:1 phased in over a number of years until the target is reached.

4.3.5 RESOURCE CENTRE DEVELOPMENT - FILLING THE INFORMATION GAP

Given the bleak scenario of black and coloured school libraries, did they remain uncontested terrains for change in the 1980's? It seems that school libraries were substantially underestimated as sites of contestation during the education crisis years of the 70's and 80's. Reasons for this may lie in the underdeveloped nature of school libraries for the previously disenfranchised. Given the general lack of virtually all resources, libraries were considered one of the numerous and not given special status.

Nonetheless, READ took the initiative and intervened in black schools. The 80's was also the period for the rise of **Resource Centres** which provided the mass-based organisations like the United Democratic Front (established in 1983), National Forum, Civic organisations and Super SRC's with information and services to which the oppressed previously had no access. Resource centres were:

> characterised by their non-governmental nature and their concern with building democracy both in their internal work practices and in society at large.The orientation of these resource centres derives from a situation of mass repression, a manifestation of which is the censorship of information, organisations and persons (Karelse, 1991:3).

In keeping with People's Education and the choice of

developing an alternative and parallel education system to apartheid education, the resource centre was conceptualised as an alternate structure to the state run public libraries in terms of its organisation, intent and information provided (Karelse, 1991:4). Resource centres were renowned for the production of "grey literature" i.e. less conventional information sources and unpublished private works which are bibliographically elusive (Verbeek and Stilwell, 1988:26). Often these sources of information were highly relevant to the survival and information needs of communities. There were 3 broad types of resource centres:

1. **Community resource centres**

   which were geographically located within residential areas and serviced the needs of their communities and local organisations. Examples in the Western Cape were the Hanover Park Advice Office and the Woodlands Resource Centre.

2. **Resource centres attached to larger service organisations** with a special function or audience. For example, ILRIG (International Labour Resource and Information Group).

3. **Resource centres** which functioned **independently** of another organisation. For example, CRIC (Careers Research and Information Centre).

(Karelse, 1991:4)

It was not only in resource provision that they were different from public libraries, but the nature and

relationship with their users was distinctly atypical. The aim of resource centres was community empowerment through providing not only information but also skills to equip people to challenge and change their social conditions. Thus through workshops and ongoing feedback a service took shape which was user-friendly and promoted self-reliance.

Educational resource centres like **ERIP** (Education Resource and Information Project), **SACHED** (South African Committee for Higher Education) and **CRIC** provided invaluable information to students in the 80's. **ERIP**, for example, put together information packages on historically important dates like Workers' Day, Sharpville Day, Soweto Day and South African Women's Day. **SACHED** produced a local teenage magazine called **Upbeat** which featured lively, current and taboo (for some) topics which served as a creative learning tool in the classroom as well. **CRIC** prepared the youth not only for the world of work, but also for the very real world of unemployment with their information packages on careers.

4.3.6 THE 1990'S: SCHOOL LIS IN THE PERIOD OF TRANSITION

4.3.6.1 INTRODUCTION

President De Klerk's reform strategies in 1990 made it patently clear that political changes were in the offing. The country was in a deep economic crisis - the culmination

of years of isolation and boycotts had brought its pressure to bear. The money crunch was felt in education too. Under the ex-HOR the budget for school libraries was drastically cut in 1990. Only R400 went to each school. In 1991 this rose to R1 400 and then funds dried up completely.
Even though funding had been frozen and monies redirected elsewhere, the 90's is the period of transition and hope Debates, colloquia, symposia, conferences, investigations and discussions - these exchanges of ideas were the fuels which fanned the educational fire. No longer were critiques centred round the apartheid era that has been well documented. Now concerned people were projecting into the future to a time of a new democracy and a unitary system of education.

4.3.6.2 NEPI LIS

Initially, school LIS and LIS generally found themselves very much on the periphery of educational debates and institutions. The South African government's Education Renewal Strategy document for a new education system of June 1991 failed to mention the role of school libraries. Even the inclusion of the LIS sector in NEPI was belated due to the marginalisation of LIS generally. Nevertheless, NEPI LIS provided the foundation for the first collaborative effort amongst all library and information workers in South Africa.

In terms of school LIS it made an important contribution. The investigations pronounced that:

1. there was no ordinance governing school libraries to enforce the provision of facilities or to provide standards.
2. only a few education departments formulated explicit school library policies.
3. the existence of a policy seemed to have a direct bearing on the provision of school LIS
4. for the schools under the DET, despite acknowledging the potential role of school libraries from 1983, they remained underdeveloped due to a historical legacy of neglect and discrimination which resulted in gross financial burdens in the Transvaal the DET estimated in 1992 that R2,5 billion was needed to establish school libraries in all schools under it (NATIONAL ..., 1992:12).
5. although the Independent schools (privately funded) had no uniform policy regarding school libraries, in practice substantial budgets realised school LIS of First World standing.
6. there is no uniformity in selection policy and practice amongst education departments.
7. merely providing facilities does not necessarily lead to improved teaching and learning. School libraries need trained school librarians to propagate the benefits of a library and the library and information skills programme.

(NATIONAL ..., 1992:8-14)

What is instructive about this research on the whole is the

unevenness in school library development under the 19 different ex-education departments. This "has to do with both the conceptualisation of school libraries as either integral or an auxiliary part of the education system and with the lack of financial resources" as in the case of the and Homeland education departments (NATIONAL 1992:14).

authors of the NEPI LIS document comment on the prevailing hegemonic educational philosophy which discouraged critical thinking, self-directed learning and independent study. These latter elements in an education philosophy could greatly advance a school library system. There is also a lack of understanding of the link between a change in the curriculum structure and the restructuring of school LIS. Both at the education department and practitioner (teacher in the class) levels there is a general vagueness of the purpose of developing a school library because it is not considered integral to the teaching philosophy and practice (NATIONAL ..., 1992:14-15).

4.3.6.3 THE IPET LIS SECTION REPORT

Where NEPI suggests possible options to approaching a unitary, equitable education system in a democratic South Africa, the IPET LIS report drawn up under the auspices of the Centre for Education Policy Development sketches a

detailed plan of how South Africa's LIS should be restructured. For example, there was strong recommendation that LIS fall within the ambit of the Ministry of Education and Training. The LIS sector recognised that the basic tenet for placing it with the education ministry was that information and libraries play a central role in all educational sectors.

As NEPI highlighted, the IPET report too emphasised the need for developing independent and life-long learning styles:

> Information literacy is central to the empowerment of learners. Without library and information services, student-centred and resource-based learning, which liberate students and teachers from authority-centred and textbook-based rote learning, are doomed to failure ... (IMPLEMENTATION..., 1994:208).

The report scrutinised the rationale and costing of school library development. The writers of the report, using Fuller's (1987:279) study on **What school factors raise achievement in the third world**, contend that school libraries in developing countries are a cost-effective element in the educational programme because they have a positive impact on student achievement. Of the expenditure per pupil and per school as indicators of quality in studies conducted in developing countries, the mere presence of a school library and school library activity have been consistently related to pupil achievement. Of 18 studies that investigated the effect of library size and

activity on students' achievement at schools in developing countries, a significantly high 15 (i.e. a confirmation rate of 83%) reported a positive effect. By way of comparison with other costly material inputs, the positive effect was confirmed in 16 out of 24 investigations into the number of textbooks available i.e. a confirmation rate of 64%) and in only 4 out of 11 investigations into the effect of science laboratories (i.e. a confirmation rate of only 36%) IMPLEMENTATION ..., 1994:237).

The section on costing school libraries threw up the anomalous situation from which a unitary education system would have to start. The problem is how to arrive at an optimum way of calculating the future costing of school libraries. The ex-departments of education all used different approaches to costing. The bottom line in future costing is parity and redress: how to improve conditions in impoverished schools to bring them up to ex-HOD standards regarded as the best run, effective and integrated services). Trying to implement a UNESCO 1977 standard for developing countries of 12 items per pupil to start with is financially unrealistic. For example, at ex-HOR schools the mean ratio of library items per pupil is 3,5. Raising the levels to 12 items per pupil would cost about R255 million in these schools alone (Stupart, 1994:1)!

The IPET LIS report suggested that each school of 500+

pupils have a teacher-librarian and a half-time assistant.

rationale behind trained library personnel is the underutilisation of school libraries if librarians are not there to mediate. Professionally trained staff organise the central collection, administer it, provide access, teach information and research skills to students and liaise with teachers.

The report describes that the best situation for school libraries is to be integrated with the entire curriculum. At this stage of development the school librarian and subject teachers jointly design programmes for independent learning and the development of information skills (IMPLEMENTATION ..., 1994:240).

4.3.6.4 DRAFT WHITE PAPER ON EDUCATION AND TRAINING 1994: REACTIONS FROM THE SOUTH AFRICAN LIS SECTOR

Draft White Paper on Education and Training was heralded as a ground-breaking document which encapsulated the vision of the first non-racial education system in South Africa. Yet, for the LIS sector it was a disappointment to be excluded from such a fundamentally important document given the input at the IPET level. Responses to the White Paper came from across the LIS sector - from LIWO, SAILIS, EDULIS Western Cape and the Media Services Centre Western Cape expressing discontentedness at being omitted.

Despite utterances in the White Paper like

> improving the quality of education and training services through a process of life-long education and training ...
> and
> the curriculum and teaching methods should encourage independent and critical thought, the capacity to question, enquire and reason ... (South Africa. Department of Education. Draft..., 1994:12)

there is no explicit mention of the role of school libraries or public libraries in this restructured education system.

Even though the White Paper does criticise past policies,

> official policies on examinations and teaching methods have encouraged the memorisation of large amounts of information and discouraged both teachers and students from developing their initiative or critical thinking" (South Africa. Department of Education. Draft..., 1994:9).

ways of combatting these approaches are not clearly delineated in the section on curriculum development
In a new process based curriculum students have to be taught skills to access information, extract the relevant and reject the "noise", analyse, synthesize and construct new knowledge for themselves. This is what library and information skills can offer to a new national curriculum fit to take us into the 21st century.

4.3.6.5 OUTCOMES-BASED EDUCATION AND SCHOOL LIS

Whilst the **Draft White on Education and Training** did not spell out the specific role of the school library programme in education, in the new curriculum information literacy is more explicitly identified. Information literacy is the ability of an individual to recognise the need information; and to locate, organise, evaluate and use information for effective decision-making. One of essential outcomes of the new curriculum is the *ability to collect, analyse, organise and critically evaluate information*. Information literacy falls within the learning area of *Communication, Literacy and Language* and one of the specific outcomes of this area of learning is information literate person.

4.4 SCHOOL LIBRARY AND INFORMATION PROGRAMMES IN ANGLOPHONE AFRICA

4.4.1 INTRODUCTION

School libraries and LIS generally in Africa have been in a state of decline over the past 15 years. Rosenberg (1994:247) paints a gloomy picture of African librarianship which is always "planning" and "proposing" but never implementing. She questions the sustainability of libraries in Africa given their overdependence on international aid and their shrinking budgets from parent bodies

(governments, universities, education departments).

The scenario for school libraries in Africa seem even more dismal. Looking at Ghana, Nigeria, Kenya, Zambia, Tanzania, Zimbabwe, Swaziland, Botswana and Nigeria, the general impression is one of disillusionment and negativity. Problem areas are well documented but solutions involve a complex mix of economic muscle, cultural sensitivity, educational reforms and a shedding of an ideological bondage with the West.

4.4.2 A NON-READING CULTURE: WHY ARE AFRICANS NOT READING?

There are a number of factors which impede reading in Africa. This has implications for schooling and libraries. What Tawete (1991:123 calls the common denominator in Africa is "poverty" All sources consulted allege that Africa is in a state of collapse. Africa has been experiencing a decline in the volume of exports. For example, between 1980 and 1984 there was a 22,9% decline (Banjo, 1991:105). As African countries depend on foreign exchange earnings for their imports, there has resulted a corresponding decline in imports.

With declining economies low or non-profitmaking industries, like book publishing, are the last to be financed. To purchase a book in Ghana will cost you 8 times your days wages (Tötemeyer, 1994b:411). Well known African

authors do not publish locally. Of the books in bookshops, 80-90% are imported and in a foreign language (Banjo 1991:107; Tawete, 1991:135).

Illiteracy is still rife in Africa despite all the literacy projects of the 70's and 80's. Tötemeyer (1994b:412) estimates the illiteracy rate in Africa to be 54%. The fact that only half of the languages spoken in Africa have been transcribed could aggravate the problem. There is no access to written materials in the mother tongue which clearly disadvantages the African child. In African countries where English and French are used, 95% of the population cannot read these languages (Tötemeyer, 1994b:413). One solution to the language problem has been the suggestion by Neville Alexander of the PRAESA Institute at the University of Cape Town (UCT) for the reduction of black languages in Southern Africa to two major languages viz. **Nguni** to encompass Zulu, Xhosa, Swazi and Ndebele) and **Sotho** to encompass North Sotho, Pedi, Southern Sotho and Tswana).

Library services have been deteriorating in Africa if not through political upheaval (Liberia, Nigeria, Zaire, Burundi, Rwanda) then eroding services to rural areas where impassable roads prevent book mobiles from operating (Tötemeyer, 1994b:411)

But it's not only economic factors hindering reading progress. There are cultural and social factors too. Loho

(1991:143) has mentioned several. Africans are an essentially oral people for whom storytelling has been the means to handing down information. It is considered anti-social to be reading when others are entertaining with storytelling.

Families are usually the extended kind and are large and noisy and quiet spots in a dwelling are rare. Night-time reading is normally out because of a general lack of electricity. Being mainly rural, children help with farming activities like carrying loads to market or with the harvest and are then too exhausted to engage in reading.

4.4.3 THE EFFECT OF THE SYSTEM OF EDUCATION ON SCHOOL LIBRARY PROGRAMMES

Besides the above factors, the education system itself is to blame for not encouraging a reading culture, a library culture and a research culture. The education systems are still single text oriented and exam driven. Resource-based learning is at the conceptual stage in most schools when they do have libraries (Kakoma, 1991:5). Loho (1991:144) complains that child-rearing in Africa does not stimulate cognitive development for westernised schooling. There is a lack of educational toys, picture books and few public libraries.

Matsika and Chiware (1989:21), writing about Zimbabwe,

lament the state of school library provision in their country. When there are libraries they are regarded as shrines or they are used as storerooms or they are timetabled and therefore never used. Both Kakoma (1991:12) and Matsika and Chiware 1989:24) share the sentiment that the basis for the lack of school library development information programmes is that little research and little life-long learning emanates from African universities. authors accuse university lecturers of being apathetic about publishing and research.

4.4.4 STRATEGIES TO IMPROVE SCHOOL LIS IN AFRICA

There are recommendations coming out of African countries which South Africans cannot chose to ignore. They recommendations at the policy level, statutory level, school/site level and teacher/ school librarian training level

4.4.4.1 LEGISLATION

On the advice of three of the authors, Tötemeyer 1992:114), Kakoma 1991:14) and Osei-Bonsu (1990:88), it is imperative for governments to legislate school libraries. Without this legislation, there is no statutory basis for a planned, sustained school LIS development. Zambia, Namibia and Ghana are still fighting to make school libraries official policy

4.4.4.2 INSPECTORATE

The next step is the formation of an inspectorate by education ministry to ensure that official policy is carried out and not left to the whims and fancies of individual principals (Stewart, 1990:9). Inspectors ensure that standards are adhered to and that funding is sustained (Osei-Bonsu, 1990:104).

4.4.4.3 TRAINING

The existing predicament of marginalised school LIS stems partly from the misconceptions of educationists about the role school library programmes can play in education development. This has led, for example, to schools being designed without libraries in mind (Kakoma, 1991:4). In the majority of school libraries in Africa where they do exist the library programme is run either by untrained teaching staff, clerical staff or volunteers (Makuvi, 1990:47).

Kakoma (1991:15); Mbambo (1990:11); Stewart (1990:9) Matsika and Chiware (1989:22) support the idea that perceptions at teacher training level are of paramount importance in instilling a library culture. Educating pre-service teachers about learning resources and showing teachers how libraries can be an extension of classroom learning creates positive attitudes to the library. Once teachers' attitudes to the school library are positively

adjusted, the need for a trained school librarian becomes obvious.

Mbambo (1990:12) calls for a dual qualification for school librarians i.e. both a teaching and library certificate. In both Botswana and Namibia there are post-diploma certificates in school librarianship at teacher training colleges. In Namibia it is compulsory for all education students to take a course on the teaching methodology of school librarianship and a module on information skills.

4.4.4.4 INFORMATION LITERACY

In the final analysis it seems that library and information skills instruction or even basic library skills programmes are in the embryonic stage in most parts of Anglophone Africa. Only Namibia has advanced to making information skills called Basic Information Science) a new compulsory subject phased in from 1992. There is a well co-ordinated three pronged plan: via a compulsory school subject, via the training of both teachers and school librarians and via a lobby for legislation. South Africa can certainly learn from this strategy!

LIBRARY AND INFORMATION INSTRUCTIONAL PROGRAMMES IN A FUTURE SOUTH AFRICA - PIPE DREAM?

4.5.1 LIBRARY INSTRUCTIONAL PROGRAMMES: AN UNEVEN DEVELOPMENT

As with the fractured distribution of school libraries amongst the different ex-education departments, the provision of qualified school librarians also depended on the policies and implementation of these ex-departments

In Beswicks'(1981:6) observation of mainly white school libraries "book education" classes presented by a qualified teacher librarian was the norm. This instruction lasted at least standard 6 (grade 8) level and sometimes beyond. The programme covered the uses of books and libraries as well as note-making, study skills and the preparation of bibliographies. By 1980 the then Transvaal Education Department had changed terminology to "media education" for "book education" to coincide with the new trend in increasing audiovisual materials in white school libraries.

In coloured schools under the ex-HOR a **Library Work Scheme** for secondary schools existed for librarians to follow. The scheme relied heavily on the "tools" approach as can be seen in **APPENDIX 3.**

In 1991 a new **book education syllabus** for standards 6-10 was proposed. It was similar in content to the work scheme, only more detailed. The basic methodology still implied the "tools" approach (see **APPENDIX 4**). Significantly, while first world countries like the USA, GB and Australia were moving into micro-computer technology, electronic media and online searches, ex-HOR schools were still focused on books and printed media. Thus, reflected even in the library programmes is the uneven development of school libraries in South Africa. They are indicative of the funding and/or under-funding of school libraries under the various ex-departments of education

Whilst Namibia introduced its **Basic Information Science** (read information skills in 1991 for grades 8 and 9 (standards 6 and 7), South Africa was only busy formulating its core information skills programme. On March 29 1994 the Department of National Education, ex-HOA approved a new subject called information skills (see **APPENDIX 1**). The new subject was to be regarded as supplementary to Media Guidance or Media User Guidance. By January 1995 the new department of education in the newly democratised South Africa accepted all three school library learning programmes. This demonstrates an evolution of library instructional services very much like the USA or GB viz. an evolution from library skills to media skills to the present information skills.

The acceptance of information skills at national education level is encouraging. It implies that an understanding of an education system exists which extends the learning environment beyond the textbook and the teacher into the school library and other informational environs. The successful implementation of it will depend on:

1. developing libraries in schools
2. resourcing and maintaining adequate resources in school libraries
3. training school librarians & retraining teachers

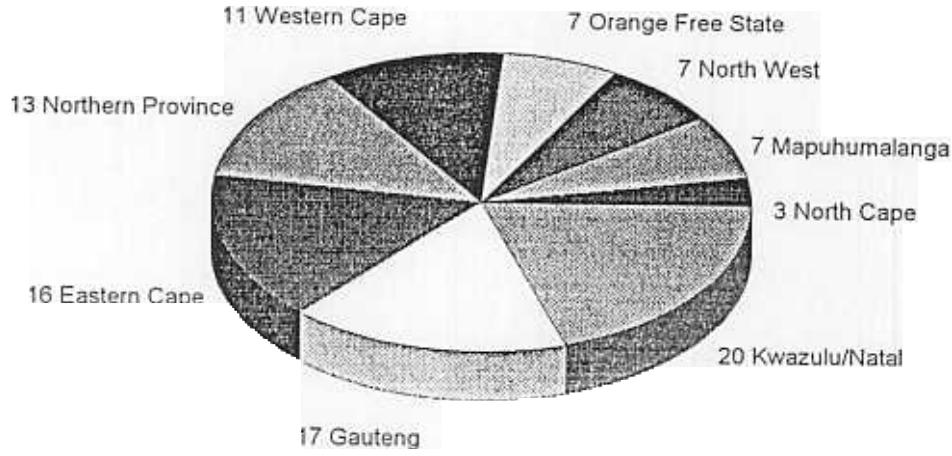
4.5.2 DEVELOPING FUTURE SCHOOL LIBRARIES: IMPLICATIONS OF THE EDUCATION BUDGET

Several aspects need to be addressed here. It is common knowledge that the wealthiest provinces in South Africa are the Western Cape and Gauteng. They have the highest human development indexes. Human development indexes or HDI's measure socio-economic development. They also have predominantly metropolitan populations 83,5% and 91,6% respectively (RACE ..., 1995/6:1 and 9) with the highest literacy rates in the country (81% and 88% respectively) (RACE ..., 1995/6:96).

Business Day indicated in 1995 that the Western Cape, Northern Cape, Gauteng and Orange Free State departments of education were overfunded by 49,5%, 40,9% 28,8%, and 11,4% respectively. The 1995/6 education budget introduced

the phasing in of equity in education by cutting more favourable budgets by 15% (see **FIGURE 3**).

FIGURE 3: THE 1995/6 PERCENTAGE ALLOCATED TO EACH PROVINCE FROM THE EDUCATION BUDGET



(RACE ..., 1995/6:110)

As the focus for this research is the Western Cape, a composite picture will be drawn using available education data. The Western Cape, Northern Cape and Gauteng had the most favourable pupil:teacher ratios - 25:1, 27:1 and 29:1 respectively (1994). Population figures for the Western Cape (as at October 1 1994 stand at 17,8% African, 2,56% Asian, 57,37% Coloured and 23,88% White (RACE 1995/6:8). Of the total number of teachers in the province 67% are Coloured of which about 22% teach in high schools. With these figures in mind, the effect of restructuring in education in the Western Cape will be felt greatest in ex-HOR schools (Coloured schools).

Whilst most provinces have to build schools and recruit more teachers, the Western Cape has experienced cutbacks in funding. The restructuring in education has lopped off 6 000 teachers in the Western Cape. This is part of the government's plan to equalise education within 5 years. The decision to cut back on teacher numbers was based on the teacher wage bill which accounts for 85% of the total bill. The consequences of the restructuring have yet to be analysed. The probability that cutbacks have had a deleterious effect on school librarians is high given the Cinderella status of library programmes in the past curriculum. In ex-HOR schools which are in the majority in the Western Cape, school LIS will suffer a setback especially since its development is still in its infancy. Only a provincial audit will be able to detail the exact loss of trained school librarians.

4.5.3 ALTERNATIVE SCHOOL LIBRARY MODELS

Besides the Western Cape and Gauteng, the other 7 provinces have an overwhelmingly rural and urban population. These mainly rural provinces are plagued by low HDI's and an underdeveloped infrastructure. These poorer provinces are not only RDP funded for basic housing, water supply, electrification and sanitation, but also for new schools and public libraries.

According to Bot (1996:6) South Africa needs 50 000

classrooms at R5 billion to accommodate existing pupils. To meet the backlog 10 598 classrooms needed to be built in 1996; 11 681 needs to be built in 1997 and 12 923 in 1998. However, no new schools were built in 1995 because of a disagreement about which tier of government should build them!

The plight of rural areas needs urgent attention. Bristow (1992:78-79) describes a distressing picture of school libraries in Venda. Only 11 of the 155 secondary schools have libraries and none of the 400 primary schools have a library. To top it all there is only 1 public library in the entire Venda region! Similarly, Krige's (Stadler, 1991:18) study of the KwaZulu & Natal schools revealed that only 5% and 10% of schools respectively have libraries which were stocked

4.5.4 SCHOOL LIBRARY STANDARDS

The IPET LIS costing report for ex-SGT and ex-TBVC schools comes to about R150 000 million for books alone and excludes personnel, building and maintenance costs (IPET 1994:10). If we are going to be guided by quantitative standards which translate into such prohibitive costs, then school LIS is going to stall.

Stander (1993:78) asserts correctly that we should formulate our own indigenous standards based on local

conditions. Transplanting and initiating a foreign education and information model alienates people from the service (Stander, 1993:96). Knuth 1994:80) suggests a hybrid of the African and Western models which is capable of supporting development. In other words, when guidelines for school libraries are drawn up in Africa (or South Africa), cognisance must be taken of the lack of suitable and relevant information in the vernacular; the state of publishing in the Third world; inadequate funds; the lack of a reading culture and inadequate information networks and technology. Hence, guidelines should concentrate on sources like newspaper cuttings, pamphlets, persons, articles, videos, free information brochures and resource sharing (Stander, 1993:94).

4.5.5 RESOURCING SCHOOL LIBRARIES: MATERIALS

Although the subject information skills (which is the focus of this research) has been accepted by the national education department, instituting it will require resourcing.

In most of the provinces where school libraries are non-existent and public libraries few and far between, inventive information sources will have to be tapped to realise enquiry based learning.

The Namibian example can teach us that information skills

are achievable if we understand that an information source can be a place, person, even a signpost. We have to go beyond the mental block of considering only books as sources. In Namibia there is a vision but no funding and most of their schools do not have libraries. They have turned to museums, community leaders, experts like agricultural officers, doctors, the environment, craft production centres, post offices, banks, supermarkets, clinics and travel agencies, amongst others, to provide sources of information (Tötemeyer, 1994a: 2-3).

Namibia has taken the idea of READ's **"box libraries"** a step further. They have created the **mobile book cabinet**, a modular structure of shelves on wheels, useful for subject teachers who have to move from class to class. Should a room become available at a school to house a centralised library, the wheels on the cabinets are removed and there is instant shelving (Tötemeyer, 1994a:7

In provinces like the Western Cape and Gauteng which have been hard hit by cutbacks, maintaining school libraries without government funding will be a challenge only committed schools and librarians will be prepared to face.

The Western Cape has a fairly well established public library service (compared to the other provinces to complement school libraries. But, the legacy of Apartheid provision of services has left an imbalance in the

distribution of public libraries. For example, in areas previously demarcated for Africans there are 6 public libraries for a population of roughly 700 000 i.e. a ratio of 1:116 666. Compare this to the Atlantic Seaboard, City and Southern Suburbs region with a mainly white population of about 300 000 who enjoy access to 20 public libraries i.e. a ratio of 1:15 000 (INVESTIGATION ..., 1993:24).

Even though public libraries are open to all South Africans now, it is an accepted fact that people will only use public libraries if they are within walking distance of 1,5km from their homes (or 3-4km for main branch libraries) (INVESTIGATION ..., 1993:10). Most people continue to live in old racial group areas. A perpetuation of past inequalities will continue until improvements are phased in over the years.

4.5.6 TEACHERS, LIBRARIANS AND THE SCHOOL LIBRARY

In a recent report in **The Argus** newspaper of March 20 1996:13), the **National Teacher Education Audit (NTEA)** stressed the deplorable state of teacher training in South Africa. It claims that the vast majority of teacher training colleges churns out teachers who cannot teach or think critically and whose curricula are outdated and overloaded with irrelevant subject matter. The NTEA also criticises the lack of continuity in teacher development from pre- to in-service education. These two elements have

been planned and designed separately thus far (RACE ..., 1995/6:123).

whole question of curriculum appropriateness for the information age includes the position assigned for school libraries and librarianship at teacher training level. There is an overwhelming agreement amongst South African authors reviewed that school librarianship be made a compulsory module of the teacher training course (Bawa, 1993:13; Fredericks, 1994:48; Radebe, 1994:45). Olën 1994 goes a step further in her study on pre-service teachers at colleges. She says it is not enough to regard the school library as a mere teaching aid. In this way it remains at the periphery of the curriculum. To make it pivotal in the curriculum students must learn information literacy through their individual subjects and not as a stand-alone subject.

By integrating library and information skills with the subjects, students learn about information handling and processing skills in the different fields. If information literacy is prescribed and examinable in each subject, the likelihood that students will transfer these sustained experiences is much greater than if they were taught information literacy separately.

would school libraries in South Africa need intermediaries (school librarians)? Experiences from around globe prove that for the effective utilisation of a

school library a trained school librarian is absolutely imperative. The IPET LIS report (1994:11 spells out the reasons for employing school librarians:

1. in order to protect the assets which already represent an investment of funds;
2. to mobilise and add value to the resources so as to improve learning and education performance;
3. to provide in-service training to teachers to use the materials effectively with a view to improving the quality of their teaching and promote resource-based education;
4. to design programmes of information skills across the curriculum.

Radebe's (1994:44-45) observation of the deficiencies which students bring to the school library training programme is instructive. Their prior learning base is riddled with inadequacies and cognisance must be taken of this when formulating course contents for school librarianship in South Africa. For example, many students (who are trained teachers with three years experience) have not experienced a library culture either whilst attending school or as teachers because of a lack of facilities or low prioritisation of the library programme. Many students come from non-reading cultures and have no real idea of the worth of reading in a society.

4.6 GENERAL CONCLUSION

most important lessons South Africa can learn about school LIS from Anglophone Africa relates to:

legislating school libraries;

- ensuring continuity and standards through some form of inspectorate/supervisory body;

establishing school community libraries in rural areas;

- making information skills a compulsory component of teacher training;

resourcing school libraries with trained professional school librarians;

overcoming the publishing dilemma by introducing **Penny Horribles** as has been done in Botswana to combat the dearth of literature in the indigenous black languages.

The changes in school LIS inevitably filters into Africa from Western countries. Many school librarians are trained in Western countries and return with ideas to adopt and adapt. Through circumstances beyond our control in Africa

debates, conferences and research in school LIS are undertaken in Western countries. There have been many successes in school library programmes in the USA and GB which we can emulate and adapt. There are advantages to having models of library and information skills programmes worked out and tested. In fact, the South African core

information skills programme is based on the South Australian model.

A comparison of the hindrances to change in African including South African) and American /British school library and librarians' programmes yields similarities which differ only in degree i.e. in African schools which do offer a library. For example, the traditional role of the school library and school librarian are considered impediments to change in the USA and GB. In South Africa the role of the school librarian has not been elevated to that of an **instructional consultant** who "participates in design and evaluation of various instructional strategies" (AASL 1988:38-39). Yet we too are grappling with outmoded perceptions of librarians as gatekeepers of the library and the library as a passive repository of books.

The most significant difference between developments in South Africa and GB /USA are that the change indicators in South Africa were sociopolitically motivated in the 70's and 80's. In GB and the USA change was brought about by national education reports and Library Association guidelines. Only in the 90's do educational reports start to play a serious role in bringing about change in South Africa's education system.

CHAPTER 5

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

INTRODUCTION

In this chapter the researcher will present, analyse and interpret the data collected at the selected school Bearing in mind the research question which is to explore the effect of implementing resource-based learning projects emphasising the process skills, the researcher, using the **action research paradigm**, will examine and evaluate the collected data.

Preparatory talks, pupil questionnaires, teacher and teacher-librarian interviews, pupils' work, diaries and discussions and the participant observations by the researcher all form part of the data to be presented and interpreted.

SELECTION OF SCHOOL FOR STUDY

Following the selection criteria stipulated in Chapter one, a principal volunteered his high school as the research site. It was an ex-HOR school with an organised school library, a library programme and a qualified, experienced school librarian

5.2.1 PREPARATORY TALKS

An explanatory letter (see **APPENDIX 2**) was sent to principal concerned and a follow-up meeting arranged to discuss the research to be undertaken. Due to the volatile nature of this period in education (the period of teacher rationalisation generated many discussion and information meetings for principals as well as staff meetings at school), the principal, who was infrequently available, never linked up with the researcher. Instead, she developed a liaison with the deputy principal and the English subject head of department. An informal discussion with the English Head of Department convinced him the English Head) of the potential value of the research. Despite niggling reservations that he expressed about teachers' suspicions of researchers and the ownership of completed research, I persuaded him to the **action research approach** of investigation which is research not conducted by an "expert" but by a peer in the education profession from a similar social setting wishing to improve learning teaching through a collaborative effort.

I, as the researcher had the job of synthesizing research and disseminating the findings amongst participants. Discussions, workshops and feedback in whatever form could pose new problems or questions to be confronted. This is the cyclical nature of action research.

An initial meeting with Subject Heads of Departments took place in the school library. The researcher located the forthcoming research investigation within the context of **Draft White Paper on Education and Training**, the impending introduction of a new subject **Information Skills** the definite move away from an examination-based focus in education. The outcome of this meeting was the identification of three teachers willing to pursue the study with the researcher. As mentioned in Chapter one under selection criteria, subject teachers from different disciplines volunteered. A standard seven Geography teacher, a standard seven Science teacher, a standard eight English teacher and the school librarian volunteered to work on the investigation.

5.2.2 PRESENTATION OF GUIDELINES AND EXPECTATIONS

intended workshop with these participants to introduce them to the course of the study turned into a presentation by the researcher of her own expectations (as spelled out in Chapter one) and of the guidelines and expectations for teacher involvement in the research project. The research had to be contextualised again for this set of teachers as had been done with the Heads of Department. Teachers were asked to identify content objectives and possible areas of project-based research to tie in with present subject levels.

A commitment was needed from participating teachers to complete the entire investigation with the researcher. Teachers also needed to understand from the outset that traditional project-based work was unacceptable. In this new approach the process and not only the final product of research would count. Pupils would be given adequate time and the researcher would be guiding the pupils step by step in the research process. In other words, pupils would not only be assessed and appraised summatively, but also formatively for their strengths and weaknesses. Teachers were given the following information sheets:

* list of information sources SOUTH AUSTRALIA 1992:28
* resource-based learning characteristics (RESOURCE-based learning ... exemplars, 1993:62
* the **"BIG SIX"** steps in the information process

The reasoning behind these bits of information was:

1. to broaden teachers' perspective of what constitutes an information source
2. to bring home to teachers that resource-based learning was a structured programme of pupil-centred learning in which the teacher acts as facilitator monitoring pupil learning closely. Pupils take responsibility for their own learning using their preferred learning styles. Through collaborative learning they begin to acknowledge contributions from their peers and in so doing hopefully develop independent and life-long learning skills

3. to introduce teachers to a process-based approach to monitoring and assessing project work. The 6 "steps" in the information process refer to:

   * **DEFINING the information need**
   * **LOCATING the information**
   * **SELECTING the information**
   * **ORGANISING the information**
   * **PRESENTING the information**
   * **EVALUATING the information process and progress of the pupil**

For each "step" teachers were given notes from Gawith 1987 and 1991 on the process involved, the information skills to be learnt, a teacher's planning checklist, a teacher's monitoring checklist, guidelines for the pupil, checklists for pupils to use and persistent problems which may arise.

Because of the time-tabling of a library period once per 7 day cycle for each class in the school and the subject-based approach to introducing the information skills process, the school librarian would have limited contact with the investigation of the research. It would be in the school librarian's own interest to learn about the new subject, Information Skills, as the teachers involved in the investigation would become familiar with it. It is also being introduced as a subject (in the WCED) within the domain of the school librarian. The participating team needed access to the school library and its resources whenever it was free of scheduled classes. The school

librarian needed to be willing to make available resources special reserve for projects being undertaken.

teachers and the school librarian had to avail themselves for an interview during the course of the investigation.

5.2.3 INTRODUCTION TO THE PUPILS

researcher personally introduced herself to the 3 classes of pupils explaining that she, them, their teacher the school librarian would be involved in a new and different way of learning and teaching which has the potential for promoting confidence and independence in their learning

A total of 87 pupils were involved in the study. There were 27 pupils in the Geography standard 7(i class, 25 pupils in the standard 7(ii) Physics class and 35 pupils in the standard 8 English class. All the pupils participated in resource-based projects and 84 completed the questionnaire. The keeping of diaries was optional and eight pupils handed in completed journals. Pupils also offered opinions during an informal discussion towards the end of the investigation.

This exploratory, qualitative research investigation took place over a two month period with daily interaction

between the researcher and teachers and pupil and to a lesser extent the school librarian.

TEACHERS' AND SCHOOL LIBRARIAN'S RESPONSES TO INTERVIEW QUESTIONS

5.3.1 INTRODUCTION

high school involved in the study had a pupil population of 1 200 and 58 teachers. The school library had a stock of about 4 000 books of which half was fiction and other half non-fiction. The school library also had a vertical file collection of pamphlets and articles and there was a variety of magazines in evidence. Audio-visual media was not kept in the library, but in a separate language laboratory. Audio-visual media was only accessible to staff where as print media was available to all.

Most pupils lived in the vicinity of the school and the nearest main branch public library was within a 2-3km walking distance from the school. Smaller public libraries are also located within a 5km radius of the main branch library. There were pupils coming from further afield, but seemed to have access to public libraries in their respective communities.

5.3.2 QUALIFICATIONS, TRAINING AND EXPERIENCE

TABLE 3: EDUCATORS' EDUCATION AND TRAINING

	Geog. Teacher	Science Teacher	English Teacher	School Librarian
Qualifi-cations	Soc.Sc. Degree + B.Ed. + Xhosa	B.Sc. Degree + B.Ed.	B.A. + B.Ed.+ Music + ½ Masters	B.A. Degree + Dipl. in Sch.Libr.
Years of teaching	12 years High school	6 years High school	26 years 12 years at High school	31 years 11 years at high school
Continu-ing educa-tion courses	Yes	Yes	Yes	No

teachers at the school were all suitably qualified clocking up a total of 75 years of teaching amongst them

except the school librarian had attended continuing education courses to keep abreast of developments in their respective fields.

5.3.3 LIBRARY AND INFORMATION FACILITIES CONSULTED

TABLE 4: LIBRARY AND INFORMATION FACILITIES USED BY TEACHERS

	Geog. Teach	Scie. Teach	Engl. Teach	Sch. Libr.
Public Library	Yes	No	Yes	Yes
Univ/Techn Library	No	Yes	Yes	No
Resource Centres	Yes	Yes	Yes	Yes
Education Library	No	No	Yes	No
Teaching Resource Centres	Yes	Yes	Yes	Yes
Media Centre	No	No	Yes	Yes
National film and video library	Yes	No	Yes	No
Teachers' Centres	Yes	Yes	Yes	Yes
Home library	Yes	Yes	Yes	Yes

Teachers in the Western Cape Metropolitan area have a host of library, information and resource centres at their disposal. However, many teachers were the unwitting victims of an Apartheid education system which dimmed enthusiasm for innovation and creativity. Consequently, there are

teachers who had never consulted the Teacher's Education Library or the National film and video library.

Formal teaching of library skills and resource-based teaching methods seems to be a more recent phenomenon as only the science teacher with six years the least number) teaching experience had had exposure to them. Yet, the only resources she used were a variety of textbooks. The other teachers used a wider variety of resources (including textbooks from across the globe) from video recordings to posters, pictures, transparencies, newspapers, educational labour publications.

5.3.4 RESOURCE-BASED PROJECTS

5.3.4.1 AIMS FOR SETTING PROJECTS

Teachers generally set their classes one or two projects annum. For the Science teacher these projects turned out to be unsuccessful because of the limited resources in the school library. Projects were mainly regarded as enrichment and either counted a minuscule percentage or nothing.

The aims of setting projects were to allow pupils to explore beyond the subject syllabus, to undertake independent research, to enable pupils to work co-operatively together and to develop leadership skills.

5.3.4.2 LIAISON WITH THE LIBRARY (SCHOOL AND PUBLIC)

Teachers admitted and the school librarian confirmed that teachers seldom or never consulted, informed or ordinated project work with her. In the responses in pupil questionnaire, a minority of pupils used their school library. A negative attitude towards the school library seemed to pervade at the school. The result was that the school library and its programme was relegated to the fringes (literally too as the library is situated at the furthest edge of the school) of the curriculum with little or no integration occurring with subjects

This lack of contact between librarian and teachers was evident in:

i) the school librarian rarely being consulted and then only in her capacity as resource provider.

ii no standardisation of certain basic aspects of the research project like bibliographic format.

iii unco-ordinated scheduling of projects to the detriment of the pupils.

5.3.4.3 FACILITATION

All the teachers conceded that they offer their pupils no structured guidance during the course of project work. Then again, issues of plagiarism and encouraging pupils to write in their own words took second place over finishing

project. All the various aspects (only for enrichment, counts nothing, no intervention, no liaison with resource people,etc. add up to a non-serious deliberation of project-based work.

5.3.5 TEACHERS' PERCEPTIONS OF THE TRANSITIONAL PERIOD IN EDUCATION

In 1995, a year after the first democratic elections in South Africa, the changes in curriculum were mere band-aid modifications. In terms of the subject content changes, nothing had been altered in either English, Science or Geography save a few deletions in the latter

When asked what they understood by continuous evaluation, teachers had fairly similar things to say. Progress would now be continually monitored through fieldwork, orals, portfolios, projects, and a host of alternative ways as opposed to cramming for a few big examinations. Although examinations would not disappear per se, the orientation of the curriculum had turned towards outcomes and not inputs. In other words, pupils would be assessed more holistically for their competencies and skills and not only for the knowledge-content which teachers espoused. In general, the teachers expressed optimism even if a cautious one towards the new proposed changes in education.

On the question why the system of evaluation was changed,

teachers pitted their answers within the realm of political changes (referring to the fledgling democracy) South Africans had just been through. In all spheres of life including education there needed to be a radical break with the past which was what the new education system was attempting to broach. Teachers agreed that the traditional exam-directed curriculum had many attendant problems. One major problem was the perpetual shortage of textbooks on which examinations were based. Thus pupils were disadvantaged who did not have access to resources and facilities. A more fundamental limitation of the knowledge-cumulative type of exam was its emphasis on short term memory and performance which did not develop attitudes, skills and values. Life-long learning suffered as a consequence.

Only one of the teacher's, who was a Teachers' Union spokesperson, had been party to discussions on the implementation of this alternate system of evaluation. From this, one can deduce that a lot of spadework needs to be done to realise an alternative education system starting with the re-training of the grassroots teacher in the classroom.

Do teachers think there is more scope for creativity or innovation within their subject now? Teachers answered in the affirmative with a qualification. Under any system of education a creative or innovative teacher would go out of

his/her way to enact that role. Yet, we cannot deny that under the Apartheid milieu there were too many obstacles for the average teacher to transcend. In the new education scenario, with its greater freedom to experiment and try new approaches, the true potential of the teacher could be harnessed.

5.3.6 SCHOOL LIBRARIAN'S KNOWLEDGE OF THE CHANGES IN THE LIBRARY AND INFORMATION WORLD AND IN EDUCATION

In the period between the dissolution of the ex-HOR and the inception of the Western Cape Education Department, there was no communication between the Education Department and school librarians under the ex-HOR as almost all personnel in the Library Subject Advisory had taken retrenchment packages. School librarians under the ex-HOR were at a distinct disadvantage re changes in the school library world. The formation of a School Library Association is still in its infancy and could have been the type of body to keep school librarians informed of changes in School LIS.

The school librarian interviewed was in a similar position to the teachers in the sense that she was not au fait with the new process-based approach to teaching and learning. She was schooled in the "Book Education" method which focuses on helping pupils to use their (school library and its specific sources by improving their location skills.

When questioned about her knowledge of the new information skills syllabus, her insights quite correctly pointed to a view of information as found beyond the school walls and a greater focus on the research strategy. But she was adamant that, above all, the implementation should start at primary school and that subject teachers themselves should be the initiators. In that way a greater integration between subjects and the information skills needed could be focused on by both the school librarian and the subject teacher.

The school librarian was not represented at Head of Department meetings and therein lays a crucial flaw. She was not in a strategic position to demand better co-ordination of project work, better standardisation, for example, of the bibliographic format, or to "market" her subject and hear and consider the needs of her colleagues.

While she recognised that only a third of teachers were coming to the school library, there was no plan to remedy the situation. While she felt that she had good resources to offer, there was the perception amongst teachers and pupils that the school library best be disregarded. In the light of more resource-based learning occurring, these differences of opinion need to be resolved.

5.3.7 HOW DO EDUCATORS VIEW THE INFORMATION AGE?

teachers and school librarian had some interesting views of what the information age conjured up for them Some said CD-Rom, computers, satellites and others said mass media, information skills as life skills, effective information retrieval skills.

Teachers also felt very strongly that information studies (Cilliers, 1992) (described as a combination of information skills, information technology, the social and economic impact of information on society and information in the international environment, amongst others) should be offered at all schools, although their school only had basic computer literacy classes. Computers integrated into

subject teaching and learning process was a distant ideal. Significantly, the school librarian did not mention computer technology at all whether for library administration purposes (data storage, issues, information retrieval) or for information searches (CD-Rom or the Internet).

5.4 PUPILS' RESPONSES TO QUESTIONNAIRES

5.4.1 INTRODUCTION

The researcher compared and contrasted the perceptions of the world of teaching and learning of the teachers' and the school librarian's with that of the pupils'. Discrepancies arose continually between teachers' perceptions and learners' perceptions. For example, teachers indicated that

consult a variety of resources for teaching lessons.

Yet, pupils referred to a text other than their textbook less than once per month (see Table 6 the mean of which is 28). Does this mean teachers are not acknowledging their reference sources to their classes? If so, does this perpetuate the myth of the teacher as the know-it-all?

Only 84 pupils completed the questionnaire as 3 were absent on the day. Two were from the standard 7(i class and one pupil was from the standard 8 class.

Please note that some of the questions allowed the pupils to choose more than one descriptor. Thus, Tables 5, 8, 9

13 and 14 do not total 84.

5.4.2 TEACHING STYLES ENCOUNTERED MOST FREQUENTLY

TABLE 5: PUPILS' DESCRIPTION OF THE AVERAGE LESSON

Description of average lesson	Std. 7(i)	Std. 7ii	Std. 8	TOT-AL
Teacher talks, pupils listen	21	16	23	60
Textbook teaching	3	16	11	30
Photocopied notes	24	22	33	79
Group work	12	6	17	35

The typical lesson described by most pupils was the teacher talking and referring to a photocopied note handed to pupils. The descriptor in the questionnaire, which refers to the use of slides, models, videos, music, etc. in lessons, was not chosen by any pupils.

TABLE 6: FREQUENCY OF REFERENCE TO A TEXT OTHER THAN THE TEXTBOOK

	Std.7 (i)	Std.7 (ii)	Std. 8	TOT-AL
never	3	1	5	9
weekly	1	7	2	10
monthly	3	6	13	22
other	18	11	14	43

With reference to table 6 it is evident from the explanations given by pupils that they received the most exposure to texts other than their textbook when doing research projects.

On the whole, pupils were dissatisfied with the way lessons were taught. Reasons cited most frequently were:

* the inadequacy of explanations given by teachers;
* the uninteresting presentation of lessons (recommending at the same time that learning should be more fun with educational outings, videos, music, etc.);
* the boredom that came with teachers talking, pupils listening and then writing notes (recommending at the same time that learning should be more pupil- centred, group work, more interactive, participatory and less spoon feeding);

* teachers talked too fast, were too formal and did not allow enough time to take down notes.

5.4.3 RANKING OF SKILLS USED IN LEARNING

TABLE 7: RANKING OF COGNITIVE SKILLS USED IN LEARNING

Cognitive Skill	Std.7 (i)	Std.7 (ii)	Std. 8
Recall	1	1	3
Recognition	2	2	4
Problem-solving	3	3	1
Diagnosing	4	5	5
Analysing	5	4	2
Predicting	6	6	6

Table 7 demonstrates in descending order of importance (1 being the skill most often called upon in learning and 6 being the skill used most seldom) the ranking of pupils' thinking skills. The two standard seven classes had a ranking order almost identical to each other, whilst the standard eight class diverged significantly from the former two. Lower order thinking skills (recall and recognition) were identified as the most often used skill amongst the standard sevens. The skills of diagnosing and predicting (considered higher order thinking skills) were notably

positioned nearly last in the order by all standards. middle order thinking skills of problem-solving analysing were featured first by the standard eights. Perhaps the emphasis in learning starts to change at this level and pupils are suddenly expected to become more independent, analytical learners.

Pupils were asked how they would fare in the major exam of the previous standard in one of their "study" subjects if they had to write it again the next day i.e. a 5 month gap in time). The standard sevens were optimistic about the outcome predicting an average to good mark for such a test The standard eights on the other hand, were much more pessimistic with the majority claiming a predicted average to poor result for such a test. The latter were much more realistic in their reasoning mentioning a lack of study time as the main culprit for potentially poor results.

There was an understanding by the standard eights traditional exams require significant amounts of remembering and hence the predicted poor marks. Yet, contrary to that observation, they ranked recall as only the third significant cognitive skill.

5.4.4 PROJECT-BASED WORK

All the pupils indicated that they had done a research project within the last year in subjects ranging from

Science (Physics and Biology to Geography to English, Mathematics and Guidance. A majority of projects were conducted in group situations, although a choice of working alone or in groups was usually offered.

Teachers normally informed pupils at the start of the project of the requirements like due date, length, presentation format,etc. After that, pupils were left to fend for themselves. The majority of pupils claimed that a list of reference sources were seldom or never given and that teachers expected them to complete the project without steady guidance from teachers.

On the question of whether pupils believed that projects counted towards a yearmark or not, 96% stated that projects did count. Most pupils realised that projects were mainly for enrichment and seldom tested in exams. It seemed then that teachers had managed to coax pupils into believing that projects counted when they actually did not. Despite knowing that projects were seldom if ever tested in exams, 92% of pupils felt that they learned more by doing a research project than by learning out of a textbook or notebook

TABLE 8: TYPES OF INFORMATION SOURCES PUPILS USE MOST FREQUENTLY

Information Sources	Std.7 (i)	Std.7 (ii)	Std. 8	TOT-AL
Books	25	25	34	84
Articles	23	23	33	79
TV/Radio	5	7	19	31
People	5	9	27	41
Indexes	4	6	10	20

TABLE 9: LIBRARIES PUPILS CONSULT

Types of Libraries	Std. 7(i)	Std. 7ii	Std. 8	TOT-AL
School Library	7	7	11	25
Public Library	25	23	23	71
Home Collection	19	21	33	73
Resource Centres	0	6	24	30

Pupils used a variety of resources the majority of which were printed media. Table 9 depicts glaringly the avoidance of the school library (used only 30% of the time) in favour of other libraries. This may be a reflection of the

lack of appropriate stock, a lack of access to resources in the library or a general negative attitude to the school library and/or librarian. See 5.4.7 for further evaluation. A good 87% of pupils claimed that they were using the resource collection in their homes. This meant that the economic background of these pupils was a privileged middle class (by South African standards). advantaged status could also be a contributing factor to the lack of a need to use the school library.

When asked for which purposes they had used information sources, pupils rated projects as the main reason. descriptor, **"to solve a particular problem"**, in questionnaire under purpose for information source was chosen by only 6 of the standard eight class pupils. This was in contrast to their perceived most important skill used in learning - see Table 7. In other words, although **problem-solving** was considered their prime cognitive skill, they would not necessarily consult information sources to assist them. This was indeed a lack of understanding of what information could be utilised for.

TABLE 10: HOW TO DO A PROJECT FROM A - Z

Pupils were asked to describe how they would set about doing a research project from start to finish. Their responses were analysed and transposed onto the **BIG** "steps" in the information skills process

TABLE 10: HOW PUPILS CONDUCT A PROJECT FROM START TO FINISH

	Std.7 (i)	Std.7 (ii)	Std. 8	TOT-AL
Defining	6	4	14	24
Locating	25	21	28	74
Organising	16	8	10	34
Presenting	17	17	15	49
Evaluating	0	1	0	1

The distribution of steps identified in percentage of pupils who identified each stage was:

* defining 29%
* locating 88%
* organising 41%
* presenting 58%
* evaluating 1%

Locating was the one step identified the most with **presenting** a distant second. A similar result was obtained by Todd and McNicholas (1993:90) in their Sydney, Australia study of grade 7 pupils

An absent feature in Table 10 is the skill of **selecting**. Selecting involves using information: analysing, interpreting, comparing, questioning. It means applying a variety of critical and analytical information skills to extract specific information related to the information purpose. Two ways of interpreting pupils' responses are either that pupils were using this skill without being metacognitively aware of this function or that they were merely copying information

Although 61% of pupils indicated that writing ideas in your own words was a requirement by teachers, this information skill feature was rarely mentioned in their content of describing the research process.

TABLE 11: PUPILS' PERCEPTIONS OF GOOD PRESENTATIONS

What is a good presentation?	Std. 7(i)	Std 7ii	Std. 8	TOTAL
Neatly Typed	2	0	12	14
Borders & Pictures	5	2	6	13
Lengthy	7	10	4	21
Not sure	8	6	5	19
Other	3	7	7	17

Presenting ranked second in importance to pupils in the completing of a project. Pupils' perceptions of a good presentation focused mainly on making it look attractive. In Table 11 the descriptor **"other"** chiefly combined "neatly typed" and "lengthy" with "colourful pictures" and "borders". There was no sense of considering the accuracy or clarity of the presentation or ensuring that a sense of purpose and audience came across. A final interesting feature of **presentation** was the 22,6% of respondents who displayed uncertainty about the criteria for a good presentation. This could imply that teachers are not explicitly teaching criteria for good presentations and merely leaving the "creativity" up to the pupils' interpretation. Teachers need to intervene and explain that focusing on the "external look" of a presentation is only one aspect and that the message and how it is transferred by the medium is equally important

The skill of **evaluating** as part of the research process was mentioned by one person only. Evaluating refers to the self-monitoring, self-diagnosing of pupils' progress during the research process as opposed to the standard evaluation by teachers at the end of the finished product. Evaluating formatively by pupils themselves allows for reflection of individual strengths and limitations. Insistence upon this kind of evaluation will engender greater self-confidence and independence in learning.

5.4.5 PREFERRED LEARNING STYLES

TABLE 12: PUPILS' PREFERRED LEARNING STYLES

Learning Styles	Std. 7(i)	Std.7 (ii)	Std. 8	TOT-AL
Linear	14	19	20	53
Individual	16	11	15	42
Visual	5	12	19	36
Holistic	8	7	16	31
Social	6	12	13	31
Verbal	8	7	13	28
Head	12	6	7	25
Symbolic	7	7	10	24
Multi-Sense	1	4	8	13
Lateral	2	4	7	13

main purpose for including Table 12 in the questionnaire was to compare the preferred learning styles of pupils with the teaching styles of teachers. Gawith 1991:7-9) used the list of types of learners to show that learners have to "translate" the teaching methodology into learning methodology at which they're most adept. Most

learners combine a few of these learning styles.

The most popular learning styles were **linear** and **individual**. The conventional education system which stresses written exams demands solitary, individual learning. Could this preferred mode of learning be the result of an exam-driven system or is it the way we innately want to assimilate new knowledge?

Pupils perceived the way the average lesson was taught as a passive process - i.e. teachers talk while pupils listen and take notes. This conventional method of teaching does not embrace the full spectrum of learning techniques of pupils. By allowing pupils to conduct more resource-based or " action-learning" projects, preferred ways of learning could be freely experimented with.

5.4.6 COMPETENCIES IN LIBRARY AND INFORMATION USE

TABLE 13: SKILLS TAUGHT IN THE HIGH SCHOOL LIBRARY

Library & Information skills	Std. 7(i)	Std. 7ii	Std. 8	TOT-AL
Card Catalogue	24	24	26	74
Location Skills	25	24	28	77
Encyclopaedia	21	17	21	59
English Dictionary	18	16	18	52
Bibliography	22	16	32	70
Indexes/Contents Pages	20	16	14	50
Notemaking Skills	3	2	3	8
Keywords	3	6	3	12
Selecting	3	4	5	12
Presenting	3	4	4	11

In this part of the questionnaire pupils' familiarity with library and information usage was discerned. About 80% of pupils came from primary schools which had a library. When the question was posed in terms of what they did in the primary school library, 50% commented that they read books (but could not necessarily take books home), 38% mentioned

having "book education" lessons and 12% did not visit the school library at all for scheduled lessons.

At high school level the emphasis is principally on library skills as opposed to information handling skills. Pupils taught how to use individual references like encyclopaedias and dictionaries and how to locate books in library by using the card catalogue. Hence there is a correlation between the library locational skills taught and the locating phase of the information search process in table 10.

When asked to rate their library skills 37% considered them good, 32% considered them very good and an equal number thought their library skills of fair ability. The application of library skills learned in the school library to public library usage was reported by a successful 76% of pupils.

information skills facet as reflected by notemaking skills, keywords, selecting and presenting skills was sorely lacking. This was at variance with the school librarian's comment that she was teaching notemaking and some information retrieval skills. Very often if skills are reinforced regularly by many teachers, pupils do not hone those skills. Unless pupils are taught the skills of questioning information, how to take notes effectively by keeping their research topic in mind and what an effective

presentation entails, resource-based projects will continue to be uncritical, plagiarised, prettily decorated products of secondary/minor importance to either pupil or teacher

On the application of library skills in their school subjects only 53% declared a successful transfer of these skills. The library skills applied in school subjects were locational skills, using dictionaries, encyclopaedias and catalogues and the writing of bibliographies. The balance of pupils who could see no connection between library skills and their school subjects offered the following arguments:

* skills learned in the scheduled library period were unnecessary and not required in learning school subjects.
* Access to the school library was restricted
* The school library had insufficient resources and therefore pupils did not bother to go there.
* Pupils felt unsure of themselves in the library.
* Pupils don't bother to use other information sources because it takes too much effort and there's never enough time.

5.4.7 ATTITUDES TO THE SCHOOL LIBRARY AND LIBRARIANS IN GENERAL

TABLE 14: ATTITUDES TO THE PRESCRIBED LIBRARY PERIOD

Attitudes to Library Periods	Std.7 (i)	Std. 7ii	Std. 8	TOT-AL
Interesting	3	5	0	8
Non-exam subject	7	6	2	15
O.K. to pass time	9	13	3	25
Not sure of feelings	8	7	10	25
Boring	11	10	25	46

Although 68% of pupils expressed a positive attitude towards librarians in general, 55% were outright negative about their scheduled library periods calling them "boring". Only 9,5% found library periods interesting. Given the figures above for the predominantly negative attitude to library periods and the non-transference of library skills, there needs to be a re-assessment of the role and significance of the school library programme in the curriculum

5.4.8 PERCEPTIONS OF THE INFORMATION WORLD

Responding to the question, **What do you think is meant by**

Information Age?, the average pupil had a fairly good idea. Answers offered were: there is more (sic) knowledge about things than in former years; information is stored more efficiently and people can access information more readily; the world is more advanced (sophisticated); people be doing more research; in South Africa the meaning takes on a political tone with the Freedom of Information it is synonymous with the computer age; the biggest weapon today is having more information than your opponent.

Responding to the question what computers can be used for, 72% had very good replies. Pupils recognised that computers could be used for games; jobs; preparing projects; storing information; recording data; looking up information; word processing; doing designs and sketches; sending messages; space technology; and controlling huge systems like banks.

5.4.9 ATTITUDES TO PROJECT WORK AS OPPOSED TO EXAMINATIONS

TABLE 15: PUPILS' RESPONSES TO THE CHANGES IN ASSESSMENT

	Std. 7(i)	Std. 7ii	Std. 8	TOT-AL
Positive	18	15	17	50
Undecided	2	6	7	15
Negative	5	4	10	19

the last question pupils were informed that a new system of assessment was about to be embarked upon. The implication was that 50% of their pass mark could come from research projects, fieldwork, etc. as opposed to the normal 90% from exams. When asked how they felt about this, 60% of pupils reacted positively. Reasons given were that projects and enquiry-based learning were less pressure than studying for exams; pupils enjoyed projects more and scored better marks than in exams; pupils would be forced to take projects more seriously; pupils would now get credit for work well done; and projects taught independence and you learned more.

The other 23% who responded negatively to the new idea of continuous assessment also referred to as continuous evaluation) offered the following arguments: they were used to the old exam system and feared scoring poorly in projects; they disliked project work; criteria for projects were not generally clearly delineated; and there was never enough time given to complete projects

5.5 ASSESSMENT OF PUPILS' WORK

5.5.1 INTRODUCTION

order to reveal to pupils where their strengths and weaknesses lay, pupils were monitored and assessed both formatively and summatively. The whole concept of

information skills is to empower pupils right from start to boost confidence and self-image as learners. Traditionally, pupils are informed at the end (i.e. summatively) whether their presentations were good or bad. This is the product-oriented research project which pupils and teachers are familiar with.

By guiding pupils "step by step" through the research project the researcher was hoping to instil in pupils a process-oriented approach towards learning which is assessed throughout the progress of the project. Pupils need supervision all along the way. If there are limitations at specific stages, it is best to prod direct pupils there and then and not leave it until end.

Two of the three classes were monitored by the researcher until the end. Due to time constraints (Science teacher limited scheduled periods per teaching cycle with the class and the mid-year exams were brought forward) the Science class was not observed by the researcher until the end

5.5.2 ASSESSMENT SCORES OF THE GEOGRAPHY CLASS

The standard seven Geography class received scores for

1. mind-mapping their topic; creating keywords & posing probing questions which would lead to step 2 in the

information process. The class averaged 60% here

2. the research plan or outline. An average of 59% was attained and the researcher had to do much prompting to head pupils in the right direction.
3. the ability to take notes in their own words and to organise their notetaking. The class scored poorly: 40% average. Pupils copied straight out of texts, merely photocopied and underlined important ideas which were copied verbatim, seldom paraphrasing.
4 presentations included the provision of a bibliography, delivery of the presentation and content of the project). Presentations took the form of fact files, interviews and research reports. On the whole the presentations were good gaining an average 70%!

5.5.3 ASSESSMENT SCORES OF THE ENGLISH CLASS

The standard eight class was scored similarly to the standard seven class:

1. The ability to mind-map their topic, produce keywords and pose probing questions was poorly accomplished with the average score being 50%.
2. Notemaking techniques: At least a third of the class did not hand in rough notes. The other two thirds had a good idea especially seen in their ability to construct ideas in their own words.
3. Bibliography: Although pupils located an impressive

variety of resources at stage 2, at least a third of pupils omitted acknowledging them formally in their bibliography. This may seem contradictory to the questionnaire response in which 100% of this class concurred that bibliographies were compulsory in projects. It is the opinion of the researcher based on teachers' responses that pupils are never penalised for not having a bibliography and therefore ignore that requirement.

4. Presentation: Pupils could produce either an advert, a cartoon, an interview transcription or a panel discussion. Pupils scored exceptionally well at this stage averaging 75%.

5.6 DIARY ENTRIES AND ORAL FEEDBACK FROM PUPILS

5.6.1 INTRODUCTION

diary as a form of data collection may seem too rich in description to translate into hard statistical evidence,

it is one way of capturing exactly how the pupil was affected by the new information skills approach. Research is the interaction of thoughts, feelings and actions (after Kuhlthau). In the absence of an interview (due to time constraints), the diary was the next best vehicle for expressing their thoughts and feelings during the research process. From the content of eight diary entries and one period of informal discussion, the researcher has attempted

to interpret the impact that the information skills approach has had on pupil self-perception, the learning process and their view of the information world.

5.6.2 EFFECT ON THE SELF-IMAGE

Pupils responded quite frankly in their diary entries with a depth of perception of themselves as learners akin to self-analysis.

Responses from one class were brutally honest in their perception of why they could not initially grasp the information skills approach. They were not simply accepting of their limitations, but reflected intelligently on the possible reasons. They were confident enough to verbally articulate these thoughts.

In another way of showing that they themselves were in control of their learning, pupils confessed that they didn't try hard enough or that they would have to learn from their mistakes. Blaming oneself and not others is taking responsibility for your learning.

Pupils also expressed gratitude for boosting their self-esteem. For example, one pupil felt that "brainstorming makes you feel like you know something". Before, new topics always made them feel dumb!

Pupils felt a greater sense of self-control because pupils dictated the learning pace and were the active participants. In traditional lessons teachers rushed to complete content and dominated the lesson.

There was an air of excitement in learning a new methodology and a keenness to learn. This positive attitude to learning was expressed by some pupils saying that the new approach inspired them to learn and recommended that all subject teachers heed this new method.

5.6.3 EFFECT ON THE LEARNING PROCESS

Pupils were open to a new way of learning. They looked forward to each new step as a challenge. The learning environment was non-threatening and participatory. At first they were anxious and confused (normal feelings according to the Kuhlthau triad of thoughts, feelings and actions when one engages in the research process). Some pupils expressed shock at having to make decisions on their own about directional strategies in their learning. They had never done this before.

Some pupils indicated that they enjoyed the brainstorming and the planning because they could effectively determine the point from which they had commenced and the point to which they were headed.

In the oral feedback from one class, some pupils loathed what they referred to as the " painstaking analysis at each step of the way" The researcher referred them to the questionnaire responses about different types of learners. The linear and multi-sense learners through their respective systematic and practical approaches to learning would find the information skills six steps simple to follow. A majority of 63% of pupils indicated that they were partly linear learners. These pupils expressed appreciation of the step by step method

Those pupils who are predominantly lateral, verbal, symbolic or head learners would find the orderly six steps slow, methodical and drawn out. Yet, even some of these pupils admitted that the information skills process method made sense in the end.

One pupil enjoyed the fact that the learning process was being continually monitored and assessed by the teacher/s Often, in previous projects, the presentation or product was emphasised and hence projects are completed without planning or fore-thought. Pupils would either simply copy projects or do them the day before. There was also positive expression by some pupils of the application and transfer of the information skills approach to projects being researched in other subjects

A major area of concern normally is the lack of time

management. In this structured approach pupils had to draw up a time frame and refer to it daily. Pupils reiterated over and over that normally teachers gave them too little time for projects. There was also no co-ordination of project work amongst teachers. Hence one class had to produce three projects in the term as well as prepare for mid-year exams. Pupils voiced the hope that with the new curriculum there would not be this conflict between exams and project-based work.

5.6.4 EFFECT ON THEIR VIEW OF INFORMATION

For the first time pupils said they were identifying themselves as the first sources of information. For some pupils the skill of interviewing was new. Normally, Geography projects were predominantly practicals or model building. Now they had to regard people as sources of information. Pupils were opened up to a wide range of information sources never considered before: museums, exhibitions, parastatal departments, map bureaus, advertising companies, comics and cartoons - to name just a few.

5.7 PARTICIPANT OBSERVATIONS OF THE RESEARCHER AND CONCLUDING REMARKS

5.7.1 FLAWS AND SETBACKS

As a "rookie" researcher, I engaged in this research investigation with optimism and enthusiasm, but unseasoned practice. What was intended as an initiation and implementation of information skills turned out to be the initiation and conducting of information skills - for various reasons which will be explored below

One of my shortcomings was the ethical issue of pupil willingness. Pupils were explained the procedures and potential value of the research investigation, but their participation became virtually mandatory. Once teachers had agreed to the investigation and decided to include the outcome as a yearmark, pupils were literally coerced into agreeing. I am aware now that I had transgressed the individual rights of the pupils by not asking for their permission.

It was naive to imagine that educators and pupils would adapt to and adopt a new method of learning simply because it seemed more effective. Change always generates suspicion and people need to be totally convinced before they are willing to adopt the change. A further obstacle to this particular change initiation was the rigid school library

schedule and the syllabi which teachers had to complete for examinations.

In retrospect more emphasis should have been placed on strategies to convince teachers of the information skills approach. The following observations of teachers led me to this conclusion:

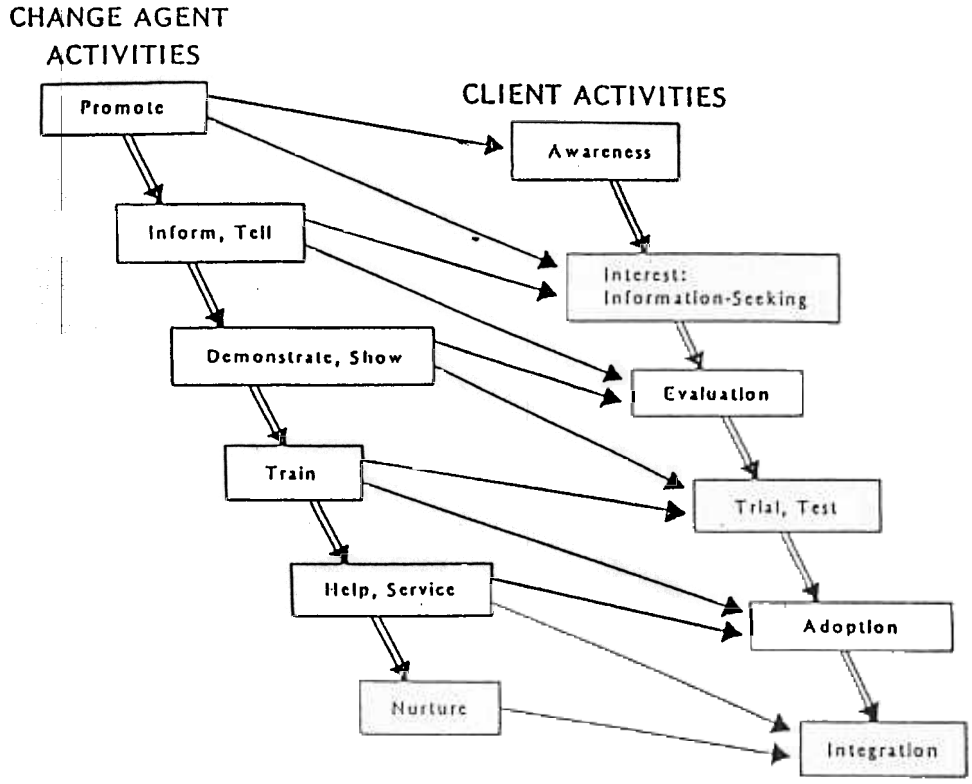
1. Teachers were too passive - they were reluctant to make suggestions.
2. Informal meetings with teachers were not directed enough to their feelings and thoughts about the information skills approach.
3. The methodology of teaching resource-based projects was quite foreign to teachers.
4. The lack of intervention of teachers could be interpreted as the perception that this was research "done to them".

5.7.2 HAVELOCK'S MODEL OF THE CHANGE AGENT IN EDUCATION

As a novice researcher and because the **action research** process allows for such reflection and evaluation of flaws in the research, the researcher sees as imperative in subsequent undertakings the use of Havelock's Model of the Change Agent (Todd et al, 1992: 7-9) when introducing new ideas in education. Its basis is a range of change agent activities. See the Havelock change agent's guide to

innovation in education below:

FIGURE 4: HAVELOCK'S MODEL OF THE CHANGE AGENT



The model acknowledges that people rarely adopt new ideas when first confronted with them. It allows people progress by testing, trialling and evaluating the new idea before accepting and integrating it.

The level of commitment of teachers at the high school was still at the curiosity stage -i.e. beyond the stage of resistance to the new idea, but still lacking direction of how to intercede. They had not reached the stage acceptance and commitment.

5.7.3 THE INFLEXIBLE LIBRARY SCHEDULE

The time-tabled library period does not allow for effective subject-based integration of information skills. Studies have shown that information skills learned through actual subject research projects are more effective because they are learned contextually rather than abstractly. Because the researcher conducted the investigation by way of subjects, the participation of the school librarian was extremely limited. This could be considered one of the drawbacks of the investigation as the school librarian was not receiving firsthand benefits of observation or involvement

5.7.4 EXAMS AND RESOURCE-BASED LEARNING

Whilst teachers realised that for the first time in education projects could contribute a substantial mark to a pupil's overall assessment, there was still the drive to complete subject content for examinations. The style of teaching most teachers used to complete subject content excluded an information skills approach which teachers considered takes too long. In both the minds of teachers and pupils exams were omnipotent. It is the opinion of the researcher that only once attitudes and behaviour are changed through practice away from an exam-oriented curriculum, can the new learner-centred curriculum succeed

5.7.5 SELF-REFLECTION

In terms of self-reflection for the improvement of my practices, the investigation was invaluable. My first realization was that a whole-school approach to information skills would not work as teachers would never all convinced at once of its effectiveness. Teachers need to be shown what to do and nurtured in small groups. From this grassroots level word could spread of its value and worth.

A positive yet unwitting behavioural trait which I displayed in conducting the investigation was that of "information literate" person. Information literate people are characterised, amongst others, as needs-driven people who are determined and who strive to find and information to make decisions and to solve a problem. Science teacher wanted pupils to conduct experiments to demonstrate the everyday application of science principles learned in Physics lessons. She said that she had not had much success with a similar project before because could not locate appropriate information sources. By simply finding suitable material for her class, I "modelled" the attribute of persistence.

As the "expert" in my field it was important for me to demonstrate my information-seeking strategies for pupils to "imitate" (see 2.2.6 for novice versus expert debate) When some pupils in one class were too shy to conduct a

panel discussion live, I suggested that they videotape it. I also took them to a studio where it was done "professionally" so that they could experience first hand the technical aspects of such a session

A final contribution to my own improvement of practice was the realisation that once I, as school librarian, am empowered to co-ordinate the project-based work in school, I would be in a stronger position to suggest ideas like a standardized bibliographic format for the entire school; informing public libraries of projects set; operatively planned and assessed projects between subject teachers and the school librarian, amongst others.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

INTRODUCTION

In terms of the statement of my problem, which was to investigate the impact of initiating and conducting an integrated approach to information skills on pupil learning and teacher instruction, to what extent did I achieve what I had set out to do? In this my closing chapter I will discuss the conclusions I have reached based on the findings of my research. The **emancipatory action research** mode necessitates concluding statements and recommendations which will be meaningful for the transformative educational practices of previously disadvantaged communities in South Africa

6.2 UNDER-RESOURCED SCHOOL LIBRARIES AND INFORMATION SKILLS/LITERACY

One of the main contentions of the research was to confirm whether or not an information skills approach to project-based work could be conducted at a school with limited resources. Most of the literature dealing with the subject information skills and resource-based learning do so from the vantage point of First World, well resourced

school libraries. In fact, the study completed by Lance et al (1993), which resolved that the more resources a school library had the better the overall academic achievement seemed to be, was disillusioning for what I was attempting to prove. If I was to convince the majority of South Africans that information skills could be undertaken at a school, then I needed my target to be a previously disadvantaged school. Although at this stage a national audit has not been done and it is not known where on the continuum of school libraries the average stands, I can only venture that it is about 2 items per pupil. In other words I wanted to make my study a worthwhile exercise, transferable to similar settings

The school at which the research took place had only 3,3 books per pupil and yet it is my opinion that it was a success. My recommendation is that it can be done with limited resources if the following conditions prevail:

1. There is a well-stocked public library within walking distance; and/or
2. Pupils have access to some information sources at home;
3. Teachers themselves are resourceful, exhibiting information literacy traits; and
4. There is an augmented idea of what constitutes a resource so that it is not limited to books.

Resource-based projects beget resources. In my observation

at the school, projects stimulated the purchasing of much-needed resource material as well as produced new resource material. For example, the pupils produced two videos: one of a panel discussion on **sex and the teenager** and other was an interview on **relocations** and **District Six.** literature refers to a concept called "collection mapping" (Callison, 1993:83). This entails acquiring materials earmarked for special resource-based projects. Collections to support the curriculum could be built up in this way.

6.3 INFORMATION SKILLS AND PUPIL LEARNING

My findings on pupil learning and the information skills approach to undertaking projects have ramifications for the implementation of the new curriculum in South Africa. The positive correlation between my findings and the proposed new curriculum refers to styles of teaching and learning. A vast majority of pupils were dissatisfied with the way they were taught describing their average lesson as basically "chalk and talk". Pupils opted for a variety of learning styles (see 5.4.5) which their teachers did entertain. In the new curriculum one of the **essential outcomes** (the latter defined as general things you can do and understand which matter in all areas of learning) addresses this problem directly. Namely, it is an essential outcome that different ways of learning are used. I would like to suggest that the information skills process approach to independent, enquiry-based learning could

provide pupils with a successful framework for its realisation.

A majority of pupils responded positively to the notion of alternate methods of measuring a pupil's progress other than by examinations. Pupils (92%) also communicated that they learned more by doing independent projects compared to learning from a textbook or notebook and it was also on these occasions that they would refer to a source other than a textbook. Pupils in this study are thus affirming another essential outcome of the **new curriculum** which is to collect, organise, examine and understand information for independent critical and creative thinking.

Notwithstanding the crude way of measuring the pupils' understanding of the research process in the absence of a more sophisticated, empirical method, there was a convergence of the pupils' perceptions of how to do a research project and the actual projects handed in for assessment. Two of the information skills "steps" or "stages" - location and presentation - were identified most frequently. The literature highlighted a similar result (Todd and McNicholas, 1993:90). What can be inferred from both our studies is that pupils are not thinking metacognitively about the research process. There is a lack of reflection and reviewing skills as well as planning and self-monitoring skills. These are qualities which information literate people display and which pupils need

to embrace. The unguided way in which projects were done in the past by pupils gave rise to this serious oversight Teachers were not monitoring projects in a meaningful way because they did not count towards a yearmark. School librarians were observing the plagiarism and lack of notemaking skills (amongst others) occurring, but lacked the clout to change existing patterns of project work. The new curriculum should be a gift to the information skills approach to the research process because an essential outcome requires that learners solve problems and make decisions using critical and creative thinking. Teachers will have to decide how to measure or weight critical thinking, what constitutes critical thinking in particular contexts and so on

6.4 INFORMATION SKILLS AND TEACHERS

Teachers mentioned that they used or referred to a variety of texts for lesson preparation, yet pupils were referred to a text other than their textbook only really when they did projects. It seems then that teachers are not acknowledging their sources when teaching and in my view perpetuating the myth of teacher as fountain of knowledge. From the data gathered and interpreted in the study I have deduced that teachers themselves were not consciously reflecting on their own information-seeking behaviour. The literature on critical thinking claims that novices (pupils copy the modes of thinking and information-seeking

strategies of the experts(teachers) in their respective fields (see 2.2.6). Teachers need to be made aware that pupils mimic their research habits and they should therefore conduct the lesson bearing this in mind.

The educators in the study were all university degreed. They displayed a good grounding in their subject content. Although only one teacher had been taught library skills at school, the rest became confident library users whilst studying for their degrees and diplomas. The educators in the study are probably the exception rather than the rule in South Africa if one goes by the charges of the NTEA and Radebe 1994). The NTEA report and Radebe recognise that many teachers in South Africa come from a non-library culture and their prior learning base is riddled with inadequacies. But despite the advantages the teachers in the study had, the data collected shows that even these teachers have to re-examine their attitudes, aims and assessment of resource-based projects if this style of learning is going to be effective

The teachers in the research generally bypassed the school library as a source of information. Teachers either did not consider the school library and the school library programme as integral to their individual subjects or they assumed that an under-resourced library was not worth visiting. All in all there wasn't a constructive perspective of the school library. One of the potential

values of the research was to promote co-operative planning and teaching between teacher and school librarian. study opened up teachers' minds to a role of the school librarian which they had not experienced before - that is, as instructor and information intermediary. What bearing the latter will have on teacher-school librarian future relationships has yet to be measured.

6.5 INFORMATION SKILLS AND THE SCHOOL LIBRARIAN

While the school librarian perceived her programme to be effective and successful, the pupils and teachers thought otherwise. More than half the pupils 55% described library period as boring. Teachers did not seem to be familiar with the library programme at all. From the interview remarks of the school librarian she was aware that a minority of teachers consulted the resources and she was never party to project work set by them. The image she projected was one of self-sufficiency rather than that an information intermediary. The library had more of an air of a repository for example, the better non-fiction books were locked away to prevent them from being stolen) than an information laboratory in which resources were used for meaning making by pupils.

Although the school ran computer literacy classes for the pupils, the school librarian did not mention any link between the information world and computers. To

researcher this was another sign that the librarian hanging onto her subject in an isolated kind of way. literature identifies this outmoded image of the school library as contributing to making the school librarian redundant in this information rich world

School librarians have to be made accountable especially in times of cutbacks. When there were cutbacks in the USA in the 1970's, the AASL issued new standards to rationalise school libraries. In the Western Cape (South Africa) we are experiencing cutbacks too. How do we intend justifying school libraries? The new curriculum has the essence of information skills as an essential outcome; there is existence of an information skills "syllabus" and a working document **the National Policy for School Library Standards** (South Africa. Department of Education. National ...1997) has just recently emerged. Then again, there may be policies in place and an ideal curriculum worked out the reality on the ground is ill-equipped school librarians for the new role.

From the school librarian's lack of representation at Head of Department level, I would recommend advocacy competencies as an essential skill to be taught at library schools and in-service training. Having contact with an important layer of the school like the Heads of Department could have influenced her perception of the success or failure of her job.

RECOMMENDATIONS FOR IMMEDIATE ATTENTION

In the light of the above findings I would like to make the following proposals for immediate consideration:

The information skills curriculum could be developed even at schools with limited resources. The principles embodied in the theory of the information search and use process could be developed in any problem-solving situation - it simply has to be adapted to the circumstances.

next recommendation I would like to make is to change image of the school library from a place in which books found to one in which meanings are made and new knowledge is constructed. This may help to shift the fixation on books to a broader concept of resources. In the working document of school library standards (published May 1997 there is a shift from focusing on books to "items". This may well assist in the new conceptualisation of the school library as a "learning laboratory"

new subject **information skills** is slowly being introduced. The natural home for it should be in the school library programme as the school librarian is the one educator who is adept at finding, organising, examining and synthesizing information. With the cutbacks in staff many principals chose to give the school librarian more examinable subjects to teach and recruited untrained

personnel (parents or ordinary teachers) to manage the library. Is the information skills programme not at risk of failure before it has started if there is no specially trained person like the school librarian to ensure its implementation?

The AASL which produced **Information Power**, the guidelines for school library media programmes in the USA, has proved to be an influential body in American School LIS. A South African School Library Association (presently at the conceptual stage) could become the independent voice for school librarians in South Africa. It could work out appropriate guidelines and act as a watchdog for the anomalous school library situation in South Africa as it transforms.

Regions, in dire need of both school and public libraries, could resort to an alternative model of libraries like the Australian and Canadian school community library. This alternative model to the traditional school or public library was espoused by Verbeek and Stilwell (1988:24) in the spirit of People's Education. School community libraries are people-centred and community empowering.

The best examples of school-housed public libraries (i.e. school community libraries) are in South Australia (Amey, 1989:110-114). The recipe for success is a rural setting with a population of not more than 3 000. The reason for

this is the small-town community spirit of sharing acceptance.

There are specific guidelines for school community libraries as they are official structures. There is a greater flexibility with these libraries regarding opening hours and types of services. Funding is shared between local authorities and the state education department. person in charge of the library is a teacher librarian. For people to be convinced of this model they must accept that it is not necessarily "service on the cheap" but an innovative alternative. If development can be defined as " change which promotes or actualises the innate capacities of society" (Knuth, 1994:79), then school community libraries can act as "enabling settings".

An extension of the concept of school community library is the **Multi Purpose Media Resource Centres (MPMRCs)** proposed by Ogunsheye in a 1982 World Bank report on school libraries in developing countries (Knuth, 1994:85-86). Their function would be to generate learning materials/teaching aids especially in the indigenous languages thereby promoting indigenous culture. They could also perform the function of a school community library and develop multimedia learning materials which transfer knowledge and skills in the oral tradition format too.

In our standards on staff we will have to concentrate on

in-service training because of a shortage of qualified school librarians and underqualified teachers. In more developed countries quantitative measures like having one librarian per 400 students my be more appropriate. In our general aims and goals we may need to spell out bridging the gap between printed and oral cultures more explicitly than in first world countries (Stander, 1993:93 and 95).

Not only do we need curricula which cover community librarianship especially for school community library models, but also curricula which train potential school librarians in instructional design programmes. South Africa presently needs a host of different types of courses to stay the shortfall of school librarians. We need short courses 3 week modular courses during the school holidays); bridging courses (between various types of LIS diplomas) and refresher courses to update school librarians on the latest trends in the field) in addition to the post teacher certificate courses/graduate courses

6.7 RECOMMENDATIONS FOR FURTHER RESEARCH

In terms of the action research theoretical framework, an investigation may solve an existing problem, but at the same time may create new questions. This is typical of the cyclical nature of action research. The nature of the questions which need further research are grounded in the South African school LIS milieu.

first possible area for further research is to establish where on the continuum of school library models and school librarian instructional consultancy roles South African school librarians are

The second area of almost immediate interest is how do we adapt the information skills process model to learning in totally deprived conditions? In other words, examples of case studies in areas which have no school or public libraries.

Fuller's (1987) study on **What school factors raise achievement in the Third World** pinpointed school libraries as being the best cost-effective element in raising achievement in the educational programme. I would like this research to go a step further and measure the correlation between the degree of integration of the school library programme into the curriculum and academic achievement

fourth area of investigation is to look at strategies or models which can guarantee that the integration of the school library and information skills programme with the entire curriculum takes place. This research should offer schools best options which have been tried and tested.

The last topic of research I would like to suggest needing attention relates to the idea that the traditional curriculum and the critical thinking (new) curriculum are

juxtaposed. In the light of this view, how effective is the integration of information skills into subject areas if the integration is only done with projects and not as a learning approach to the entire subject content?

APPENDIX 1

DEPARTMENT OF NATIONAL EDUCATION

CORE TEACHING PROGRAMME

FOR

INFORMATION SKILLS

GRADE 1 TO STANDARD 10

DATE OF IMPLEMENTATION : 1994

CORE INSTRUCTION PROGRAMME FOR INFORMATION SKILLS

RATIONALE

Modern society requires us to continually adapt to changed circumstances, as technology and industry, for example, change and progress. For this reason adults and children need certain types of skills in order to acquire and master new knowledge and working expertise. Furthermore, it is becoming increasingly clear that employees change their occupations more often than in the past, owing to the altered demands of employers or because new work opportunities are created. In order to adapt successfully, employees require certain general abilities such as problem-solving, cooperation, communication and logical thought. Such general abilities may be developed, inter alia, by more specific skills such as knowing:

* how to formulate information needs;
* where to find information;
* how to handle the information;
* how to assess information;
  to organise information;
* to present and apply the information; and
  how to evaluate the end result.

These areas of competence are included in the subject Information Skills.

2. SUBJECT AIM

2.1 OVERALL AIM

Information skills are process skills which are applied in order to attain other learning objectives. The overall aim of the subject is thus to expose pupils to the process of purposefully finding information, handling it, assessing it, synthesising and applying it, and to enable them to evaluate their own results. In this way, the subject at the same time addresses the whole learning process.

2.2 GENERAL AIMS

In order to realise the foregoing aim, acquisition of the following skills is regarded as a general aim:

* knowledge of the methods of gathering information and the application thereof;

* logical thought and systematic method;

techniques for the presentation and application of information; and

ability to assess the different kinds of information.

3. THE INSTRUCTION PROGRAMME

The following six educational domains of learning and thinking are employed to systematise the learning skills:

* FORMULATING AND ANALYSING INFORMATION NEEDS

* GATHERING AND HANDLING INFORMATION

* ASSESSING INFORMATION

* ORGANISING AND SYNTHESISING INFORMATION

* PRESENTING INFORMATION

* EVALUATING THE FINAL RESULT

4 DIDACTIC METHOD

4 Themes for the teaching of Information Skills should have relevance to themes/topics in other subjects or current affairs, and relate to the personal interests of the pupils, their experiences and level of development. Some lessons may be planned in cooperation with certain subject teachers. The emphasis however, should at all times fall on information skills and not on subject knowledge.

4.2 The pupils are taught information skills through the process of an information search. The information skills are taught step by step according to the process of the information search, following the sequence of the six domains. Instruction is as practical as possible with the pupils taking an active part in the education process in every lesson.

Clear aims and specific objectives should be determined for the teaching of information skills. Objectives should provide for the introduction, practice and application of specific information skills.

Effective media stockbuilding should specifically include material which is suitable for the instruction of particular information skills as well as being applicable on thematic grounds. The stock should be of such a nature that pupils realise that the information centre can cater for their information needs.

4.5 Provision should be made for the use of a wide range of media. The choice of specific media formats and audio-visual hardware must be suitable for the acquisition of certain information skills. Pupils should be systematically introduced to various sections of the media stock, and continually be given the opportunity to handle the hardware in a practical and responsible manner.

Responsible use of sources of information, acknowledgement of the source of the information, and a critical attitude to, as well as appreciation of, information should continually be encouraged.

Sufficient opportunities should be created for independent problem solving, logical discussion and original and creative thinking. Emphasis should be on the development of the pupil's own opinion regarding information and media formats, as well as respect for the opinions of others.

4.8 When planning a lesson, the media teacher should make provision for the practice and application of the acquired information skills by the pupils throughout the process of the information search. Application may be through participating in class or group discussions, finding media independently, making notes, organising information, presenting information and the evaluation of personal work. This sometimes occurs orally, sometimes it is a physical activity. In most lessons, a written contribution is expected, but it must be adapted to the needs and abilities of the pupils as laid down in the first domain.

4.9 The presentation of Information Skills consists of interaction between the activities of both teacher and pupils and takes place on an integrated basis. Class instruction is alternated with group and individual instruction, in accordance with the needs of the situation. Peer assistance should be encouraged.

4.10 The presentation should be as practical as possible so that pupils will have the opportunity of practising and developing the information skills which are taught during the lesson.

4 Owing to the practical nature of the subject, formal explanations should last no longer than five minutes at a time. Pupils should move around freely to find media, work together in groups under the guidance of the teacher and discuss the process of the information search and the information they have acquired. Class discipline should thus be informal and relaxed but still controlled.

4 2 Skills in finding and using media are acquired by means of learning guides such as a user's guide, transparencies, wall friezes, flow charts and/or posters.

4 3 The media teacher should give guidance to pupils continuously during each step in the process of an information search so that they can understand, verbalise and apply the process.

4 4 The media teacher should keep all communication by the pupils focused on the aim of the particular assignment, and all pupils should be fully involved in discussions.

4 5 Thorough guidance should be given to the pupils by the media teacher in the reporting back of acquired information at the end of the lesson, which may be done in a variety of ways.

The media teacher should liaise with other teachers on a regular basis, so that all teachers may be kept informed of the pupil's level of competence. Thus the information skills acquired by the pupil can be applied during instruction in other subjects.

5 ALLOCATION OF PERIODS AND UTILISATION OF TIME

Provision is made in the school timetable for the presentation of Information Skills.

5.2 In the Junior Primary phase, a total of one period in the course of the week is devoted to the integration of Information Skills with class work.

5.3 Pupils in the Senior Primary and Junior Secondary phases receive one period per week of formal instruction in Information Skills.

For the continued instruction of Information Skills in the Senior Secondary phase, the media teacher should cooperate closely with the subject teacher. Subject assignments should incorporate the teaching of new information skills and the regular revision of skills already acquired.

6. EVALUATION

6 The aim of evaluation by the media teacher is to determine <u>whether:</u>

6 1 the pupils have mastered certain information skills

2 the pupils have acquired the necessary knowledge of the media and information sources and understood their value.

3 the pupils have developed the correct attitudes towards the information

6.1 4 the presentation of the lesson was successful

6.2 Pupils' progress during the process of an information search is evaluated continuously. A pupil should not proceed to the next domain of the process unless the previous domain has been mastered.

6.3 Pupils' work should be checked after the conclusion of a lesson. Selected parts of the work which show progress, excellence, negligence or lack of ability should be discussed with pupils and, where necessary, improvements should be indicated.

6.4 Pupils who have not acquired and mastered a specific information skill in a specific lesson should receive individual attention so that they may master that skill.

6.5 The pupils' level of competence in the use of the various media and the application of the skills should be determined for each lesson by monitoring their progress during the lesson, as this will influence the choice of media and skills for the following lesson.

6.6 The media teacher and the subject teacher should cooperate closely in order to determine the level of mastery of information skills during the use of media in the classroom and media centre, and in the carrying out of assignments.

6.7 Pupils also have the opportunity, during a lesson, to evaluate the results of their activities themselves and to determine to what extent information skills have been mastered.

7 DIFFERENTIATION AND REMEDIAL WORK

Differentiation is essential. Every pupil should be regarded as an individual with his own abilities and interests.

7.2 Differentiation takes place continuously by means of various oral and written assignments which differ in the degree of difficulty and/or a variation in the number of assignments according to the abilities and interests of the pupils.

Gifted pupils particularly will be involved in the above manner, while individual attention is given to the weaker pupils.

If it is clear that a large number of pupils have not mastered a particular skill, remedial education is done with the whole class by repeating the skill during a following lesson. Where individual pupils with problems are concerned, individual attention is given either to the pupil or to a group with the same problem.

JUNIOR PRIMARY PHASE

AIM		OBJECTIVES	DIDACTIC REMARKS
DOMAIN 1: FORMULATING AND ANALYSING		The learner should:	
1.1 Introduction to sources of information	1.1.1	Become acquainted with the following concepts - media corner - media centre/library - sources/media - information	Practical experience essential before concepts are fixed
	1.1.2	Become acquainted with information through - initial listening - later independent reading	Reading aloud to pupils; sound recordings and other media formats
	1.1.3	Be able to recognise/identify characters and situations in fiction	
	1.1.4	Be able to indicate preferences regarding further listening/reading activities	According to verbal and non-verbal development: indicate physically; later formulate/express
	1.1.5	Be able to choose between sources and express reasons for the choice	Five possibilities at most; motivation of choice according to verbal and non- verbal development
	1.1.6	Be able to identify the theme of a reading/ passage/audio-visual programme and express it in his own words	
DOMAIN 2: GATHERING INFORMATION			
2.1 Introduction to information environments	2.1.1	Know the location of information sources in the classroom	Media corner: books, sound recordings, pictures etc.
	2.1.2	Know the location of information sources in the school, outside own classroom	Media centre; school terrain
	2.1.3	Get to know the location of information sources outside the school	The local town/branch library, museums etc.
2.2 Introduction to the arrangement of books	2.2.1	Get to know the junior book collection of a media centre	Initially only the difference between junior and senior collections
	2.2.2	Get to know the general arrangement within the junior section	Fiction; non-fiction (animals, hobbies etc.)
2.3 Introduction to sources other than books	2.3.1	Get to know other sources in the media centre	Periodicals, sound recordings, audio-visual sources, and where they are kept

AIM	OBJECTIVES	DIDACTIC REMARKS
2.4 Introduction to the procedure of finding information	2.4.1 Get to know the media staff as a first step and source of help	
	2.4.2 Get to know the catalogue	Independent use is not recommended before Std 1/Gr. 3
	2.4.3 Get to know the sequence of steps in the loan procedure	
	2.4.4 Be able to find and take out a book in the junior section	Browsing guides/markers; issue card
	2.4.5 Get to know the indexes in certain books	Std 1/Gr. 3
2.5 Acquiring the principles of handling books and caring for them	2.5.1 Know how to handle a book and turn the pages carefully	
	2.5.2 Know how to care for a book outside school	Own book bag
	2.5.3 Know how and when to return books to the media centre/library	
	2.5.4 Know what the consequences are if the above rules are disregarded	Legal aspects of damage to books; replacement of losses
2.6 Acquiring the principles of handling other media	2.6.1 Learn to use and care for media such as cassette players, video cassettes and slides	Use of switches etc.
DOMAIN 3: ASSESSING INFORMATION		
3.1 Exercising choices	3.1.1 Choose from available fiction	Choice made on the basis of appearance and illustrations
	3.1.2 Choose from non-fiction/audio-visual media on the basis of a theme	Moving from familiar to unfamiliar themes (own or given)
3.2 Critical evaluation of an information source	3.2.1 On the basis of need/theme decide whether a source is suitable, meets his/her needs	Suitable illustrations; vocabulary
DOMAIN 4: ORGANISING AND SYNTHESISING		
4.1 Organising information	4.1.1 Arrange collected pictures/drawings according to specific themes/headings	
	4.1.2 Later add own captions to pictures/drawings	
	4.1.3 Identify and write down own keywords from sections read or listened to	
	4.1.4 Arrange keywords under given headings	Initially no more than two headings
	4.1.5 Use keywords in a given framework/diagram	

AIM	OBJECTIVES	DIDACTIC REMARKS
	4.1.6 Write down sentences in sequence of events in story	Single sentences only and not for every book
	4.1.7 Get to know concepts such as title/author/ illustrator of sources	
	4.1.8 Be able to write down author/illustrator and title of source used	Only for sources used in 4.1.3 to 4.1.6 (from Gr.2 onwards)
DOMAIN 5: PRESENTING INFORMATION		
5.1 Oral presentation	5.1.1 Participate in discussions on characters/ events/facts	After the conclusion of the reading/sound recording or audio-visual presentation
	5.1.2 Be able to repeat in own words or dramatise events of story	By means of sound recording; own version of course of story/some events in story. (Only main features - not prescriptive or strictly according to text)
	5.1.3 Be able to read aloud portions from printed source or from own written work	
5.2 Creative presentation	5.2.1 Be able to portray objects, characters or events from story	By means of e.g. drawings, body language, clay
	5.2.2 Be able to use pictures or illustrations from source to supplement verbal presentation	
	5.2.3 Be able to write a few words on the characters, objects, events or topics	Creative writing (NB Keep balance in; mind mainly verbal during this phase)
DOMAIN 6: EVALUATION		
6.1 Self-evaluation	6.1.1 Pronounce own opinion on information	Feeling about story, characters, events, objects, illustrations in fiction/non-fiction/audio-visual programmes
	6.1.2 Determine own need for more information on same subject/theme/other theme	Verbal
6.2 Evaluation of exposure to information	6.2.1 Verbalise personal experience of information outside the school	Verbal (share experiences with friends about impressions gained from advertisements/films/animated films/video programmes)

SENIOR PRIMARY PHASE

AIM	OBJECTIVES	DIDACTIC REMARKS
DOMAIN 1 : FORMULATING AND ANALYSING	The learner should:	
1.1 Development of a framework for a systematic method of work	1.1.1 Analyse and identify the subject/theme of the information need himself	Own interest/assignment; key words
	1.1.2 Be able to formulate the aim of the search/ assignment verbally or in writing	Why, for whom, for what purpose is it to be done?
	1.1.3 Identify the target/target group of the assignment/search	Own information/class speech/written assignment
	1.1.4 Determine the type of information needed	Factual/fictional
	1.1.5 Analyse own present state of knowledge and need for more information	What information is known already/still needed?
	1.1.6 Analyse and formulate the nature of the final presentation	Written/computer printed/verbal/audio-visual presentation; format; depth; duration
	1.1.7 Compile this broad planning as a framework	Written
1.2 Further planning	1.2.1 Verbalise the next possible steps in the process	Oral discussion
DOMAIN 2 : GATHERING INFORMATION		
2.1 Identifying and locating information environments and learning how they are organised	2.1.1 Get to know the availability of information	Development of information and availability of information; access to/ limitation on information (ethical principles)
	2.1.2 Identify the broad information environment available	Media centre; school; public library; museum etc.
	2.1.3 Be familiar with the internal environment of the media centre	Layout; shelf guide; book block guide; labels
	2.1.4 Be familiar with the type of media	Distinguish between various kinds of media
2.2 Introduction to classification systems	2.2.1 Get to know the various systems for arranging the different media	Systems for each of the following: fiction; non-fiction; reference books; periodicals and software
	2.2.2 Know the alphabetical and numerical systems as well as their combination (on appropriate level)	The ten classes of DDCS; numerical order within classes; combination for software
2.3 Introduction to and the use of information retrieval aids	2.3.1 Use and understand the functions of the following retrieval aids:	
	- the card catalogue/computer retrieval system/ computer printout	Authors; titles; themes etc.
	- source lists	

		reading lists	
		- dust covers, blurbs, container covers	
		- reviews	E.g. mention in mass media
		- radio and television programme guides	
		- exhibitions	
2.4 Locating sources	2.4.1	Be able to find the necessary sources with the aid and use of classification systems and retrieval aids	Browsing guides/markers; study guides
2.5 Handling and caring for sources	2.5.1	Know how to handle various media and hardware correctly	Books; periodicals; newspapers; pamphlets; software; hardware
	2.5.2	Be familiar with loan procedures	
	2.5.3	Be familiar with the conditions and the legal implications of loans	Responsible use; accountability for media
2.6 Media centre conduct	2.6.1	Be familiar with the social, ethics regarding the use of the media centre	Neatness; non-disturbance; assistance
2.7 Use of bibliographic data	2.7.1	Know which bibliographic information is needed to select the right source	Books: author, title, publisher, date of publication Periodicals: title, volume, number, year Software: title, location number
2.8 Introduction to the arrangement of information in sources	2.8.1	Become familiar with the various ways in which content can be arranged in sources, viz.	
		- alphabetical	According to subject or words
		- systematic	According to subject
		in volumes	
		- according to language medium	
		- in sets of programmes	E.g. audio-visual programmes
	2.8.2	Become familiar with the following aids in sources and be able to use them:	
		- the blurb or cover	
		- table of contents	
		- indexes	
		- glossaries	

AIM	OBJECTIVES	DIDACTIC REMARKS
	- chapters with/without headings	
	- paragraphs with/without headings	
	- key words/guide words	
	- menus and instructions	Computer programs
	- graphic material	Diagrams; illustrations; photos; charts; graphics; tables
2.9 Further planning	2.9.1 Verbalise the next possible steps in the process	
DOMAIN 3: ASSESSING INFORMATION		
3.1 Assessment of information	3.1.1 Become familiar with the criteria for the assessment of information such as:	
	- type of information	General/specific; academic/popular; factual/fictional; persuasive use of language
	- recency	
	- reliability and quality of information	Author acknowledged expert/unknown
	- influence of information	Portrayal of the community/individual; influence on/portrayal of the needs/ emotions/opinions of the public, individuals and groups (advertisements, news events, printed series etc.)
	3.1.2 Evaluate the suitability/utility of the acquired information such as	
	- visual information	Illustrations; pictures; maps; slides etc.
	- auditive information	Discussions; readings; sound recordings; interviews etc.
	- audio-visual information	Slide-sound recordings; video sequences; computer programs etc.
	- printed information	Books; periodicals; reference works; newspapers, pamphlets etc.
	on the basis of the draft framework	See 1.1.7
3.2 Further planning	3.2.1 Verbalise the next possible steps in the process	
DOMAIN 4: ORGANISING AND SYNTHESISING INFORMATION		
4.1 Organising of information	4.1.1 Adapt the draft framework if necessary	Additions/omissions as necessary
	4.1.2 Select information and organise according to the aim and framework	Main points; key words; core facts; (oral or written)

AIM	OBJECTIVES	DIDACTIC REMARKS
	4.1.3 Select and organise accompanying illustrative material (visual, auditive, audio-visual).	Graphics; pictures; class sources; sound recordings; videos etc.
4.2 Synthesising of information	4.2.1 Produce a draft presentation in accordance with the final framework	Sentences; tables; speech; type of essay; assignment; graphic work etc.
	4.2.2 Get to know the recognised documentation procedures for quotation and source references	
4.3 Further planning	4.3.1 Verbalise the next possible steps of the process	
DOMAIN 5: PRESENTING INFORMATION		
5.1 Preparation for the presentation of information	5.1. Compare the draft presentation with the aim, nature and framework as originally planned; make adjustments if necessary	Compare with 1.1
	5.1.2 Prepare the final version of the presentation	Check language use and spelling; equipment
5.2 Presentation of information	5.2. Note criteria for presentation	
	5.2.2 Present the final product	
DOMAIN 6: EVALUATION		
6.1 Self-evaluation	6.1.1 Judge the success of own presentation on the basis of criteria	Criteria such as meaningful content; own communication skills; suitability of sources used etc.
	6.1.2 Determine what value or potential the whole process had	
	6.1.3 Determine the value/potential of the information	Knowledge of subject was extended; attitude towards information changed; application of information to satisfy need
6.2 Group evaluation	6.2.1 Determine the evaluation of the target group on the basis of criteria	Criteria such as increase in skills/knowledge; influence on group opinion; impact of the information; potential value of information etc.

AIM	OBJECTIVES	DIDACTIC REMARKS
DOMAIN 1: FORMULATING AND ANALYSING	The learner should:	
1.1 Development of a framework for a systematic method of work	1.1.1 Independently analyse and identify the subject/theme of the information need	Own interest/subject assignment/problem; core ideas; key words
	1.1.2 Formulate the aim of the information search verbally or in writing	Why, for whom, for what purpose is it to be done?
	1.1.3 Identify the target/target group in the search/assignment	Own information/class presentation/written assignment/debate etc.
	1.1.4 Formulate the nature of the information needed	Factual; fictional; both
	1.1.5 Analyse own present state of knowledge about subject/theme and need for more information	Which aspects of information are known/still needed?
	1.1.6 Plan the time for the execution of the assignment/search	Time needed for research and production of final product
	1.1.7 Analyse and formulate the nature of the final presentation	Written/verbal/audio-visual presentation; format; scope; depth; duration; information background of the target group
	1.1.8 Put together this broad planning in a framework	Written
1.2 Further planning	1.2.1 Verbalise the next possible steps of the process	Oral discussion
DOMAIN 2 : GATHERING INFORMATION		
2.1 Identifying and locating information environments and understanding how they are organised	2.1.1 Get to know the availability of information	Development of information and information availability; access to/limitation on information (public/confidential information); information systems
	2.1.2 Identify and locate the broad information environment available	Media centre, school terrain, public library, museum etc.
	2.1.3 Be aware of the functions and value of the various information centres	
	2.1.4 Be familiar with the internal environment of the media centre	Layout; shelf guides; book block guides; labels
	2.1.5 Be able to exercise a choice concerning the information centre which will best serve his needs	
	2.1.6 Become progressively familiar with the nature of media	Differentiate beween different media formats, including more advanced reference works
2.2 Organisation and use of classification systems	2.2.1 Know and be able to use the Dewey classificaton system, the numerical organisation within this system and the organisation of fiction and software	

	2.2.2	Take note of other classification systems which may be found in information centres outside the school	
2.3 Use of retrieval aids	2.3.1	Have knowledge of the functions of the various retrieval aids	Card catalogues/computer retrieval system/computer printout (author,title, subjects, etc.); source lists; reading lists; dust jackets; reviews; exhibitions
	2.3.2	Be able to use the card catalogue/computer printout with confidence	
	2.3.3	Be able to use additonal retrieval aids to find sources	Bibliographies; blurbs; programme guides
2.4 Locating sources	2.4.1	Be able to find the necessary sources with the help and use of classification systems and retrieval aids	
2.5 Handling and care of media	2.5.1	Use of media centre and sources in accordance with social ethics and the legal system	Neatness; non-disturbance; assistance; loan procedures and conditions. Responsible use; accountability for media
2.6 Use of bibliographic information	2.6.1	Use bibliographic information to select appropriate sources	Books: author, title, etc. title page Periodicals: title, volume, number, year Software: title, location number, etc.
2.7 Use of aids in sources and arrangement of information in sources	2.7.1	Improve knowledge of the various ways in which subject matter may be arranged in sources.	Alphabetically, according to words or subject; systematically, according to subject; in volumes; according to language medium; in sets or programmes
	2.7.2	Be able to use.the various aids in sources	Tables of contents/indexes; glossaries; keywords/headwords; menus and instructions (computer programs); chapters with/without headings; paragraphs with/without headings; paragraphs with/without headings; graphic material
2.8 Further planning	2.8.1	Verbalise the next possible steps in the process	
DOMAIN 3: ASSESSING INFORMATION			
3.1 Assessment of information	3.1.1	Make use of criteria for the assessment of information such as: - kind of information - recency - reliability and quality of information	General /specific; objective/biased; stereotyped/realistic; truth/propaganda; facts/opinions; facts/fiction; South African/overseas; primary/secondary; disinformation; emphasis; alternative points of view; order; detail and main idea; essence of argument/issue etc.
		- influence of information	Portrayal of the community/individual; influence on/portrayal of the needs/ emotions/opinions of the public, individuals and groups (advertisements, news events, television/printed series etc.)
	3.1.2	Evaluate the suitability/usefulness of the information on the basis of the draft framework such as:	
		- visual information	Illustrations; pictures; charts; diagrams; photos; slides etc.
		- auditive information	Discussions; lectures; interviews; sound recordings etc.

		audio-visual information	Slide-sound recordings; video sequences; film sequences; computer programs etc.
		- printed information	Books (reference works, non-fiction, fiction); periodicals; newspapers; pamphlets etc.
3.2 Further planning	3.2.1	Verbalise the next possible steps in the process	
DOMAIN 4: ORGANISING AND SYNTHESISING INFORMATION			
4.1 Systematising/organisation of information	4.1.1	Adjust and finalise the draft framework if necessary	Make additions/deletions according to information obtained
	4.1.2	Select and systematise information according to the aim and framework	Main points, keywords, essential facts (oral or written)
	4.1.3	Classify accompanying illustrative material according to the framework and nature of the information	
4.2 Synthesising of information	4.2.1	Produce a draft presentation in accordance with the final framework	Sentences, tables, speech, essay, assignment, graphic work, audio-visual etc.
	4.2.2	Make use of recognised documentation procedure for quotations and source reference	Compile reference list of sources used
4.3 Further planning	4.3.1	Verbalise the next possible steps of the process	
DOMAIN 5: PRESENTING INFORMATION			
5.1 Preparation for the presentation of information	5.1.1	Compare the draft presentation with the aim, nature and framework as originally planned and adjust if necessary	Compare with 1.1
	5.1.2	Prepare the final presentation	Finalise style of presentation; equipment; check language and spelling; check clarity of sound and image
5.2 Presentation of information	5.2.	Note standard criteria for presentation	Tone of voice; voice projection; body language; appearance of written/printed/visual work
	5.2.2	Present the final product	
DOMAIN 6: EVALUATION			
6.1 Self-evaluation	6.1.1	Judge the success of own presentation on the basis of criteria	Criteria such as meaningful content, own communication skills; suitability of sources used, etc.
	6.1.2	Evaluate and verbalise the value of the process for self development	Criteria such as increase in level of knowledge/skills
	6.1.3	Determine the value/potential of the information	Knowledge of subject extended; attitude towards information changed, information applied to satisfy need

AIM	OBJECTIVES	DIDACTIC REMARKS
6.2 Group evaluation	6.2.1 Determine the target group's evaluation on the basis of criteria	Influence on group opinion; impact of information

CORE INSTRUCTION PROGRAMME : INFORMATION SKILLS

SENIOR SECONDARY PHASE

AIM	OBJECTIVES	DIDACTIC REMARKS
DOMAIN 1: FORMULATING AND ANALYSING	The learner should:	
1.1 Development of a framework for a systematic method of work	1.1.1 Identify and analyse the subject/theme of the information need himself	Own interest/class assignment; core ideas; key words
	1.1.2 Formulate the aim of the information search/ assignment verbally or in writing	Why, for whom, for what purpose is it to be done?
	1.1.3 Identify the target/target group of the search/ assignment	Own information/class talk/written assignment/debate etc.
	1.1.4 Formulate the nature of the information needed	Factual; fictional; both
	1.1.5 Analyze own state of knowledge of subject/theme and need for further information	Which aspects of information are known/still needed?
	1.1.6 Analyze and formulate the nature of the final presentation	Written/verbal/audio-visual presentation: format; scope; depth; duration; information background of the target group
	1.1.7 Put together this broad planning in a framework	Written
1.2 Further planning	1.2.1 Determine the next possible steps in the process	Oral discussion/written notes
DOMAIN 2: GATHERING INFORMATION		
2.1 Identification and locating of information environments and their internal layout	2.1.1 Extend knowledge of the availability of information	Development of information and availability of information; access to limitations on information (public/confidential information); conventional and electronic information systems (network, communication satellites, etc.)
	2.1.2 Identify and locate the broad information environment available	Media centre; school terrain; public library; information centre; museum; physical environment; electronic information systems; persons etc. Determine locations.
	2.1.3 Identify the internal information environment for orientation	Directions to identify location of kinds of media
	2.1.4 Be familiar with the nature of media	Differentiate between various kinds of media and determine/know the use of each

AIM	OBJECTIVES	DIDACTIC REMARKS
2.2 Organisation and use of classification systems	2.2.1 Know the difference between the various classification systems for collections of media in the media centre according to the kinds of media	Identify collections; use sequences
	2.2.2 Identify, exploit and learn to use the classification systems outside the school	Discuss similarities between known systems; try out unknown systems and try to determine methods of classification/identify differences
2.3 Use of retrieval aids	2.3.1 Independent use of the card catalogue/computer retrieval system/computer printout	All sections of the catalogue/computer menus/printouts according to subject
	2.3.2 Know the function of the retrieval aids	Use and request lists of sources according to needs; know use of indexes for reference works/periodicals articles and published bibliographies
	2.3.3 Use supplementary retrieval aids outside the school to find information	Video screens (teledata-codes for retrieval by subject, program screens); electronic bulletin boards; printed indexes (newspapers, etc.)
2.4 Use of bibliographic information	2.4.1 Use the bibliographic information in printed media	According to need, determine how much bibliographic information is required for the purpose/assignment; exploit layout of source documents (catalogue/computer printout) for bibliographic information
	2.4.2 Find and use the bibliographic information in the audio-visual media	Parts of audio-visual programmes with bibliographic details; television cuts/ information appearing on screen
2.5 Information gathering	2.5.1 Be able to collect and use information from printed, visual and auditive sources	Revision and refinement of skills from previous phase
2.6 Care of media	2.6.1 Observe the social ethics and legal conditions for the use of media in the media centre and information centres outside the school	Stipulations of Copyright Act
2.7 Further planning	2.7.1 Plan the next possible steps in the process	
DOMAIN 3: ASSESSING INFORMATION		
3.1 Assessment of information	3.1.1 Apply knowledge of criteria for the assessment of information, such as	
	- kind of information	General/specific; academic/popular; factual/fictional; biased/objective; stereotyped/realistic; propaganda/truth; original/adapted; primary/secondary; South African/foreign; hackneyed statements; disinformation
	- recency	Outdated/up-to-date information; information/perspectives adjusted according to latest developments
	- reliability and quality of information	Author recognised expert/unknown; author/manufacturer acknowledges sources (bibliography) as reference for information
	- influence of information	Portrayal of community/individual; influence on/portrayal of individual, public and group needs/emotions/opinions
	3.1.2 Compare information on the same subject in different sources	Printed sources; visual, auditive, audio-visual information

	OBJECTIVES		DIDACTIC REMARKS
	3. 3	Assess the suitability/usefulness of the information on the basis of the draft framework	(See 1.1.7)
		- visual information	Illustrations; pictures; charts; diagrams; photos; slides
		auditive information	Discussions; lectures; interviews; sound recordings
		- audio-visual information	Slide-sound programmes, video sequences, film clips, computer programs, etc.
		- printed information	Books (reference works, non-fiction, fiction); magazines, newspapers, pamphlets/brochures/flysheets
3.2 Further planning	3.2.1	Determine the next possible steps of the process	Verbal/written
DOMAIN 4: ORGANISING AND SYNTHESISING INFORMATION			
4.1 Systematising/organising of information	4.1.1	Finalise/adjust the provisional framework, if necessary	Make adjustments to main points according to information gathered
	4.1.2	Systematise the information according to the framework	Use own judgement on where information fits in/which information is not necessary (distinguish hierarchical order of information gathered)
	4.1.3	Organise additional illustrative information according to the framework and the type of information	Make own decisions according to finalised framework (4.1.1) and type of information gathered.
4.2 Synthesising of information	4.2.1	Illustrate core ideas/facts/summaries graphically	Diagrams, graphs, tables, sketches (places, objects, buildings, etc.)
	4.2.2	Interpret information visually/auditively/audio-visually	Selection of existing information in audio-visual format; production of items/programmes
	4.2.3	Synthesise information gathered for own interpretation/conclusion	Based on information gathered draw logical conclusions, venture predictions, formulate hypotheses
	4.2.4	Apply acknowledged documentation procedure	Compile quotations, footnotes, source references; lists of sources used
4.3 Further planning	4.3.1	Determine the next and final steps in the process	Verbal
DOMAIN 5: PRESENTING INFORMATION			
5.1 Preparation for the presentation of the information	5.1.1	Compare the draft presentation with the aim, nature and framework as originally planned	See 1.1
	5.1.2	Finalise the style of presentation	Consider following the style of presentation as found in sources consulted
	5.1.3	Identify information to be emphasised during presentation	Selection: written/visual/auditive/audio-visual information
	5.1.4	Finalise the role of illustrative information to be used in the presentation	Point of reference or as illustration only; duration (how long should it be shown/played/exhibited/demonstrated?)

AIM	OBJECTIVES		DIDACTIC REMARKS
	5.1.5	Reserve/test equipment needed for the presentation	Printed sources, audio-visual programmes and hardware, projection facilities
	5.1.6	Take into account the criteria for quality/ successful communication	Check language use and spelling; check clarity of sound and image; relation between auditive and visual information
5.2 Presentation of information	5.2.1	Take into account the standard criteria for presentation	Tone of voice; voice projection; articulation; eye contact; body language; personal image; appearance of written/printed/visual work; microphone technique; tempo of presentation
	5.2.2	Present the final production	
	5.2.3	Acknowledge the information sources used during the presentation	Display sources physically; refer to sources during presentation/refer to exhibition of sources
DOMAIN 6: EVALUATION			
6.1 Self evaluation	6.1.1	Express own opinion on the success of the presentation on the basis of criteria	Meaningful content; own communication skills; aspects mentioned in Domain 5; was aim of information search realised?
	6.1.2	Evaluate own standard of information skills	Identify skills which were successfully applied/which need more practice
	6.1.3	Evaluate the results/value of the information search process such as	
		- personal development	Enrichment gained by becoming acquainted with the information content (new insights; personal opinion reinforced/changed etc.)
		- personal opinion/attitudes towards information sources	Sufficient/insufficient information sources; layout of information sources improved/impaired; accessibility; their format and nature suited/did not suit own personal taste
		- stimulation to continue with further information searches	Target group desires more information on subject/aspect of subject; learner became interested in an aspect and wants to do more research
6.2 Group evaluation	6.2.1	Determine the evaluation/opinion of the target group on the basis of criteria	Criteria such as group attitudes; group opinions; group behaviour (audience enthusiastic/uninterested, individuals ask questions, enquiries about subject/ theme in media centre, etc.)

APPENDIX 2

LETTER OF REQUEST TO THE PRINCIPAL OF THE HIGH SCHOOL FOR PERMISSION TO CONDUCT THE STUDY

17 March 1995

Dear

RESEARCH INTO RESOURCE-BASED EDUCATION

As a Masters student at the University of the Western Cape, part of my thesis requires an investigation at a school with an established library and a trained school librarian The title of the thesis is: **Integrating information skills into the curriculum: an action research investigation at a High School.** The research is being supervised by Dr G.H Fredericks of the University of the Western Cape's Department of Library and Information Science.

I should very much like this investigation to take place at your school. Would you please permit me the time to explain the essence and the logistics of the action research. I will be telephoning on Wednesday, 22 March to make an appointment.

Yours truly
Ms S E Zinn

APPENDIX 3

LIBRARY WORK SCHEME FOR SECONDARY SCHOOLS

Std 6 18 lessons	Std 7 14 lessons	Std 8 10 lessons	Stds 9 & 10
LIBRARY ORIENTATION			
Introduction & rules			Incidental lessons
The Public Lib.	Public Lib.		Individual guidance
4 Sections of the library			
Issue system			
D.D.C.	D.C.C.	D.D.C. &	
Card Catalogue	Catalogue and bibliography	catalogue	
READER'S GUIDANCE			
Alternate lessons throughout the year.	Authors Types of Lit Novels, short stories, essays	Popular authors Historiaal periods	Literary study
MATERIAL'S STUDY			
Dictionaries Bilingual Unilingual Subject	Dictionaries Language usage	Dictionaries (cover the whole field)	Language usage
Encyclopaedias Alphabetic Systematic Subject	General ency. Single volume encyclopaedias Atlases	General Ency. Subject ency.	Ency. Britannica
Non-book mat. Newspapers Periodicals Pamphlets	Subject period. Telephone direc. Business section	Subject period.	Extracts Summaries Reviews Study methods
RESEARCH/STUDY			
Key words Notetaking	Notetaking	Reading Notetaking Writing up assignments	

APPENDIX 4

NEW BOOK EDUCATION SYLLABUS FOR STANDARDS 6-10

BOOK EDUCATION SYLLABUS STANDERDS 6 - 10

UNIT	STD 6	STD 7	STD 8	STD 9 and 10
				Note: The following scheme of work should be drawn up after consultation with the principal, subject teachers and teacher-librarian.
Introduction to the School Library	1. Definition of School Library. It's fucntions and aims. 2. Arrangement of bookstock. 3. Rules: (a) For Usage. (b) Conduct. (c) Handling. 4. Issue system.	1. One lesson on importance of the following types of libraries. (a) Public. (b) College/University 2. Care of books.	1. One lesson on importance of the following types of libraries. (a) State. (b) Special. (c) Private.	
Revision	Written test to reveal basic knowledge of Book Education skills such as: (a) Types of books in library and their use. (b) Arrangement of books in library. (c) Classification and Cataloging of books. (d) Parts of a book.	Revision of librar skills by means of short assignments.	Revision of library skills - short assignments.	Revision of library skills - short subject related assignments.

Introduction to the bookstock.	Introduction to books that will be used in std 6: (a) Fiction. (b) Standard reference works e.g. dictionaries, encyclopaedias, where found in library. (c) Periodicals.	Illustrations and their use: (a) Different types. (b) Value. (c) Methods of reproduction. (d) Importance of position in relation to text. (e) Diagrams, graphs, maps.	Periodicals and Newspapers: (a) Information they contain. (b) Arrangement of articles, advertisements. (c) Compare two South African newspapers.	Introduction to more advanced reference works and non-fiction by means of graded exercises.
Introduction to non-book	Special attention to: (a) Pamphlets. (b) Cuttings. (c) Pictures. (d) Transparancies. (e) Slides. (f) Cassettes.	1. Location and use of non-book material. 2. Making of charts and posters integrated to subject assignments.	Use of non-book material by means of graded exercise.	Integration with subject assignments.
Information retrieval skills Classification.	Pupils should know 10 main classes of Dewey Decimal Classification system, division as sub-divisions to explain hierarchy.	1. Emphasis on use by means of graded exercises. 2. Use of Subject Catalogue. 3. Use of call numbers to locate materials	Profitable use of classification for all reference purposes.	Briefly discuss two other classification systems. Compare basic simularities and differences to DDC. e.g. Brown C. C. Bliss. Library of Congress.
Catalogue	Revision of Author, Title and Subject Catalogue. Introduction to high school catalogue.	Introduction to subject headings. Emphasis on use and individual guidance by means of assignments.	Examples of catalogu cards with more detailed information and what they represent.	Practical use of catalogue for compling bibliographies. Briefly discuss computerised catalogues.

UNIT	STD 6	STD 7	STD 8	STD 9 and 10
Reference techniques.	1. Use of general encyclopaedias in both languages: (a) Arrangement alphabetic systematic (b) Indexes. (c) Abbreviations. (d) Cross-references. 2. Atlases - (a) Geography. (b) History. (c) Bible. 3. Non-fiction works: (a) Table of Contents. (b) Appendices. (c) Glossaries. (d) Source material/ bibliographies.	Use of: 1. Subject encyclopaedias. 2. Dictionaries: (a) Etymological. (b) Bilingual. (c) Subject. 3. Works on South African flora and fauna. 4. Catalogues. 5. Reference material on careers. Use task cards or short assignments.	Use of: 1. Biographic dictionaries. 2. Encyclopaedia. 3. Bible Concordance. 4. Economic Atlas. 5. Thesaurus 6. Dictionary of Quotations.	Introduction to more advanced subject material: 1. Subject Periodicals. 2. Indexes. 3. Abstracts. 4. Theses. 5. Guide books. 6. Year books. 7. Reference on Careers. (If possible arrange a visit to a University library or to a reference library.)
Note-taking	Basic requirements and techniques: (a) Comprehension. (b) Relevance of facts. (c) Speed. (d) Use of facts from more than one source (e) Arrangement. (f) Good language (own words).	Revision of work done in std 6. Also: (a) How to keep records and sources of books and periodicals while making notes. (b) What to do with Quotations.	Revision of work done in standerds 6 and 7. Correlate with assignments.	Listening notes. Practice in making notes while listening to lessons: (a) Keywords. (b) Abbreviations. (c) Speed. Preparation for further study.

Bibliographies	1. Standard from used by school. 2. Introduction to Footnotes Uniform system. (Augmented Harvard).	1. Emphasis on detail and uniform lay-out 2. Compilation of a bibliography on a subject. 3. Footnotes.	Reference to bibliographies found in reference works e.g. Encyclopaedia Britannica.	1. More detailed bibliography simular to those used at University/ College level. 2. Advanced system of footnotes. Use of terms: Opcit Ibid etc.
Independent Reference work.	This should be correlated with the different subjects. Ask subject-teachers to file in forms in advance for intended projects so that reference material may be reserved.			
Reading Guidance	Alternative weekly. 1. A reading programme for the year should be planned. (Liaise with language teachers). 2. Introduce pupils to fiction for their level. 3. Discuss: (a) Authors. (b) Reading lists. (c) Non-fiction. (d) Book display: Bookjackets. Blurbs Sketches. (e) Competitions. (f) Films, videos, tapes	Minimum 10 periods for year. A planned reading programme should be compiled. 1. Introduce interesting new books. 2. Reading lists. 3. General fiction on: (a) Crime and detection. (b) Espionage. (c) Ghost stories. (d) Science fiction. (e) Westerns. (f) Teenage problems.	1. Prepare pupils for adult reading. 2. Introduce new books as for std. 7. Also: (a) Historical novels - fiction and non-fiction. (b) Sports and hobbies. (c) Drama. (d) General interests. (e) Biographies - fiction and non-fiction.	1. Correlation with prescribed works. 2. Discuss other works by prescribed authors. 3. Introduce latest or interesting adult novels.

APPENDIX 5

INTERVIEW QUESTIONS PUT TO TEACHERS

1. STATUS QUO

1.1 What methods do you use to teach your subject?
That is, your average lesson?

1.2 Do you set your pupils projects?
If yes:

1.2.1 How often per annum?

1.2.2 What aims do you have in mind when setting them?
or What is your intention in setting projects?

1.2.3 Are the projects directly related to the subject or are they for enrichment primarily?

1.2.4 Do you usually offer pupils a bibliography?

1.2.5 To what extent do you offer guidance in course (duration) of the project? Elaborate!

1.2.6 At what stage, if any, do you liaise with either the school librarian or the public libraries in your local area?

1.2.7 In terms of the assessment:
Does it normally count towards a yearmark or percentage?
How important is referencing, correct bibliographic format and plagiarism to
Are pupils penalised for not writing in their own words?

1.2.8 Do you allow pupils to evaluate the project? elaborate! IF NO:

1.2.9 Why not?

2. TRANSFORMATION

2.1 Has the content of your subject changed with the new curriculum? If yes, name a few of the changes and why you think it has been changed. If no, what would you like to eliminate or add?

2.2 With the new system of evaluation, continuous evaluation is to make up 25-50% of the compulsory mark on the report card or of the promotion mark.

2.2.1 What do you understand by continuous evaluation?

2.2.2 What will be the impact of it on the traditional three exams and controlled tests?

2.2.3 Why do you think the system of pupil evaluation was changed?

2.2.4 Do you think there is more scope for innovation/creativity within your subject now?

2.2.5 Have you been party to discussions on how this alternate system of evaluation is going to be put into effect? If yes, elaborate. If no, how do you feel about the immediate future?

3. PERSONAL DETAILS

3.1 What teaching and other qualifications do you have?

3.2 How long have you been teaching? At a high school?

3.3 Have you attended continuing education workshops/courses in your subject/related subject in last two years?

3.4 Do you presently use of these facilities for subject material? Yes or no?

- 3.4.1 Public libraries
- 3.4.2 University/technikon libraries
- 3.4.3 Resource centres like ERIP, CRIC, Etc.
- 3.4.4 Teachers' education libraries: Cantebury & Dorp streets.
- 3.4.5 Teaching and learning resource centres: UWC & UCT
- 3.4.6 Teachers' centres e.g. Claremont or Parow
- 3.4.7 The media centre in Harrington St.
- 3.4.8 National film and video library (Bellville)

3.5 Do you purchase subject material regularly? Are they placed in the school library or are they mainly for your home library reference?

3.6 What types of sources do you use most frequently and occasionally for your subject?

4 HISTORY OF TEACHER AS LIBRARY USER

4.1 When you were a high school pupil, were you taught book education skills. That is, were you taught how to use a dictionary, encyclopaedia, telephone directory and so on in the school library?

4.2 When you were an HDE Student, how confident were you of using the university and public libraries? How would you grade your expertise then?

4.3 As a teacher in training (your HDE year) were you encouraged to try or introduce the idea of resource-based teaching?

5. INFORMATION LITERACY

5.1 The age we are living in has been described as the Information Age. What does it conjure up for you?

5.2 How important do you think it is for teachers today to be teaching Information Studies? Information Studies comprises:

- Information skills
- Information technology
- The social and economic impact of information on society
- Information in the international environment

5.3 Are there components of Information studies which are taught at your school already? If yes, which?

APPENDIX 6

INTERVIEW QUESTIONS PUT TO THE SCHOOL LIBRARIAN

1. STATUS QUO

1.1 Do you teach Book Education? To which standards?

1.2 Describe what you understand by Book Education.

1.3 Was Book Education taught as part of the Diploma in School Librarianship?

1.4 How would you teach an average Book Education lesson?

1.5 Do you think the Book Education lessons are successful? If yes, why? If no, why not?

1.6 What is the present total stock in the school library?

1.6.1 Non-fiction and fiction?

1.6.2 Different media - for example audio cassettes, maps, posters and so on?

1.7 What is the pupil population? Teacher population?

8 What is the proximity of the nearest public libraries?

1.9 What percentage of teachers use the school library?

1.10 PROJECTS

1.10.1 In which subjects do teachers set projects/research work most frequently? In which standards?

1.10.2 How many projects, on average per term, are you aware of?

1.10.3 Do teachers liaise with you?

1.10.4 Do teachers ever check the resources in the school library first and gear the project to availability of resources?

1.10.5 What kind of guidance have you witnessed teachers giving pupils in the course of doing a research project?

1.10.6 What is normally your direct and indirect involvement in these projects?

1.10.7 Do you contact the neighbouring public libraries to inform them of pending research projects of which you have been informed?

1.10.8 Have you built up a working relationship with neighbouring public libraries?

2. TRANSFORMATION

2.1 With the new system of evaluation and its emphasis on continuous evaluation, how do you envisage teachers putting into practice this continuous evaluation? Has it been discussed at school/staff level yet?

2.2 Why do you think the system of evaluation has changed?

2.3 How do you feel about this change?

2.4 If teachers wanted their instructional strategies/teaching methods to change to more resource-based learning, do you feel ready:

2.4.1 conceptually?

2.4.2 having enough resources in the library?

2.5 In the new **Curriculum for Junior and Senior Secondary**

Phases of the WCED, it talks about "Book Education, Information Skills, Media Education and Media Guidance. Where do they overlap and where are they different?

2.6 Having read the **New Information Skills Syllabus** as set out by the Department of National Education:

2.6.1 How confident do you feel about teaching it?

2.6.2 In what ways is it different from what you've been doing?

2.6.3 Do you think it should be taught instead of Book Education in:

school librarianship courses?

teacher education courses?

2.7 **INFORMATION**

2.7.1 What images do the Information Age conjure up for you?

2.7.2 How important do you think it is for schools to be offering Information Studies. Information Studies encompasses:

Information Skills

Information technology

The social and economic impact of information on society

Information in the international environment

2.7.3 Are there components of Information Studies already taught at your school? If yes, which?

3. PERSONAL DETAILS

3.1 What library and teaching qualifications do you have?

3.2 How long have you been a librarian? and a teacher?

3.3 Have you attended continuing education workshops/courses in school librarianship in the last two years?

3.4 Do you attend Head of Department meetings? If not, who represents you at Head of Department level?

3.5 Do you presently use of these facilities for information/resources for yourself? Yes or no?

3.5.1 Public libraries

3.5.2 University /Technikon libraries

3.5.3 Resource centres like ERIP or CRIC

3.5.4 Teachers' Education Libraries: Cantebury & Dorp streets.

3.5.5 Teaching and learning resource centres at UWC and UCT

3.5.6 Teachers' Centres in Claremont or Parow

3.5.7 The Media Centre in Harrington St.

3.5.8 National film and video library in Bellville

3.6 What types of sources do you borrow?

APPENDIX 7

QUESTIONNAIRE FOR PUPILS

Please regard the answers you are giving as an important contribution to this study on learning and teaching. Your name will not appear anywhere on this form. You will therefore remain anonymous. Please answer all the questions. Raise your hand if you need clarity during the questionnaire answering period. Thank you for your time!

1. YOU, THE LEARNER

1.1 **Which of the following descriptions best describe your average lesson? You may circle more than one.**

a. The teacher talks, you listen.

b. The teacher indicates the important points in your textbook and you copy them out into your notebook.

c. The teacher hands out photocopied notes or you write notes from the overhead which s/he reads and explains and you study for exams.

d. The pupils discuss the work in groups and each group contributes opinions and asks questions.

e. The teacher uses slides, models, videos, music and other interesting material to make the lesson interesting

f. Other. Please specify

How often do you have to refer to information /text other than your standard textbook for the subject? Circle one.

a. everyday b. once a week c. once a month

d. never e. other. please specify

1.3 **Are you satisfied with the way lessons are taught?**

YES / NO

WHY?.....

1.4 **If you were to write your November 1994 history/ biology/geography/etc. exams tomorrow, what kind of mark would you gain? Circle one.**

a. very good b. good c. average d. poor e. fail

WHY ?

Rank the following skills from 1 to 6, 1 being the skill you use most often and 6 being the skill you use least for learning.

PREDICTING: to tell what is going to happen based on information accumulated e.g. weather forecast

RECALL: to remember or recollect e.g. when did the Second World War end?

... **ANALYSING:** examining in detail the different parts and showing how the parts interrelate or interconnect e.g. analysing a film for racism

... **PROBLEM-SOLVING:** solving problems in realistic situations e.g. how do you convince your little brother not to mess your room without hitting him?

RECOGNITION: to recognise e.g. a drawing in biology

DIAGNOSING: the steps you take to investigate and determine the nature of a problem or condition e.g. doctor proceeds through a series of steps to determine what illness you have.

1.6 Projects

1.6.1 Have you done any research projects this year or last year? YES / NO

If yes, please continue.

If no, turn to questions 1.6.7; 1.6.8; 1.6.9

2 In which subjects have you done projects?

3 Did you do them in groups or alone?

1.6.4 **When does the teacher inform you of the requirements e.g. due date, length, presentation format?**

Circle one.

a. start of the project

b. during the project

c. towards the end of the project

1.6.5 **Does the teacher normally give you a list of sources?**

YES / NO

1.6.6 **Does the teacher guide you steadily through the project or do you have to do most of the work on your own?**

1.6.7 **What kind of sources have you personally used for information? You may circle more than one.**

a. books (encyclopaedias, atlas, reference, etc.)

b. magazines, newspapers, pamphlets, articles

c. videos

d. audio cassettes

e. television and radio programmes

f. music

g. slides

h indexes

i. people

j. other. specify .....

1.6.8 **Where did you find these sources? Circle more than one.**

a. school library

b. public library

c. at home

d. resource centres like CRIC

e. other. specify .....

1.6.9 **For which of the following purposes have you used these sources? You may circle more than one.**

a. projects

b. general personal interest

c. to solve a particular problem

1.6.10 **Describe briefly how you go about doing a research project from start to finish.**

11 **Do the projects usually count towards a yearmark?**

YES / NO

12 **Does the teacher insist that you:**

a. include a bibliography? YES /NO

b. write in your own words YES /NO

1.6.13 **Which of the following do you think will give you an excellent mark for your project? Circle one.**

a. project neatly typed or computer printed

b. project with neat borders and lots of pictures

c. lengthy project with lots of facts

d. not sure

e. other: specify

1.6.14 **Do you think you have learned more by doing a research project than by learning out of a textbook or notebook?**

YES / NO

WHY ?

1.6.15 **Is work done in projects tested in exams too or is it mainly for enrichment?**

1.7 **How would you best describe yourself as a learner? You may circle more than one.**

1.7.1 **LINEAR LEARNER:** you like slow and steady, one-step-at-a-time learning. You don't like to go on to the next step until you've mastered the last. You like things to be clear and logical, to have a beginning, middle and end.

1.7.2 **LATERAL LEARNER:** you are good at making imaginative leaps. You enjoy brainstorming, seeing links and relationships, starting at the end, or middle, and leaping around.

1.7.3 **VISUAL LEARNER**: you look and learn. You use your skills of visualising. You can create scenes and pictures in your mind. Once you can "see" it, you can learn it. You need to write things down

1.7.4 **VERBAL LEARNER**: you like words. You listen and remember names, sounds, conversations. You can learn languages from hearing them spoken. You learn by talking, giving labels to concepts. Once you have talked something through, you know it.

1.7.5 **HOLISTIC LEARNER**: you like to have an overview, a broad understanding of the whole before you make sense of any part. You are an instinctive learner. Things need to feel right, look right.

1.7.6 **MULTI-SENSE LEARNER**: you learn by using more than one sense. You use touch, feeling, sense and sound to anchor learning. Practical learning, learning by doing, by experiencing, touching is vital to you.

1.7.7 **SYMBOLIC LEARNER**: you can understand and manipulate symbols and numbers - like musical scores, abstract concepts, etc. You often prefer maths, science and computing.

1.7.8 **HEAD LEARNER**: you enjoy collecting knowledge, knowing any number of facts about any number of things. You are a good trivial pursuit partner and usually find study quite easy.

1.7.9 **INDIVIDUAL LEARNER**: you like learning by yourself You like to think and read, and you can practise an

"internal dialogue" with yourself to sort things out and get them into perspective.

1.7.10 **SOCIAL LEARNER:** you build up your knowledge, define and refine your opinions by sharing and discussion. You find learning alone unattractive and worthless. You get a buzz from other people, from group discussions.

2. INFORMATION SKILLS

2.1 Did your primary school have a library?

YES / NO

If yes, what did you do in the library period?

2.2 Are you an active member of the public library?

YES / NO

2.3 Would you describe your library skills (ability to find information; use encyclopaedias and references; etc.) as: Circle one.

a. excellent b. very good c. good d. fair e. poor

2.4 Which skills have you been taught in the school library since high school. You may circle more than one.

a. How to use the card catalogue

b. How to locate a specific book on the shelf

c. How to use an encyclopaedia

d. How to use an English dictionary

e. How to write a bibliography

f. How to use indexes and contents pages

g. How to write notes from texts (books/articles)

h. How to use keywords and write notes in your own words

i. How to select only the most appropriate information for a specific topic.

j. How to organise and present a research topic.

k. Other. specify

2.5 **Do you apply the above you have learned to public library usage too?** YES / NO

2.6 **Do you apply what you have learned in your school library in your school subjects too?** YES / NO

If yes, what have you applied?

If no, why not?

2.7 **How do you feel about your library periods? You may circle more than one.**

a. It's interesting because you learn how to use a library and its resources.

b. You enjoy it because it is not an exam subject.

c. It's o.k. because you can pass the time reading magazines, newspapers or whatever.

d. You're not sure how you feel about it

e. It's boring - you can't see any point to it.

2.8 How do you feel about librarians in general?

2.9 People call the age we are living in the INFORMATION AGE. What do you think they mean by that?

2.10 What do you think / know computers can be used for ?

2.11 If you were told that 50% of your pass mark will now come from research projects, experiments, fieldwork etc., how would you react and why? Bear in mind that 90% of your pass mark came from exams before.

THANK YOU VERY MUCH FOR YOUR TIME!

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