Development and Evaluation of Diagnostically Supported Teaching Strategies to Reduce School Failure in Ghana

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A car had this inscription: " if you can read this thank a teacher". This short statement is pregnant with a lot of meaning. It sums up the entire work of a teacher. In other words the ability to read or become literate was created by the inputs made by the teacher in the life of the individual. Thus no literate regardless of his social standing can ignore the role teachers have played in getting him to where he is.

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CONTENT

DEUTSCHE ZUSAMMENFASSUNG

Die vorliegende Arbeit befasst sich mit bildungspolitischen Fragen sowie schulischen Lern- und Vermittlungsproblemen unter einer allgemeinen und international umfassenden Perspektive. Der spezifische Focus ist aber exemplarisch auf den Fall von Ghana ausgerichtet. Wie in vielen anderen Entwicklungsländern sind die Leistungen des Schulsystems in Ghana keineswegs zufriedenstellend. Viele Lernende erfüllen nicht die von ihnen erwarteten schulischen Anforderungen, und viele brechen die Schulzeit vorzeitig ab. Schulversäumnisse und Bildungsabbrüche bilden eine der Hauptquellen für eine unerträgliche pädagogische Situation, welche die ohnehin knappen Mittel für die öffentliche Erziehung ungebührlich stark belasten.

In den zurückliegenden Jahren sind in den führenden Industrieländern mehrere international vergleichende Untersuchungen über die Wirksamkeit der jeweiligen Schulsysteme erschienen (zuletzt PISA 2000; vgl. Deutsches Pisa-Konsortium, 2001). Hieran knüpft meine Arbeit jedoch nicht an. Vielmehr befasst sie sich mit der Tatsache, dass das Schulsystem in Ghana viel zu wenige Schülerinnen und Schüler erreicht und viele von ihnen ohne nennenswerten Erfolg ihre Schullaufbahn vorzeitig beenden. Allerdings ist dies ein Problem, das in ähnlicher Weise auch für viele andere Länder betrifft. So beschreibe ich diese Probleme zwar unter einer allgemeinen Perspektive, greife auch Konzepte für grundsätzliche Lösungen auf, doch dies alles mit Blick auf die spezifische Situation in Ghana.

So zeigt eine Analyse der Schulsysteme weltweit gewisse allgemeine Trends - zum Beispiel:

- Schulische Vermittlungsprobleme scheinen weit verbreitet zu sein, wobei die tatsächlichen Lernergebnisse bei weitem nicht den Zielsetzungen entsprechen, die man aufgrund der Bildungsinvestitionen erwartet. Diese Diskrepanz soll beschrieben werden.
- Das so zu beschreibende Problem lässt sich besser verstehen vor dem Hintergrund oder Geschichte der jeweiligen nationalen Kultur, der sozio-ökonomischen Entwicklung des Landes und den Lebensbedingungen der Menschen.
- Erfolgreiche Lösungsversuche können nur erzielt werden, wenn geeignete Mittel investiert werden, so dass die Zielgruppen im Bildungssystem angeregt werden, ihre eigene Situation zu verstehen und sie mit neuen Formen angemessener Problemlösungen ausgestattet werden.

In vielen Ländern der Welt erhofft man sich heute von Schulreformen eine deutliche Minderung der weit verbreiteten und vielfältigen sozialen Probleme, die Ausbildung und

Festigung eines humanen und demokratischen Staatswesens und die Verwirklichung der Menschenrechte. Schulen sollen jungen Menschen dazu verhelfen, Ziele für eine sinnvolle menschliche Lebensgestaltung zu finden, gleichzeitig aber werden sie auf eine Zukunft vorbereitet, die konsumorientiert ist, in der die Einkommensverhältnisse und die Bildungsmöglichkeiten der Bevölkerung immer stärker auseinanderklaffen und es zu einer immer größer werdenden Klasse unterprivilegierter Menschen kommt, die von dem globalen Wohlstand ausgeschlossen sind.

Wenn Menschen in einer friedlicheren und miteinander verbundenen Welt zusammen leben sollen, müssen sie sich überall besser verstehen, müssen gerechte und hilfreiche Gemeinschaften bilden und die globalen Probleme der ökonomischen Disparitäten, Gewaltanwendungen und rassistischen Auswüchse bekämpfen. Dementsprechend sollten Schulreform-Programme sowohl auf lokaler als auch auf nationaler Ebene immer in einen größeren sozialen, ökonomischen und ethischen Rahmenplan eingebettet sein, der die zentrale aktuelle Frage betrifft, wie wir eine friedvollere, zivile, demokratische und gerechte menschliche Gesellschaft schaffen. Niemanden sollte man von diesen Überlegungen und Vorhaben ausschließen.

Eine Analyse der verschiedenen Schulreform-Programme in der ganzen Welt offenbart bemerkenswerte Übereinstimmungen bezüglich der Zielsetzungen und Umsetzungen. Allerdings scheinen sie in sich widersprüchliche und teilsweise gegensätzliche Ziele für schulisches Lernen zu verfolgen. Im Allgemeinen betreffen diese (a) die Qualifizierung für ökonomische Aufgaben in einem globalisierten Markt , (b) das Eintreten für eine demokratische Gesellschaft, (c) die Fähigkeit zum kritischen Denken, klaren Entscheidungen und lebenslangem Lernen, (d) die Ausbildung von Moral und ethischen Werthaltungen, (e) die Offenheit für Unterschiede zwischen den Menschen und interkulturelle Verständigung (FISCHER, 1998a).

Gleichfalls eindrucksvoll ist die breite Übereinstimmung bezüglich lokaler und nationaler Reform-Programme, die Veränderungen bezüglich des schulischen Lehrens und Lernens fordern sollen. Beispielsweise betonen solche Vorhaben nahezu uneingeschränkt das aktive, entdeckende und interessegeleitete Lernen. Durchweg finden sich Forderungen nach integrierten Curricula im Sinne themenbezogener Lerninhalte mit interdisziplinären Zugängen. Von den Schülerinnen und Schülern wird erwartet, dass sie lernen, wie man lernt, wie man mit anderen kooperiert, wie man sich selbst Lernziele setzt und die eigenen Leistungen überprüft und bewertet. Von den Schulen wird verlangt, dass sie ihre Curricula

stärker an den sozialen, ökonomischen kulturellen und politischen Vorgaben und Realitäten ausrichten. Die meisten Reformvorhaben gehen davon aus, dass die Schülerinnen und Schüler ihr Wissen eher konstruktiv denn rezeptiv erwerben, und sie erwarten von den Lehrkräften und Lernenden eine effektive Nutzung der technologischen Hilfen in allen Gebieten. Nahezu alle Reformpläne sehen eine größeren Einfluss der regionalen Schulen bei der Kontrolle der Curricula und somit eine Stärkung der Eigenverantwortlichkeit für die Gestaltung der Lehr-Lernprozesse vor. In zunehmendem Maße werden die Lehrkräfte gehalten, ihre Unterrichtstätigkeit kritisch zu überprüfen, sich an Forschungsvorhaben zu beteiligen und ihre Erfahrungen und Erkenntnisse mit Kolleginnen und Kollegen auszutauschen (FISCHER, 1998b).

Neben diesen unüberhörbaren Rufen nach Veränderung bemerken wir aber auch eine überraschende Übereinstimmung bezüglich bestimmter Dilemmata und Widersprüche über verschiedene Gesellschaften hinweg. Während auf der einen Seite viel Zeit für konzeptionelle Planungen als ein wesentlicher Teil schulischer Erneuerung gilt, bieten die realen schulischen Strukturen und die Erfordernisse des Curriculums den Lehrkräften nur wenig Chancen für gemeinsames Planen und den Austausch von Erfahrungen, Überlegungen und Konzepten. Einserseits kommt die Forschung zu dem Schluss, dass die eigenverantwortliche Beteiligung der Lehrkräfte an den Erneuerungsprozessen absolut entscheidend ist, andererseits beeinträchtigen die entsprechenden Forschungen durch deduktive Theorie-Ansätze und Defizit-Modelle des Lehrerverhaltens die Initiative, das Engagement und die Professionalität der Lehrerschaft. Solche Konzepte eignen sich kaum dazu, die Lehrkräfte als Initiatoren für Schulentwicklungsprojekte anzuerkennen, und leider nutzen sie auch kaum die Expertise, Initiativen und Erkenntnisse der Lehrkräfte. Innovationen, die von den Schulen selbst ausgehen und von den Universitäten weiterentwickelt werden, sind eher selten. Das ist bedauerlich, denn eigene Planungen und Umsetzungen sind wesentlich, um Schulen zu Visionen zu verhelfen, mit denen sie ihren eigenen Standort sowie die Richtung und die Form ihrer Entwicklung bestimmen können.

Mit der vorliegenden Arbeit soll nun ein ernsthafter Versuch unternommen werden, den dargelegten Überlegungen und Analysen Rechnung zu tragen. Ihre wesentlichen Grundgedanken sind folgende :

- Das Vorgehen zur Verbesserung der schulischen Situation erfolgt induktiv, also ausgehend von der Schulwirklichkeit.

- Die Kompetenzen und Möglichkeiten der Lehrkräfte, ihre eignen Leistungen zu verbessern, werden anerkannt und in kooperativer Weise aufgegriffen, um gemeinsam gesetzte Ziele und Ideen zu verwirklichen.
- Das Lernpotenzial der Kinder wird erkundet und intensiv genutzt.
- In kooperativer Weise wird vorgegangen, um die Unterrichtsprobleme gemeinsam mit den Lehrkräften zu benennen und um Zielsetzungen für notwendige Änderungsprozesse zu bestimmen. Dabei sollen globale, kulturell relevante und schulspezifische Zielsetzungen aufeinander abgestimmt werden.

Diese Bemühungen sind auf jedem Fall darauf ausgerichtet, jedes Kind in der Klasse zu einem erfolgreichen Lernprozess zu verhelfen.

Meine diesbezüglichen Überlegungen spiegeln die Forschungsergebnisse von KENNETH SIROTNIT wider, der unter anderem herausfand:

Verbesserungen der schulischen Situation müssen in den Schulen selbst stattfinden, von den Menschen dort ausgehen und in ihrem Interesse sein; bei den Analysen und Beschreibungen sind fachkundige Fragestellungen und kritisches Denken erforderlich; die Evaluationsprozesse müssen mehrperspektivisch angelegt sein im Hinblick auf angemessenes Wissen und Informationsgrundlagen; und dieser Prozess ist nicht als eine einmalige, kurze und vorübergehende Angelegenheit aufzufassen, sondern als ständiger Teil der täglichen professionellen Arbeit bei den Bemühungen, die pädagogischen Leistungen in der eigenen Schule ständig zu verbessern (nach GOODLAD, 1987, S. 41).

Vor diesem Hintergrund gebe ich im ersten Kapitel einen kurzen Überblick über das Bildungssystem in Ghana. Dabei wird gezeigt, dass ein sehr starres Curriculum, verbunden mit der Forderung nach regelmäßig durchgeführten, häufigen Kontrollen der Lernergebnisse, dem Feststellen schwacher Leistungen und der genauen Festlegung der Lehrziele für die Lehrkräfte nicht besonders erfolgreich sein kann. Typische Beispiele hierfür und wie sie sich negativ auf die Lehr-Lern-Prozesse auswirken, werden dabei herausgestellt.
Selbstverständlich ist das Problem des Schulversagens in Ghana kein plötzlich eingetretenes Ereignis wie ein "Big Bang", sondern es ist das Ergebnis eines Prozesses mit vielen ineinander verflochtenen Faktoren. Meiner Ansicht nach sind diese Ergebnisse im Laufe der Jahre eingetreten vor allem aufgrund mangelnder politischer Informiertheit der aufeinanderfolgenden Regierungen, der schwierigen Situation der Lehrerschaft, unzureichender Curricula und entsprechender Arbeitsmittel, der Sprachenpolitik, der zu

langen Regelschulzeit und unökonomisch genutzter Unterrichtszeit. Eine Analyse dieser verschiedenen Faktoren deckt den Kontext auf, innerhalb dessen die schulische Problematik in Ghana zu verstehen ist (vgl. GODWYLL, 2002). Auch in dieser Arbeit wird daher eine kritische Problemanalyse im Hinblick auf den Focus und die Bedeutsamkeit meiner Untersuchung erfolgen.

Das zweite Kapitel gibt einen Einblick in den Unterricht, wie er sich in Ghana darstellt - und dies vor dem Hintergrund der traditionellen Philosophien und Konzepte, die einen Einfluss auf die Gestaltung des Unterrichts haben. Dieses verdeutliche ich anhand typischer Beispiele in Form narrativer Episoden. Sie sollen zeigen, wie sich die im vorangegangenen Kapitel dargestellten Faktoren in den alltäglichen Abläufen des Unterrichts niederschlagen. Diese narrativen Schilderungen lassen das Geschehen im Klassenraum als ein sehr komplexes Unternehmen erkennen. Dies wird vor dem Hintergrund internationaler Literatur vertiefend erörtert, womit gezeigt werden soll, wie universell solche Unterrichtsprobleme eigentlich sind, zugleich aber sollen sie die spezifische Situation in Ghana vor dem dargestellten Hintergrund differenziert beleuchten. Die aufgearbeitete internationale Literatur bietet zugleich die theoretische Basis für die praktischen Entscheidungen, welche die mit den Lehrkräften geplanten und durchgeführten Interventionen betreffen.

Das nächste Kapitel stellt eine Vertiefung des vorangegangenen dar. Es schafft die Grundlagen für ein Modell, welches das Schulversagen in Ghana beschreibt und erklärt. Vor diesem Hintergrund wird kritisch beleuchtet, welche Mängel seitens der Schule eine erfolgreiche Unterstützung der Lernprozesse erschweren.

Der überwiegende Teil vorliegender Untersuchungen konzentrierte sich auf höhere Klassen und bediente sich typischer Papier-und-Bleistift-Tests, die für Schulanfänger kaum geeignet sind (SHEPARD, KAGAN & WURTZ, 1998). Solche Forschungen am Ende der Schulzeit zeigen jedoch lediglich an, inwieweit das System erfolgreich oder weniger erfolgreich gearbeitet hat. Beispielsweise berücksichtigte die 1993 gegründete United States Agency for International Development (USAID) mit ihren kriterienorientierten Schulleistungsuntersuchungen 5% der gesamten Population von Schulkindern im 6. Jahr der primary school. In Anlehnung an den USAID-Report aus dem Jahre 2001 wird ein Programm des Erziehungsministeriums von Ghana bis zum Jahre 2002 unterstützt. Man muss also erkennen, dass ein riesiger finanzieller und kräftemäßiger Aufwand in die sogenannte "post mortem-Analyse" investiert wird, welche zwar das Ausmaß der nicht mehr rückgängig zu machenden Katastrophe anzeigt, aber nichts zur Prävention beiträgt. So bringen solche Untersuchungen viele Informationen über die

Schülerleistungen, die aber insofernn wertlos sind, als man an der Lebenssituation der untersuchten Kinder nicht mehr viel Entscheidendes ändern kann. Man sollte also nicht warten, bis ein Kind sechs oder mehr Jahre lang die Schule besucht hat, um dann erst festzustellen, dass es kaum lesen oder rechnen kann!

Im Unterschied zu diesen bisherigen Ansätzen konzentriert sich die vorliegende Studie auf Interventionsmöglichkeiten und wählt dazu Schulanfänger der Basic School (BS 1). Dies wird als realistischer und sinnvoller für Interventionen angesehen, die früh genug an der Situation der Kinder ansetzen, um diese möglicherweise noch positiv beeinflussen zu können. Daher wird ein vorläufiges diagnostisches Instrument, das von mir erstellt worden ist, benutzt, um wichtige Lernvoraussetzungen der Kinder zu erfassen und Hilfen für die Unterrichtsgestaltung zu liefern. Die theoretischen Grundlagen bei der Auswahl der berücksichtigten inhaltlichen Bereiche, nämlich vor allem Graphomotorik (Zeichnen), Mathematik und englische Sprache, werden diskutiert. Abschließend wird ein Überblick zur Bedeutung lernprozessbegleitender diagnostischer Verfahren gegeben.

In Kapitel vier wird die Methodik der Untersuchung erläutert. Dies betrifft die Darstellung des Design, die Auswahl und Beschreibung der Personenstichproben, die Darstellung des Untersuchungsinstruments, den geplanten Ablauf der Untersuchung und die Auswertung der Ergebnisse.

Die erzielten Ergebnisse werden in Kapitel fünf dargestellt und diskutiert. Zunächst werden die Daten 15 verschiedenen inhaltlichen Bereichen zugeordnet. Dann folgt die Analyse der Ergebnisse in vier Schritten. In einem ersten Schritt wird ein Überblick über die Schwierigkeitsstufen der einzelnen Items auf der Grundlage der errechneten Schwierigkeits-Indices ($p = NR/R$) gegeben. In einem zweiten Schritt werden verschiedene Leistungsprofile mit ihren prozentualen Besetzungshäufigkeiten ermittelt und qualitativ diskutiert. In einem dritten Schritt wird mittels chi^2 geprüft, ob und inwieweit die Ergebnisse von sechs unabhängigen Variablen, nämlich Geschlecht, Region der Schule (Stadt/Land), bevorzugte Sprache während der Untersuchung (englisch/regionale Sprache), vorschulische Erfahrungen (Kindergartenbesuch ja/nein) sowie Schulform (privat/öffentlich) beeinflusst werden. Die Daten von 60 ausgewählten Kindern (= 37.9 % der gesamten Stichprobe), davon 24 mit extrem straken und 36 mit extrem schwachen Leistungen, konnten für einen solchen Versuchsplan verwendet werden. Mit Ausnahme des Geschlechts waren alle Ergebnisse auf einem sehr hohen Niveau ($p < 0.001$) signifikant. Diese Ergebnisse wurden in vierten Schritt unter der Frage untersucht, ob und welche Interdependenzen zwischen den signifikanten

Variablen erkennbar sind und welche Gruppierungen der untersuchten Kinder sie ergeben. Diese Resultate sind sehr prägnant und werden anhand zweier Grafiken veranschaulicht.

Zur Diskussion dieser Befunde werden Beobachtungen aus Unterrichtssituationen, Schlüsse aus den Ergebnissen unserer Pilot-Studie sowie anderer empirischer Forschungen herangezogen. Schlussfolgerungen für die Gestaltung der Lehr-Lern-Prozesse beenden dieses Kapitel.

Die Ergebnisse zeigen eine enorme Varianz der individuellen Lernvoraussetzungen der Kinder. Dieser Befund unterstreicht zwingend die Notwendigkeit, modifizierte Unterrichtskonzepte zu entwickeln. Für diesen Zweck wurden drei Eingangsklassen ausgewählt, in denen entsprechende Interventionen erfolgten. Das sechste Kapitel beschreibt das schrittweise Vorgehen einer solchen Intervention. Die Ergebnisse dieser ersten Interventionsphase, welche eine Verbesserung und Differenzierung der Unterrichtskonzepte zu versprechen scheinen, werden ebenfalls diskutiert.

Im letzten zusammenfassenden und resümierenden Kapitel werden die Schlussfolgerungen aus der gesamten Arbeit im Hinblick auf die Bildungspolitik sowie theoretische und praktische Weiterentwicklungen der Pädagogik gezogen.

Diesen Überblick über meine Arbeit möchte ich mit einer Bemerkung von PAOLO FREIRE abschließen, die meine Überlegungen im Zusammenhang mit der vorliegenden Arbeit zusammenfasst:

Demokratie und demokratische Erziehung fußen auf dem Vertrauen in die Menschen, auf dem Glauben, dass sie die Probleme ihres Landes nicht nur diskutieren sollten, sondern es auch können, ...das sind Probleme der Demokratie selbst. Erziehung ist tätige Liebe, die zugleich Mut erfordert. Sie darf die Auseinandersetzung mit der Realität nicht scheuen und sie darf, will sie nicht zur Farce verkommen, kreative Diskussionen nicht umgehen (FREIRE, 1981, S. 38).

OVERVIEW

This dissertation deals with educational policies and problem with teaching and learning in school from a general and international standpoint. But the specific example and focus will be the case of Ghana. In Ghana as also in many developing countries the objectives of the school system are not achieved. Many pupils fall short of the standards required of them and many also drop out before the full cycle. Failures and dropouts constitute a major source of educational waste that unduly strains already tight educational budgets.

In the past years a lot of comparative researches have been undertaken into the efficiency of the educational system in a number of developed countries (recently PISA 2000; see Deutsches PISA-Konsortium, 2001), which compare success, and achievement of educational goals and objectives. This is not the emphasis of my work. This work covers the critical problem of high school dropouts and failure in the Ghanaian educational setting, however it deals with this specific situation in the general context of the international situation regarding the educational systems of many countries. The aspects of the problem are described and clarified with reference to possibilities for solving the problem in general but with specific reference to the critical conditions prevailing in the Ghanaian educational system.
An analysis of educational systems all over the world shows certain general trends for example:

- Teaching problems are general and the reality is that the planned outcomes of the educational system are not realised by many of its products. This discrepancy has to be described.
- The description of the problem can better be understood through the background or history of specific cultures, the socio-economic developments of the people and the general living conditions of the people.
- A search for solutions can only be successful when the resources are available and the participants in the system of education are helped to understand the current situation and equipped with new ways of dealing with the identified problems.

In many countries of the world today, the hope is that school reforms will help ameliorate a wide range of social problems, build more civil and democratic societies, and advocate social justice and human rights. Schools are asked to help young people find meaning in their lives while at the same time prepare for a future in a world that is consumer-oriented, with

increasing disparities in income levels, and a growing economic underclass excluded from global prosperity.

If humans are to live together in a more peaceful and interdependent world, people everywhere need to better understand each other, build more just and caring communities, and address the systemic global problems of economic disparities, violence, and racial hatred. Accordingly, school reform programmes both at the local and national level, must be framed within larger social, economic, and moral agendas which address the central questions of our day, including how are we creating more peaceful, civil, democratic and just societies? No one is left out of this work.

An examination of school reform programmes around the world reveals a remarkable similarity in purposes and implementation strategies. Most reform plans tend to outline ambitious and often conflicting goals for schooling. These generally include: (a) preparation for work in a global market economy, (b) citizenship and democratic participation in society, (c) skills in critical thinking, decision-making, and life-long learning, (d) moral development and value education, and (e) appreciation for diversity and inter cultural understanding (FISCHER, 1998a).

Equally impressive is the wide agreement, among local and national reform programmes, advocating changes in instructional and learning strategies. For example, reform agendas are nearly unanimous in emphasising active, discovery, and interest-based learning. Almost across the board, there are calls for integrated curriculum, thematic learning, and interdisciplinary studies. Students are expected to "learn how to learn," collaborate with others, participate in setting learning goals, and evaluate their performance. Schools are being asked to be more relevant by organising curriculum around social, economic, cultural and political issues and realities. Most reform agendas hold that students need to construct rather than merely receive knowledge, and expect teachers and students to effectively use educational technology across content areas. Nearly all reform plans emphasise greater local school control over curriculum, and better accountability for teaching and learning. Increasingly, teachers are asked to critically examine their practice, engage in research, and share experiences and insights with colleagues (FISCHER, 1998b).

Accompanying these sweeping calls for change, we also note a striking commonalty of tensions and contradictions in reform agendas across different societies. While time for planning among teachers is recognised as a vital part of educational renewal, existing school structures and curriculum requirements provide little opportunity for teachers to plan together

and share discoveries, concerns, and practices. While research concludes that teacher ownership is crucial to reform agendas and professional renewal, top-down approaches and deficit models of professional development continue to stifle teacher initiative, enthusiasm, and professionalism. Such approaches tend not to view teachers as capable of authoring school renewal projects, and unfortunately make little use of teacher experience, initiative, and insight. School-based improvement projects developed by faculty and students are a rarity. This is regrettable, for planning and self study are essential in helping schools vision who they want to be, how they want to change, and what they are striving toward.

Thus, in this research a serious attempt is made to address these shortcomings in school improvement and intervention efforts. Among others the following were the pivots around which the study revolved:

- A bottom-up approach to school improvement is used.
- The capabilities and capacity of teachers to alter their own performance is recognised and harnessed in a collaborative effort to achieve shared goals and objectives.
- The potential of the children to contribute positively to their learning is explored and greatly harnessed.
- Collaborative efforts to identify classroom problems with teachers as well as decide on the objectives and direction of the intervention process are adapted. These objectives addressed global, culturally relevant and school specific aims for education.

All these efforts are made with the sole aim of making every child in the classroom a successful learner.

My conclusions re-echo KENNETH SIROTNIT's research findings which states among others that:

School improvement must take place in schools by and for the people in them; description, judgement efforts require informed inquiry and critical thinking; this evaluative process included multiple perspectives on what constitutes appropriate knowledge and information; and this process is not a one-shot deal but an ongoing part of the daily work life of professionals involved in their own school improvement efforts (in GOODLAD, 1987, p.41).

In the light of these the planned work has in the first chapter a brief overview of the educational system in Ghana. Here it is pointed out that the inflexible curriculum coupled with the strict demands for continuous assessment results, adherence to achieving weekly and termly objectives of the teachers forecast are not particularly successful. Typical examples of

these and how they fail to impact on teaching and learning for the benefit of the child are also highlighted. I contend that the problem of school failure in Ghana is not a sudden occurrence like a 'Big Bang' but has been the result of many interrelated factors. These in my opinion are years of certain uninformed policies of successive governments, the situation of the teacher, curriculum and textbook usage, instructional language policy, length of school year and use of instructional time among others. These factors have combined to impact negatively on pupil performance and achievement. An analysis of these lay bare the contextual setting in which school failure in Ghana can be understood (see GODWYLL, 2002). Thus, a critical analysis of the problem is made here as well as a discussion of the focus and significance of the study.

The second chapter gives an insight into the Ghanaian classroom against the background of how traditional philosophies and practices impact teaching and learning. A case study focusing the methodology of the teacher is reported and analysed. Furthermore, critical incidents and narrative accounts of the classroom teaching and learning are described. These tell how the everyday stories of the causative factors highlighted in the previous chapter play out in typical Ghanaian classrooms. The lessons from these narratives depict the classroom interaction to be a complex enterprise. In this regard international literature are reviewed and discussed to show how universal some of these classroom problems are, but at the same time bringing to light those peculiar to the Ghanaian setting based on the background already given. The analyses of the international literature on the complexity of the classroom also provide the theoretical bases for the choices to be made with respect to the interventions with the teachers.

The next chapter is a supplement to the previous one. It provides the bases that support the model of school failure. In this regard the context within which the school fails to assist the child is critically analysed. Typical standardised paper-and-pencil tests given in later grades are not appropriate for children entering school (SHEPARD, KAGAN & WURTZ, 1998). In the first instance, a large proportion of studies have tended to concentrate on the higher classes. Such end-of -cycle testing tells educators only the extent to which the system did or did not work. For example the United States Agency for International Development (USAID) has funded since 1993 a nation-wide Criterion Referenced Test that assesses about 5% of the population of primary six pupils. According to a USAID report of February, 2001 funds have been made available to the Ministry of Education in Ghana to support this programme till 2002. It can be seen that a lot of effort and money goes into post-mortem analyses, which only indicate the irrevocable catastrophe but do not lead to prevention. Much as it provides invaluable information on pupil performance and may lead to long and short-term remedial

steps, what happens to the lives of those "Guinea pigs" whose conditions may be irreparable? No one should have to wait until a child has completed six or more years of school to find out that the child cannot read or compute.

This study focuses on interventions and therefore selects Basic school one (BS1) pupils since it is seen as more realistic and plausible to intervene in the child's situation early enough to bring about the desired change. Thus, a pre-diagnostic instrument put together by the researcher is used as one of the tools for assessing the entry pre-requisites of children and also to assist in classroom interventions. The theoretical bases for the selection of the areas of concentration namely, drawing, mathematics and English Language ability for the curriculum based pre-diagnostic instrument are discussed. To conclude the chapter an overview is given of the importance of diagnostic instruments to the teaching-learning process.

Chapter four focuses on explaining the methodology. This covers the study design, sampling, instrument, procedure and an indication of how the results will be analysed.

In chapter five the results of the data are analysed and discussed. The analyses of the data is done in four parts. The data are regrouped into 15 skill areas. The first part of the analyses describes the variance to item difficulty using the formula ($p = NR/R$). Secondly, different emerging patterns of performances are discussed qualitatively using percentages. In the third part, using the chi-square test, statistical significant differences are calculated with six identifiable independent variables. These independent variables are, sex, locality or area, language usage during the interview, pre-school experience, age, and private versus public schools. The data from a total of 60 pupils representing about 37.9% of the sample will be used here. This percentage is made up of 24 very high performing and 36 very weak pupils. The chi-square is calculated at ($p < 0.001$). In the last part two diagrams are used to show performances of the 60 pupils based on the dependencies or interactions with some of the independent variables. Information from classroom observations, interventions undertaken with teachers, conclusions from the pilot study as well as results from other studies are used to support or buttress a point or a finding. Implications for the teaching and learning process are also deduced.

The analyses showed a wide variance among the abilities and learning pre-requisites of the children. Thus, the need for a modification in the teaching and learning process was made abundantly clear. Three class one classes were selected for intervention purposes. The next chapter therefore deals with the step-by-step description of how the classroom intervention

was carried out. The results of the intervention phase that sought to introduce among other things, improved and differentiated teaching approaches will be also discussed.

The last chapter is devoted to drawing conclusions, summarizing the results and deducing implications for educational policy, theory and practice.

To conclude this overview I will use this quote from PAULO FREIRE, which sums up my philosophy in relation to this study:

Democracy and democratic education are founded on faith in people, on the belief that they not only can but should discuss the problems of their country, ... the problems of democracy itself. Education is an act of love, and thus an act of courage. It cannot fear the analysis of reality or, under pain of revealing itself a farce, avoid creative discussion (PAULO FREIRE 1981, p.38).

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE PROBLEM

It is my considered opinion that since this dissertation is being carried out in an international setting and there would be a greater proportion of the audience who are not familiar with the educational system in Ghana that a brief overview of what pertains in Ghana is first given. Since the focus of the study is on pupils in the first year of the primary school the emphasis will be more on the pre-university structure.

Ghana is a former British Colony. She gained her independence in 1957. She has an area of approximately 238,500 square kilometres, which is about two-thirds of Germany. She has a population of about 18 million people. The population is growing at an annual rate of over 3% and approximately 45% of the population is under 15 years old. She is boarded in the east by Togo, in the west by La Cote d'eviore, in the north by Burkina-Faso, and in the south by the Gulf of Guinea and the Atlantic Ocean. About 60% of the population is illiterate and predominantly agrarian at the level of subsistence farming. She has a Gross Domestic Product (GDP) of $7,255.9 million (approximately). She has a per capita income of less than $500 actually around ($300) - and a GDP growth of between 3% - 5% per year. Inflation as at December 2001 was about 29%. Ghana has an external debt of about $ 4.3 billion (31.3 trillion cedis) and an internal debt of about $ 1.5 billion (9.4 trillion cedis). About 30% of the National budget is devoted to education but more than 80% of that goes into personal emoluments (Ministry of Finance, December, 2001).

On the average, in Ghana a child enters the first year of the primary school at the age of six, though a few manage to go to class one at the age of five. About 20% of these children would have had access to kindergarten or nursery education for at least one year. The nurseries in the main cater for children between two to four years old and the kindergarten four and five year olds. But these two terms are sometimes loosely used. For example one can find a school with a nursery only but caters for children from the age of four onwards. Increasingly, proprietors are naming these ‘Centres for Early Childhood Education and Development.’ There are some children who before entering class one would have had early education on a continuum from one to three years. On the contrary the majority of children will enter the first year in the primary school with no prior exposure to early education and their first encounter with a piece

of chalk or a pencil will be in this class. Thus stark differences exist in the entry behaviour of most class one pupils.

Since 1966 the growth of democratic institutions has been punctuated by military take over or coup d`états. These created a cycle of political instability, which also had a negative toll on the economy. The poor socio-economic situation that prevailed affected a wide range of institutions including the educational sector. Thus, there was a gradual decline of resources in terms of funds manpower, physical infrastructure, teaching and learning materials, stationery and other critical inputs needed for effective teaching and learning to take place.

The following quote from a report of the Centre for Research into Quality Primary Education in Ghana (CRIQPEG), in 1995 summarizes well the historical and current reality facing Ghana today.

In the 1960s Ghana had one of the most developed educational systems in Africa. The country experienced political instability from mid 60s and later plunged into a severe economic depression for about 20 years. Educational services were severely affected. Thousand of teachers left the country between mid 70`s and mid 80`s and many primary school classrooms had no teachers. There was an acute shortage of basic textbooks and other instructional support facilities. Schools operated under extremely adverse conditions and naturally the quality of education deteriorated. Most of the victims of the deterioration in education are now between the ages of 16 and 15. Many of them who have completed middle school can hardly read and write (CRIQPEG report, 1993, p. 2).

Numerous international reports from the World Bank, United States Agency for International Development (USAID), Department for International Development (DFID) formerly Overseas Development Agency (ODA) and other agencies have documented the sharp deterioration in the social well being and economic welfare of Ghanaians during the 1970's and early 1980's. Between 1976 and 1983, public resources for education fell from 6.4% of GDP to 1.4% and the government was enable to maintain existing facilities, build new schools, or purchase textbooks and other instructional materials for students or teachers. Enrolments actually fell during this period, and large numbers of the well-trained teachers migrated or left teaching for other sectors of the economy.

Since 1983 the people and government of Ghana have been involved in a programme of economic recovery and structural adjustment, which is having an immense effect on the educational system. Quantitatively, education has made major strides in the past decade. Through the assistance of the World Bank, USAID, Canadian International Development

Agency (CIDA**),** DFID**,** United Nations International Children Educational Fund (UNICEF), World Food Programme, Germany, Norway, Denmark, the Netherlands, other bilateral and international governmental agencies and Non-Governmental Organisations (NGO`s), over 250 million dollars have been provided to upgrade basic and technical education. The educational levels of expenditures rose to 3.8 % of GDP in 1993 and the recurrent budget rose from 17% in 1980/81 to nearly 40% in 1993. Budget allocation to basic education increased from 44% of the total education budget to 62% or more for every year since 1989.

Historically, several attempts have been made to reform the education system in Ghana. Ostensibly they have been undertaken to meet the philosophy of successive governments, or as an attempt to arrest the downward trend in education delivery, and or meet the changing needs of the society. Some of these reforms run their full course, others were truncated for political or economic expediency or simply abandoned midstream because they yielded very little results. The notable one in recent times has been the 1987 education reforms in which the then government took steps to introduce a new content and structure of education.

The old system of education had been criticized for having been elitist and too long. Thus it was seen as not cost effective and providing too many terminal points or outlets that encouraged drop out. Furthermore, it was regarded as been too bookish and producing products for non-existent jobs among others. In a nutshell, it had a 6 : 4 : 5 : 2 pattern regarding the years to pass on to the various levels of schooling. This characterizes the length in years of the primary level commencing at age 6, middle, lower secondary and sixth form respectively. At any time after primary 6 (or age 12 or 13), a pupil could pass on to secondary school after passing a common entrance examination set by the West African Examination Council (WAEC). It was more common, however, to pass to a technical institute or commercial school at the end of the middle school period, that is, after Middle 4 (or at age 16). At Middle 4 there was a separate examination for entrants to initial teacher training colleges; and finally a middle school leaving certificate examination for those terminating their school careers at this stage.

Thus, to address the criticisms levelled against the old system the reform was introduced mainly in response to the need to provide good quality education for the youth at different stages of education. Quite apart from the need to shorten the number of years spent in the schooling it was considered that educational institutions had deteriorated faster than efforts to arrest them could cope. It was also to ensure that the country would be in the position to work towards the achievement of national goals of improving infrastructure, expand access and

improve the quality of education. Some of the reasons for the deterioration and which necessitated radical changes were:

- In many schools, school children and teachers were without textbooks and stationery items as a result of foreign exchange constraints.
- Building, furniture and equipment had deteriorated as a result of lack of replacement and repair. Enrolment levels had declined over the years, while drop out rate from the school system continued to rise.
- There was an exodus of significant numbers of trained and highly qualified teachers. This had led to the recruitment of untrained teachers in primary schools resulting in less effective instruction at the basic level.
- In addition, government's finance towards education had drastically reduced
- There were no data and statistics on which to base any planning (YEBOAH, 1990).

Therefore the objectives of the reform were as follows:

- To reduce the inordinate length of pre-university education from the previous 17 years to the international norm of 12 years. To improve pedagogic efficiency and raise the quality relevance of educational outcomes through replacing the old curriculum, textbooks, syllabi and instructional materials, better building maintenance, training and retraining the teaching force and preparing school leavers for the 'real' world.
- To contain and partially recover cost, through cutbacks in over staffing of non-teaching staff and untrained teachers, the feeding and lodging costs of secondary and tertiary students, and cost recovery on textbooks.
- To enhance sector management and budgeting, improve management, and better supervision and monitoring (see GODWYLL, 2002).

Thus, since 1987 Ghana has had a 9-year free compulsory Basic Education, which integrates 6 years of primary education with 3 years of junior secondary school education (see Fig. 1.1). In order not to regard the two components as separate entities since there is no terminal point until the end of the 9 years, the term 'Basic Education' has been suggested for Primary as well as Junior Secondary School (JSS). Thus, the classes are to be named 'Basic Stage 1 to Basic Stage 9' (BS1 - BS9).The BS9 is both terminal and continuous with a nation-wide examination called the Basic Education Certificate Examination (BECE) conducted by the WAEC. Those who qualify, enter into the Senior Secondary Schools (SSS) for three years.

Those who fall out or fail to qualify can either re-sit the BECE or are supposed to be recruited into apprenticeship schools to be trained for various trades and crafts. In my opinion, this is a very poorly developed component of the educational system, a view also supported by DJANGMAH (1995). These schools are almost non-existent. Thus the majority of about 60% find nothing to do. The policy planners indicated in their own statistical projections in 1987 that only about 30% of children from the JSS could pass on to the SSS as a result of vacancies to absorb them Ministry of Education, (MOE) (1987). The SSS level also has a terminal examination called the Senior Secondary Certificate Examination (SSCE) conducted by WAEC. In both examinations students are graded on a 40% internal assessment score based on a cumulative continuous assessment records and a 60% external assessment score based on the WAEC examinations. However due to serious inadequacies in the implementation of the continuous assessment programme such as high level subjectivity in teacher made tests, validity problems, and sometimes near forgery of scores by teachers the new recommendation is to use 30% for internal assessment and 70% for external (WAEC Report, 1997).

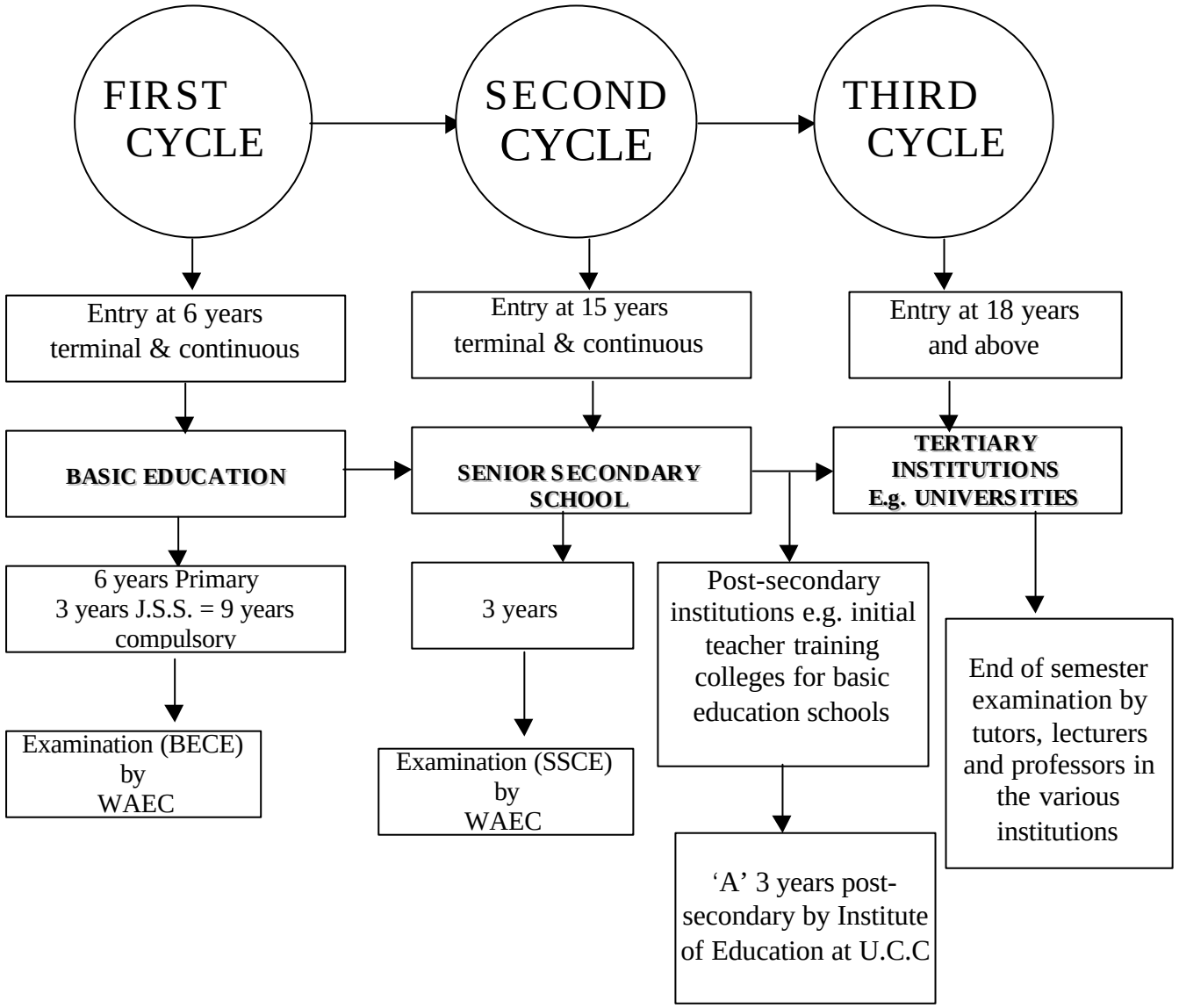
The successful completion of SSS ushers one into a wide range of post-SSS and tertiary institutions. The post-SSS institutions include nursing training colleges, agricultural training institutions and teacher training colleges (for the basic education level) while the tertiary institutions consist of diploma awarding institutions, the polytechnics, the university colleges and the universities. The new recommendation is to upgrade all the post-SSS institutions into tertiary institutions under a new umbrella of ‘Regional Colleges of Arts and Sciences’ (RECAST) to prepare their products for diplomas. The length of training at both levels, post-SSS and tertiary, varies depending upon the discipline but on the average it is between three to seven years.

Thus the educational system in Ghana has three cycles - namely:

Basic Education level BS1 - BS9, Senior Secondary School level and the post-SSS institutions, which includes teacher training institutions for the basic level, and the tertiary institutions. The attached diagram gives a pictorial impression of the structure of the educational system in Ghana as described in Figure 1.1.

Fig. 1.1:

DIAGRAMATIC STRUCTURE OF GHANA'S EDUCATIONAL SYSTEM



Thus the Educational Reform Programme launched in 1987 was meant to address the issues of access, quality and relevance of education to national aspirations. Yet the high expectations envisaged in the reform have not been realised. However the problem of school failure in Ghana in my opinion is not a sudden occurrence like a 'Big Bang' but has been the result of many interrelated factors. These in my opinion can be classified under the following:

- years of certain uninformed policies of successive governments,
- the situation of the teacher,

- curriculum and textbook usage,
- instructional language policy,
- length of school year and
- use of instructional time among others.

These factors have combined to impact negatively on pupil performance and achievement. An analysis of these lay bare the contextual setting in which school failure in Ghana can be understood (see GODWYLL, 2002).

Parents, teachers and the government complain about the falling standards of education in the country. It is my opinion that since the time of the first Ghanaian President after independence, certain government policies have been the bedrock of the gradual poor performance of the schools. The most critical of these is undertaking major educational reforms in the structure, content, philosophy and number of schools before considering their implications for teacher education and preparation.

An introductory statement from a report of the Ministry of Education (1995) on teacher education indicated that since the mounting of the educational reform programme in 1987 questions have been raised about the quality of teachers produced in the teacher training colleges. The general consensus is that the teacher at the basic education level cannot perform. But I contend that the issues and concerns over the non-performance of the teacher at the basic level had long before the reform been of great concern to educators and had been raised and discussed in many forums before 1987. Probably what the reform has done is to alter the 'spirit and letter' of the curriculum and placed higher cognitive and greater pedagogical demands on the teacher without adequate preparation. It undertook a comprehensive and far-reaching reform, which altered the structure, content, philosophy and practices in the educational system before teachers were hurriedly given in-service training. Both the duration and manner of execution were inadequate to orientate the teachers and give them the necessary confidence and competence to deliver. It has therefore aggravated the already low performance of teachers at this level. The situation can be likened to removing from before a starving man the only nourishing meal left for him. Fourteen years after the reform the performance of the teacher at this level is still questionable. ANAMUAH, KOOMSON & GODWYLL (1996), pose a rhetorical question: *"how do you implement an educational reform programme of such a magnitude before you start with the training of teachers?"* (p. 23).

The problem of teacher performance has been blamed on weaknesses in the initial teacher preparation (MOE, 1995, p. viii). But I contend that the situation of the teacher is more complicated than has been painted by the report cited above. Large class size, overload of work resulting from teaching too many subjects and the demands of continuous assessment programme are critical contributing factors. In addition, poor or lack of supervision and professional support, poor physical infrastructure, inadequate teaching and learning materials, low salaries and poor conditions of service contrive to negatively impact teacher performance.

In general, a classroom teacher has a lot of responsibilities. The effects of his teaching methods could have far reaching consequences. Thus, what the teacher does, says or writes has an impact on the life of the child. The responsibilities of the teacher increases in a school system where there are no school support personnel. In such a system as we have in Ghana the decisions, actions and inactions of the teacher are paramount in shaping the life of the pupil.

In Ghana there are only three categories of exceptionality that are officially provided for in the public schools, namely: mental retardation, visual impairment and hearing impairment. Thus, what is known as the 'hidden handicaps' are not catered for. Therefore if a child is experiencing serious problems with his learning in the 'normal' school it falls on the teacher to help him out by organizing the instructional approach to benefit him. If the teacher is unable to do that, the child is going to miss out on the mastery of essential pre-requisite skills needed for effective learning. The accumulation of deficits in pre-requisite skills over a period of time will lead to a serious lag between teacher or class level expectations and the child's actual performance.

It has been stated that there are already recognizable weaknesses in the performance of the teacher. Coupled with that, majority of the teachers in the field have very little knowledge and competence in handling exceptional individuals. It was not until 1993 that the first batch of teachers trained for the basic education level had an introductory course in Special Education as part of their professional training passed out. For teachers at the second cycle level the first trainees passed out in 1998. Yet there is no question about the presence of children with hidden disabilities in the school system. For example in a 1997 screening test administered on 300 BS1 and BS2 pupils in 12 out of the 55 primary schools in Cape Coast to identify those who were encountering difficulties in their learning and were performing far below their grade level expectation, the following numbers of low performances were identified: writing and drawing: 59.9%; reading: 79.8%; spelling: 57.4% (GODWYLL & HEFASONA, 1997).

Thus, the majority of teachers feel seriously handicapped when they encounter children with exceptionalities in their classroom. Without the necessary competence and know-how, coupled with the absence of school support personnel and other relevant services the fate of the child experiencing difficulties in the class is placed in serious jeopardy. What makes matters more precarious is that teachers have to work to meet certain targets set by the syllabus to be considered effective. For example, if there are 10 topics to be treated in a term of about 42 weeks it would be extremely difficult for the teacher to use the presence of 'weak pupils' in his class to justify why he was only able to cover three or four topics. That would neither be acceptable to the head of the school nor the district education officers. Therefore for a teacher not to jeopardise the chances of keeping his job he is faced with three challenges:

- In the first scenario he may choose to move along with those who can cope with the pace of the lesson to the disadvantage of those with difficulties.
- In the second scenario a teacher caught in the dilemma of meeting his target and struggling with children with weaker than expected learning pre-requisites may become more frustrated than even the child who is experiencing difficulties in his learning. He may then transfer his frustration unto the child, blaming him for his inability to understand or cope with the learning situation. This unfortunately demoralizes the child. His self-esteem may be damaged and repeated failures may lead to loosing interest in trying, schooling and learning altogether. Truancy may result and eventual dropout of school may become the final consequence.
- The third option is to use diagnostic instruments to identify what the child can do, adapting the instructional approach to meet the individual needs of the child to grow in competence and mastery. In other words using the principle of teaching to make every child a successful learner. But here the teacher needs assistance and professional support.

This third scenario is becoming more popular in Ghana and the world at large as stakeholders in education demand more accountability from the providers of education. For example results from a research and school interventions undertaken by CRIQPEG (1995), indicated between 10%-15% average increase in the performance of children, when through competence transfer, teachers were helped to acquire skills that enabled them assist children with difficulties in learning. It is in this light that the objective of this research is to develop pre-diagnostic instruments that can assist teachers to determine the entry behaviour of their pupils and tailor instructions to meet their needs.

Drop out rate in the schools is still high and more acute in the rural areas where more than 60% of the populace live. In a typical example, a rural school in the Northern region of Ghana had as many as 98 pupils in class one, but the number progressively reduced to eight (8) by primary six (MOE, 1995). Thus, the need for the development and use of diagnostic instruments are critical. In my opinion more important than the instruments is the sensitivity of the teachers to individual differences shown in real classroom situations. The use of diagnostic instruments can help to gain those sensitivities and arrive at more objective and valid categories for observation, if there is some willingness on the part of the teacher. The use of diagnostic instruments will assist teachers in the classroom to know what the child can do and also introduce classroom interventions to support them. The need to develop effective methodologies to meet the needs of children in a diverse class cannot be overemphasized.

1.2 CRYSTALLISATION OF THE PROBLEM

In the past 30 years, many African countries including Ghana have embarked on Universal Primary Education Programmes (UPE). Thus the increased access to schooling has automatically increased the diversity of the population served by the schools. However, quality performance of pupils has not kept pace with this increased access. For example, an educational report in 1996 indicated that although the percentage of children in the primary school increased by 30 between 1987/88 and 1993/94 there was no corresponding increase in the performance and academic achievement of the children (MOE, 1995).

Parents, teachers, politicians, government and other stakeholders have decried the problem of falling standards of education in Ghana. Their sentiments are expressed in almost every public forum or seminar that discusses the quality of education delivery in the country. The seriousness of the problem came forcibly to light through the results of the National Criterion Reference Test (CRT) in English and maths for about 12,000 pupils at BS6 in 1993 -1995. The results indicated that fewer than 5% of the pupils tested in English language demonstrated acceptable levels of mastery. Similar results were obtained on the mathematics test.

The poor performance of pupils in English proficiency was supported by the research findings of the CRIQPEG centre. Results from CRIQPEG Phase 1 Study (1995) suggested that many Ghanaian pupils were experiencing difficulty meeting expectations of the educational system and that children may not have the opportunity to acquire even the basic language skills. Classroom observations revealed that children are not interacting with the teacher, classmates

or written materials in ways that would promote English language fluency and literacy.

The data from CRIQPEG further indicated that a substantial proportion of the children at all levels are non-literate (i.e. unable to read 30% of the words in a primary school passage). Even at grade five, 40%-50% of the children are unable to decode typical passages from the 2nd, 3rd, 4th and 5th grade books. Only about 1/6 of the grade four children and 1/3 of the grade five children can decode with at least 70% accuracy.

There is mounting awareness among educators and stakeholders that the educational system is failing to meet the needs of many pupils in especially basic needs such as reading, writing and innumeracy. This situation is also indexed by the appalling performance and the large numbers of pupils who 'fail' in the end-of-cycle national examinations. Other researches lend weight to the problem of failure in Ghana (DJANGMAH, 1995; SHUBERT, J. 1995; GODWYLL & MENSAH, 1997; GODWYLL & YELKPIERI, 1997; GODWYLL & ESSIAW, 1997; O'GRADY, 2000). According to HARRIS & PASIGNA (1994) failures and dropouts constitute a major source of educational waste that unduly strain already tight education budgets. More importantly repeated failures and school dropouts deprive the country of the educated future citizenry who could contribute most fully to her social, political and economic development, if they were given the opportunity to succeed.

The opening words in a speech delivered by the then Minister of Education at a one day 'National Forum on Basic Education to the Year 2000' in 1994 for about 150 stakeholders spells out unequivocally the recognition by government of school failure:

Since 1988 we have been able to reorganise the financing and rehabilitated the infrastructure of the education system. But today we see that that is not enough. In spite of the excellent work that has been started, pupils are not learning what is expected. The greater majority of primary 6 pupils are functionally illiterate in English and Mathematics. Without functional literacy pupils won't gain comprehension and skills in other subjects, they will not be prepared for the world of work. How can we justify continuing expenditures on expanding a system that doesn't lead to learning? Reaching a target of universal participation in primary schooling is not a sensible goal unless that participation leads to learning and skills. To examine strategies for providing effective basic education, to revitalize the teaching and learning in the schools is the focus of our policies, and of this forum (REPORT OF ERRC, 1994, p.3).

Thus, the Ghanaian educational system, which coupled with the above, is saddled with fundamental weaknesses and inadequacies in initial teacher training, continued professional

field support, inefficient use of instructional time, methodology and materials is experiencing difficulties. In addition it operates a problem ridden instructional language policy and has overcrowded classrooms. It operates with overloaded and not too highly motivated classroom teachers. It is therefore consequently experiencing high levels of school failure and dropouts (GODWYLL, 2002).

Surely a sizeable percentage of school failure and dropout result from hidden difficulties, weaknesses or handicaps, which pupils may have or which emanates from the instructional process, but both the school system and the instructional programmes are not so designed to detect and or ameliorate.

In the course of their education from class one to JSS 3 the number reduces considerably. That is to say drop out rate is quite high. For children who cannot meet the pre-requisites of the curriculum or the challenges posed by the syllabus, they receive no support or assistance. These pupils enter into a situation, which is very discouraging and without much prospects. Due to repeated failure and coupled with a classroom environment, which may not be very supportive and positive, they begin to play truancy. Eventually their interest in schooling fades and a good number of them drop out. There are very few chances of getting reintegrated into the formal school system. When they are unable to get into the informal sector through apprenticeship training, they may end up on the streets doing odd jobs for little or no money. If they are unfortunate to join a negative sub-culture they then begin a career into criminality and drug abuse.

International literature on school failure states that when the following three conditions exist in a school system failure and dropout will be the natural consequence:

i) when different learning pre-requisites and learning opportunities are not served or catered for.

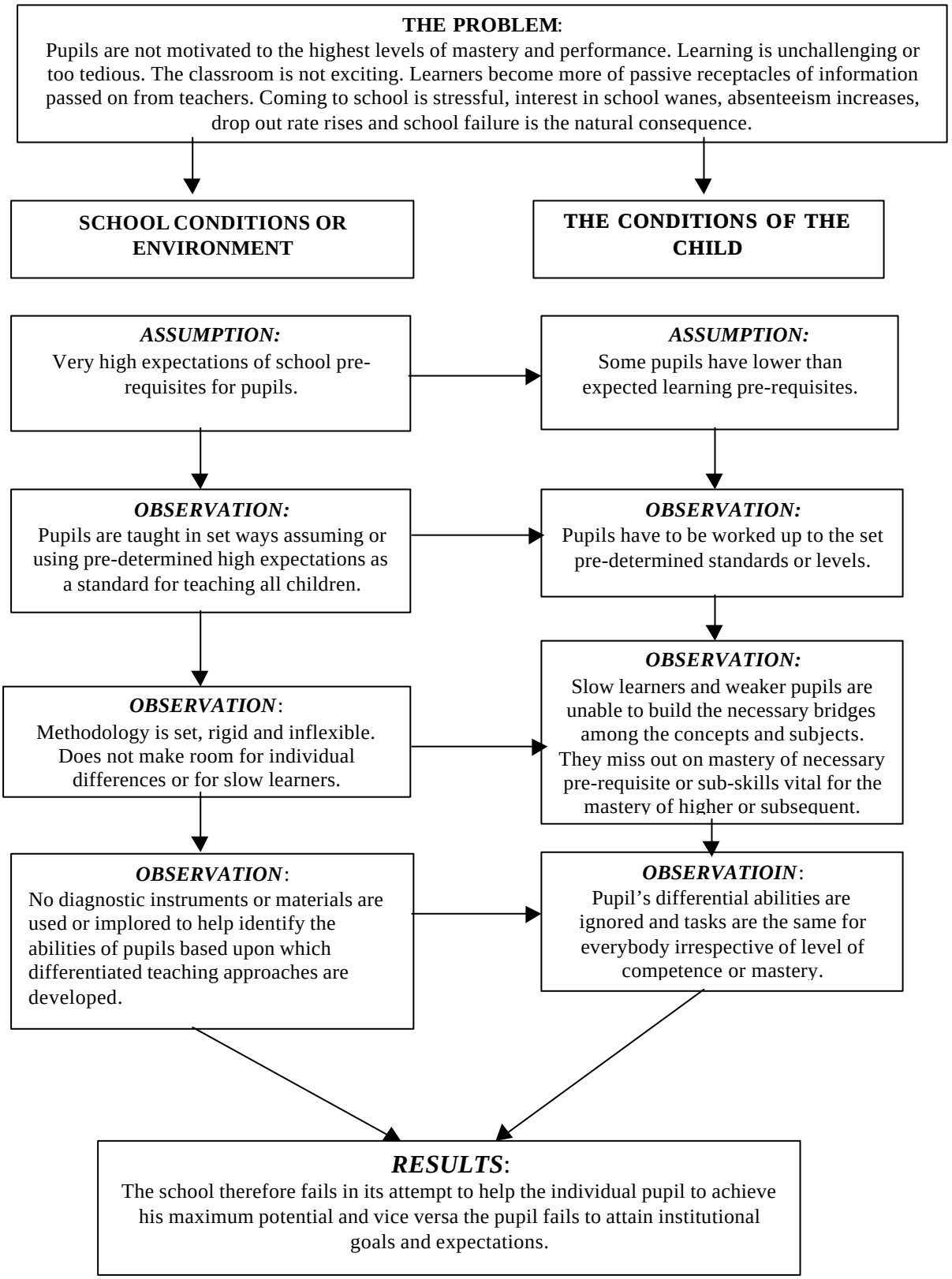
ii) when the criteria for measuring or determining success is the same for all children,

iii) when individual differences are not recognised in curriculum planning, content and classroom teaching (CEGELGA & BERDINNE, 1995; GULLIFORD, 1985; HINSON & HUGHES, 1982).

The crux of the problem can be conceptualised in the model presented below, which summarises the unfavourable school and pupil characteristics that intermingle to result in school failure (see Fig. 1.2).

Fig. 1.2:

ABIMUS MODEL FOR SCHOOL FAILURE



1.3 THE FOCUS OF THE STUDY

The choice of BS1 pupils as the focus of the study is informed by the following considerations. In the first instance, a large proportion of studies have tended to concentrate on the higher classes. In fact, the various nation-wide evaluation programmes used the terminal classes to show how far pupils have mastered the requisite skills. Such end-of -cycle testing tells educators only the extent to which the system did or did not work. So far a lot of researches have focussed on the terminal performance of pupils. Very few researches are available in Ghana on the learning pre-requisites that children are expected to enter the school with. The one research, which comes close to this work is the study carried out by CRIQPEG where curriculum-based assessment instruments and intervention strategies were used to assess and support over 1000 pupils from BS2 to BS6. Though the CRIQPEG study comes close the scope and coverage left out the BS1 pupils. Apart from that it only concentrated on English language.

Again using BS1 pupils is seen as a more realistic and plausible to intervene in the child's situation early enough to bring about the desired change. No one should have to wait until a child has completed six or more years of school to find out that the child cannot read or compute.

Nationally administered CRT programmes have attempted to answer questions such as; whether children are learning more today than in the past, or whether the educational system is working for all children? But the loophole here is that the question whether children are entering the schools today with lower or higher learning pre-requisites than formerly has not been answered. It is clear from the end-of-cycle assessment results that more children are failing than previously. But if that question of learning pre-requisites had been answered then one could say whether children of today are generally weaker than those past. It can be that the school system has failed to identify the pre-requisite skills that these children of today posses and has not adjusted the instructional process of yesteryear accordingly. The schools may still be using the entry behaviour of children of yesteryear to teach children of today and as a result the whole educational enterprise is on the verge of collapse. It is my considered opinion that the focus of this study will provide the knot that can be used to tie the loose ends.

Understanding the condition of children as they enter school can provide clues to help parents and teachers understand children's performance later in their school career. This information can also provide teachers with essential information for individualizing the curriculum to help children learn more effectively.

With the increasing demand for accountability and demand for improved student performance that has swept the nation, policy makers and educators are struggling to find ways to assess children when they enter school and this work will contribute to this search. Finally, assessment of the condition of children could be an important part of accountability measurement.

The purpose of this study will therefore be the following:

- Development of an integrated pre-diagnostic test procedures for English, Mathematics, Drawing and other functional items based upon which the learning prerequisites of BS1 pupils would be collated to show how wide the variation is among the competencies of children.
- Develop in collaboration with classroom teachers, effective teaching strategies that take into consideration individual differences in children.
- Testing of the developed teaching strategies in classrooms and their effectiveness documented.

1.4 SIGNIFICANCE OF THE STUDY

This study will be very beneficial to many teachers, researchers, and policy makers. Since it is aimed at contributing to the move towards finding workable and lasting solutions to the problem of school failure and dropout in the Ghanaian school system.

Teachers and educators will benefit directly since they can use the instruments developed in this study in their own classrooms to help identify the various learning pre-requisites that the children come to the school with. It will also assist them with skills to intervene in the child's learning to ensure that pupils achieve their maximum potential. In addition, the teaching strategies developed and evaluated can be used by them to achieve higher individual pupil performance.

Researchers in early childhood education will be exposed to the tools and strategies that were adopted in this research to replicate or to use in further research.

The Ministry of Education, which is responsible for educational policy formulation will have empirical and useful information that can inform them in new policy direction or amendments to existing ones. The instruments can also be adopted by the Ministry to be used nation-wide in all BS1 classrooms.

It is envisaged that this research will add to existing knowledge on how to promote learning in classrooms among pupils with diverse abilities.

CHAPTER TWO

A LOOK IN THE GHANAIAN CLASSROOM

2.0 INTRODUCTION

Having clearly laid bare the background of the problem, conceptualised the problem under investigation and stated the focus of the research, I now present an insight into the Ghanaian classroom in this chapter. This will be done in four segments.

In the first segment I will lay the foundation, which reveals subtle and covert influences that impact the behaviour of teachers in the Ghanaian classrooms. Here certain traditional philosophies and practices that create peculiar mental sets that invariably affect the teaching and learning encounter will be analysed.

In the second segment, a typical classroom encounter resulting from observations carried out by me will be presented and analysed. This case study purports to concretise the inferences made in the first chapter about the competencies of the teacher and also the under-currents fuelled by the traditional philosophies highlighted in the first segment of this chapter.

Furthermore, in the third segment other narrative classroom accounts carried out by myself together with other researchers as well as some project reports of other researchers will be analysed**.** These will show how the other stated factors, i.e.; language policy, instructional time usage, issues of methodology, school infrastructure, curriculum and textbook usage play out in the teaching-learning encounter in the Ghanaian schools. The results of which give credence to the validity of my forgoing case study.

The last segment will tie in with an analysis of the complexity of the classroom interaction in international perspectives. This analysis will show how universal some of the problems Ghanaian teachers face, are. The underlying dominant factor from most of these perspectives is a teacher-dominated classroom, which is representative for most Ghanaian classrooms. Therefore the analyses of these perspectives will be related to the Ghanaian school situation and deductions will be made to provide the theoretical base for the options to be selected for the classroom interventions with the teachers.

2.1 THE GHANAIAN TRADITIONAL PHILOSOPHY OF THE CHILD AND ITS IMPLICATIONS FOR TEACHING

A critical look at the teaching practices in the Ghanaian schools reveal that for a long time now the 'Lockian' philosophy has predominated where the child is seen as innately bad and that it is the responsibility of society to ‘beat out‘ the bad and put in place the good from society. I contend that as a result the child is not usually seen as an active member of his learning but a passive recipient of values and knowledge from the teacher or parent who represents the society.

In a study of teachers and students perception of rewards and punishment in secondary schools, 32% of teachers and 42.6% of students indicated weeding as the most frequently used form of punishment in schools, whereas 26.8% and 28.7% of teachers and students respectively chose canning GODWYLL & YEBOAH (1996). From my own observations in the schools, I have noted that canning or the use of the cane to whip a child when he does something wrong or even when he fails to get an exercise correctly done is very rampant. Some parents have run to schools to beat up teachers who were alleged to have canned their wards in school. Though there are strict regulations by the Ghana Education Service (GES) on the use of the cane referred to as ‘corporal punishment’ these in my view are largely overlooked. It is a common sight in many classrooms across the length and breath of the country to see a teacher holding the cane throughout the teaching session or at least the cane permanently lying on the teachers table within easy reach for the teacher to grab it and administer some strokes to the non-conforming or non achieving child.

Thus if the child is seen as innately bad or that he will never do the right thing unless scared with the cane or at least scared with the possibility of being caned then the implication is that the child is not sensible enough to do what is expected of him. An extension of this mental frame of reference to the teaching-learning situation where the child is seen as not having a significant input to make towards his learning is only a natural course. The classrooms are therefore mainly teacher-dominated and teacher-directed. The ‘Banking system’ of teaching, where the teacher is seen as the repository of knowledge and he literally ‘banks’ information into the head of the child and retrieves it with various tests at different times is very rife. HENDRICKS (1997) describes how both PIAGET (1973) stated that the involvement of children and teachers is necessary for quality early childhood education.

Coupled with the above is the traditional concept of the child. Using the Akan tribe one of the largest tribes in Ghana and particularly the Fanti or Twi language the indigenous name of a

child is 'Abofra' in Twi and 'Abofraba' in Fanti. These literally mean '*wa bo no afra mboa*' which of English means *'it has been created among animals'*. They believe that this explains why the child cannot talk initially but makes sounds just like an animal. As he interacts with the 'human' world he becomes more 'human' and learns the ways of humans for example learning to speak etc.

Thus, if a teacher has this worldview of the child the implications it has for teaching and learning are a foregone conclusion. The child will only be seen as an emerging entity that through interaction with the world of humans is learning to become acceptable to the human community. How then can a teacher with this worldview practice a teaching technique that makes the child an active member of the learning process? RINALDI (1996) explains that we must give enormous credit to the potential and power children possess. He argues that without even realising it, we make so little use of the energy potential within us. He postulates that the problem with the teacher-directed classroom is related to the lack of awareness and the under use of all of the intelligences, abilities, skills, and knowledge that we possess.

This lack of awareness robs the whole teaching-learning process of this vital potential of the child and relegates him to the background as a mere receptacle for the teacher's knowledge. RINALDI further explains that the child dies if he does not sense that the adult is close enough to see how much strength, intelligence, invention, capacity and creativity, he possesses. This emphasizes that the child wants to be seen, observed and applauded. And when the child dies the teacher dies as well because the teacher's goal is the same as that of the child in the sense that both of them are seeking to find meaning in work and in existence, to see value and significance in what they do.

When one transposes these thoughts into the traditional Ghanaian society it can be seen that the child really "dies." For instance, in the Akan traditional setting the child is supposed to be 'seen' and not 'heard'. That is to say among elders the child is not expected to talk but sit still and listen. The respectful child is therefore seen as the one who sits quietly in the company of adults and does not talk out or ask questions when not called to do so. Both children and teachers carry over these attitudes and mental sets into the teaching-learning situation. Thus, there are some classrooms where not a single child may ask a question throughout a lesson and more especially when the teacher does not provide the opportunity to elicit pupil's responses. This cannot be considered as quality teaching when the potentials, strength, intelligence, invention, capacity and creativity of the child are relegated to the background.

DEVRIES & ZAN (1995) postulate that in quality early childhood teaching children are

regularly consulted about what they want to know and do. They go further to define 'constructivist teachers' as those who respect children by upholding children's rights to their feelings, ideas, and opinions. These teachers use their authority selectively and refrain from using power unnecessarily. In this way they give the children the opportunity to develop personalities characterised by self-confidence, respect for self and others, and active, inquiring, creative minds.

Among the Ewe speaking people of the eastern part of the Republic of Ghana, Togo and Benin, a child is called 'devi' which literally means 'profit' or 'gain'. This concept of the child is enshrined in their philosophy of what a child stands for. To the Ewes, the child is a source of wealth to both the parents and the community; hence every adult member is responsible for the upbringing of children in general.

The arrival of a child to any family is greeted with happiness and merry making, this is because the child is believed to have been sent from the 'gods' or the ancestors to come and contribute to the wealth of the family. This idea is therefore manifested in the upbringing and child rearing practices.

Among many tribes especially in traditional setting, upbringing and child rearing practices are characterised by child abuse, child labour, and exploitation. Coupled with these, the child is seen as a servant and for that matter a 'slave' who has no right. In fact, the child is always wrong whilst the adults are always right. Again, the idea of 'profit' or 'gain' is vigorously pursued in the types of work that are assigned to the child. At a very tender age, the child is expected to take part in all household chores. For example, the child is expected to draw water, to clean the house, go for errands and as well do all other difficult tasks that might be assigned to him.

In many cases, the child becomes the 'sales person' for the family, hawking and advertising the wares of the parents. Older children are used as farm labourers and no doubt every child has to contribute to the income of the family.

On a more inhuman treatment of the child as a 'profit commodity', the child is sent to servitude to pay off a debt of the family. A typical wide spread practice among the Anlo's and Tongu people of the Ewe speaking people in the Republic of Ghana is the 'Trokosi' system where the female girl child is sent to a shrine for the atonement of the sins committed by their relatives and forefathers.

From an interview with a native of Logba-Vinta, who has taught for many years in the traditional area, he is of the view that in spite of modern school education, the pattern and the

practices still exist. The idea of 'devi' is therefore internalized by the teachers and this attitude has a negative impact on teaching and learning in general. Once a child comes to school, he is obligated as a matter of tradition to serve the teacher no matter the age of that child. The child serves and works for the teacher both at home and on the farm.

The consequences of these are so grave and immeasurable to the total development of the child. Academically, the child lacks the pre-requisite skills in most of the subjects due mainly to the teacher-centred methodology that is highly prevalent in the schools. Again, there is a high degree of loss of instructional time due to undue emphasis placed on co-curricula activities. My observation is that, to justify their actions, teachers tend to hide behind the co-curricula activities to exploit children's labour and sometimes also abuse them. Gradually children become de-motivated with schoolwork, develop very low morale and negative self-concept and eventually drop out of school. Those who remain in the schools do not gain much from the teachers' method of teaching. Eventually, children complete school virtually illiterate.

Unfortunately, these reflections of DE VRIES & ZAN cannot be found in a typical Ghanaian primary school classroom. Thus the majority of teachers cannot be described as constructivists.

Below I present a classroom case study that can be fairly generalized for a good number of Ghanaian classrooms. It may be not be typical of a classroom in Germany or America but it gives a bird's eye view of the Ghanaian classroom story.

2.2 A CASE STUDY CLASSROOM ACCOUNT

The narrative account is one out of the thirty classroom observations I carried out personally during the field studies. The approach was to sit in the classroom and record step by step all the activities taking place in the classroom in the form of an anecdotal record. No interpretations or judgements were made during the recording phase but comments were however noted. This case was singled out because is it very representative of the observations I carried out. It took place in November 1999. The teacher had been teaching this class for $2^1/_2$ months.

Adjoa Tawia is a class one teacher of Fankyinoko Primary School. (For the sake of anonymity both the teacher's name and the name of the school have been changed). She has pupils who come primarily from lower middle class and working class homes. She has taught

in the school and in the same class since she came out of the Teacher's Training College five years ago.

The scene begins at 10:30 a.m. The children return from break and try to settle down. The teacher was already in the classroom when the children returned. (There is no common room for teachers in the school so teachers basically stay in the classrooms sitting at their desks or at best may go out to sit on the veranda to talk with other teachers while the children are having their break).

Teacher: (Almost shouting) '*Sit down and keep quite!"* The class is still noisy. (Pupils, trying to settle down). She hits the cane on her table and speaks above her voice *"I say get settled for us to start work."* Suddenly, the noise dies down and the class looks controlled and settled. She goes to a table, opens a polythene bag and brings out many mini flags of Ghana and begins to distribute them among the pupils.

Pupil: (Noisy again) '*Teacher, Teacher, one*" (they shout here and there). Some getting up from their seats to ensure they get one.

Teacher: (With a firm voice) *"If you don't sit down and keep quite, you will not get one!"* She hands over one to Timothy who is standing with an outstretched hand.

Pupils: More pupils rush to where the teacher is standing to get a sample.

Teacher: (Apparently getting angry and frustrated). Returns to her table picks the cane and rushes to the gathering of pupils and hits them on the heads, and speaking at the same time *"I say sit down all of you!"*

Pupils: They rush to find their seats to escape the cane.

Anthony: (Almost shouting*) "Please, Miss, I don't get"*.

Abena,

Kweku

and Prosper: (Almost simultaneously) "*I also don't get some."*

Teacher: (Trying to calm down*) "share with your friends."*

Pupils: They begin to move their chairs to sit near their friends to share the flag samples.

Teacher: (She waits for them to settle down and then she posses a question). *"Who knows what we are going to talk about today?"*

Pupils: *"Yes, yes, yes, Miss I, Miss I"* (A lot of hands go up).

Pupils: Talking among themselves. One person Kofi Antobam snatches the sample flag from Fatima. She shouts *"teacher, teacher, Kofi has ..."*, she stops in the middle because Kofi puts back her sample flag on her table.

Teacher: She turns her attention to Elfreda and says (with irritation) *"You people have to behave. You have to pay special attention during this lesson because you'll need to use the information for tomorrow's test. If the discussion goes well and you do well in tomorrow's test. I have a special treat for you."*

Pupils: (In a spontaneous, exhuberant roar) *"Yea, Yea!"*

Teacher: *"Who can tell me the first colour of the flag?"* (Asking another question when the first one has not been answered).

Akroboto: (Calling out) *"I can."*

Teacher: (Ignores him) calls Edward who had his hand raised and was calling the teacher.

Edward: "I"

Teacher: (Looking confused*) "So tell me."*

Edward: *"Red"*

Teacher: *"Yes, another one."*

Pupils: About 1/2 of the class raise their hands with many of them shouting *"Teacher, teacher!"*

Teacher: *"Don't call me, just raise your hand."*

Afum: (Calling out) *"Yellow"*.

Teacher: *"Good. Clap for him. What is the other colour?"*

Teacher: *"Yes, Angela."*

Angela: *"Football"* (Apparently answering the first question of the teacher).

Teacher: (Apparently surpprised) *"No, Yes Beatrice"* (she calls another pupil).

Beatrice: *"The Ghana Blackstar football team."*

Teacher: (Almost at a loss) *"Why? No."* (She calls Anthony)

Anthony: *"The Black Satellites."*

Teacher: (Apparently frustrated tries to control her voice) *"What is wrong with you today?"* She goes to the board and writes >The Ghana Flag< on the chalkboard and turns to the class and says *"This is the topic for the day. You all say it, > The Ghana Flag<."*

Pupils: (In unison) they say *"Aha!."* They repeat after the teacher *"The Ghana Flag."*

Teacher: She turns again and writes >Social Studies< on the board and says *"We have Social Studies now and we will be talking about the flag of Ghana. Sintim go to the cupboard and bring out the exercise books for Social Studies and share them."*

Sintim: Goes to the cupboard, picks a pile of exercise books. He begins to share them. He is able to recognise a few names written on the books and gives them out but begins to fumble. (Apparently encountering difficulty recognising other names).

Teacher: She takes over the book distribution and begins to call each student or pupil by name and they run to take their books. By the time she finished almost 15 minutes was gone.

Teacher: *"Yes, what is the other colour of the flag?"* (She calls Sintim).

Sintim: *"Gold."*

Teacher: *"Gold is the same as yellow. I mean the other colour. Yes Aggie."*

Aggie: *"Green."*

Teacher: *"Good, what else do you see on the flag?"*

Pupils: More hands are up some still trying to call the teacher.

Andrew: (Calling out) *"I see the black star."*

Teacher: *"Good, clap for him."*

Pupils: (The pupils forseeing the trend of the questions are ready with their answers for the rest of the colours and so they have their hands up even as the teacher asks the questions).

Teacher: *"Who can tell me what the red colour in the flag stands for?"*

Pupils: (Two pupils walk to the teacher). *"Please may we go out to urinate?"* They are granted permission to go.

Teacher: (She repeats the question). Halfway the question three girls come up to ask permission to go and drink water. She stops in the middle of her question. *"You just came from break, you are not going anywhere. Go back and sit down"*. (She screams out).

Pupils: They return dissappointed to their seats and start murmuring something to themselves and among themselves.

Teacher: *"I said who can tell me the meaning of the red colour?"*

Teacher: *"Yes, it means blood."* (She answers it herself). *"That is our forefathers who fought to get independence for us. Some of them died and the red represents their blood."*

Ama: *"Madam, I don't understand forefathers."*

Teacher: *"It means our older people who are dead and gone, like your great great grandfathers and mothers."*

Mariama: *"Teacher!"* (she calls out) *"What is independence?"*

Teacher: "*It means that there was a time the white people from Britain ruled us. They were the Head of State / President and occupied all the big positions in Ghana. And then our old people fought with them and said we want to rule or look after ourselves and after some time they left and allowed us to rule ourselves. That is independence."*

Alfred: (Calling out*) "When was that, Miss?"*

Teacher: *"In 1957. So how many years is it now?"*

Pupils: Some of them start writing strokes on pieces of paper. Others were counting their fingers. Yet others were counting aloud by mentioning the years 1958, 59, 60, 61 as they count with their fingers.

Teacher: She calls Amponsah.

Amponsah: Stands up, but he is still busy counting the strokes he is making on his paper.

Teacher: Calls another pupil. *"Yes Amina."*

Amina: *"Madam I don't know."*

Teacher: *"Okay, Ben answer."*

Ben: *"I have not finished, please Miss."*

Nancy: (Screams out) *"42 years."*

Teacher: *"Terrific! Good girl, clap for her, another."*

(At this time the school bell rings for a change of lesson. The teacher sighs *"hmm!"*) *"Lets continue."* Teacher now tells them the meaning of the other two colours. *"The green colour stands for the forest and our vegetation and plantations. You know we have large portions of forest from which we get timber and farmers plant cocoa, plantain, pineapples and other cash crops that we export to get foreign exchange such as Dollar, Deutsche Marks now Euro, Pounds and CFA Franc."*

Pupils: A pupil on the front row interrupts the teacher. *"Miss, what is cash crop?"*

Teacher: *"They are the things we plant and sell to get a lot of money. Let me continue. The yellow colour stands for our mineral deposits, such as gold, mangenese, bauxite, iron ore etc."*

Pupils: Two hands go up.

Teacher: *"Yes Tuntumi, what is it?"*

Tuntumi: *"Miss, you said >mineral deposits< - do you mean Fanta, Sprite and Coca Cola?"* (These drinks are popularly called minerals that might have confused them).

Teacher: *"No, those deposits that can be found in the earth are called minerals. Who knows anywhere in Ghana that some of these minerals are mined?"*

Akua: (Calling out) *"Obuasi, I was there last holiday to visit my auntie."*

Teacher: *"Akua, what type of mineral is mined there?"*

Akua: *"Gold."*

Teacher: *"What is the colour of gold? Yes, Kakra."*

Kakra: *"Yellow."*

Teacher: (Looking exhausted and apparently exhibiting synptoms of non-acomplishment*). "So now you know the colours of the Ghana flag. When we got our independence from our colonial masters, we developed our own flag and that is what we have been using till now. So our flag is now 42 years old. You can see our flag is very old and older than any of you here. Since we have to give respect to our older poeple then we should all show respect to the National Flag."*

Pupils: *"Yes, Madam."*

Adriana: Riases her hand with 4 others.

Teacher: *"Yes Adriana, what is your problem?"*

Adriana: *"Why do we have a black star in the middle of the flag. My mother told me that stars are shiny and bright why is this one black?"*

Pupils: (At this time 6 hands were up).

Teacher: (Noticing that many pupils were gazing at the floor or looking out of the window, she begins to speak louder and faster without much emotion or enthusiasm) *"Oh! I forgot, it represents black Africa and the fact that a Black African nation had gained independecne and it will shine like a star through out the whole world."*

Pupils: *"Ahaa!"*

Teaher: *"Pass your books forward and get ready for mathematics."* (At this point we had spent more than 55 minutes on this lesson and a good number of the pupils appeared exhausted).

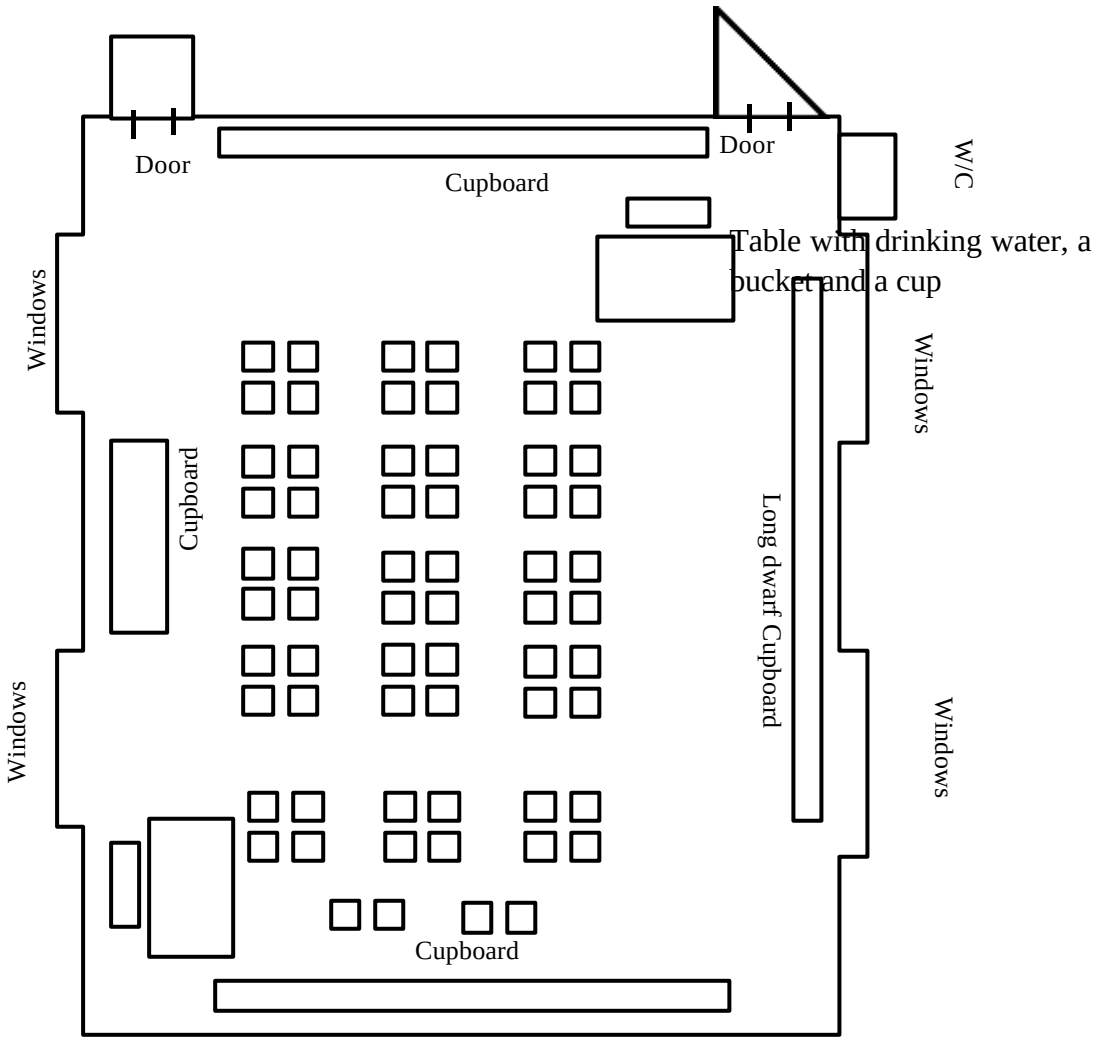
2.2.1 Critique on Case Study

The analyses of the narrative account will focus on the weaknesses that emanate from the presentation made by Adjoa Tawia, the class teacher. In this analysis I will examine the objectives, introduction, time management, questioning technique, calling out behaviour of pupils, sequential and logical flow of the lesson and the use of teaching and learning materials.

Below is a graphic representation of Adjoa-Tawia's class one classroom.

Fig. 2.2.1:

DIAGRAM OF THE CLASSROOM OBSERVED



The diagram above shows a picture of a classroom, which is fairly well endowed. As will be described in some of the narrative accounts in this chapter, not all the schools are fortunate to have these facilities. This is a school though public, has a lot of support from some church organisations, non-governmental organisations and some international organisations because of their emphasis on catering for the disadvantaged in society including orphans and abandoned children. These characteristics of the school open it up to a highly differentiated

population with distinctly different backgrounds. The school administration is also open to the infusion of new ideas to enhance teaching and learning. Some of the teachers in the school were also my former students I taught in the initial teacher training college and therefore were very ready to exist in the project. These among others formed the basis for the choice of the school during this observation.

2.2.2 The Objectives

The lesson had five objectives, which I list below:

By the end of the lesson, the pupils should be able to do the following:

a. Tell the colours of the National Flag

b. Explain the meaning of the colours

c. Tell the meaning of the black star in the flag

d. Draw and colour and label appropriately the National flag

e. Give one reason why a nation needs a flag.

An examination of the lesson shows that only 3 out of the 5 objectives were achieved. Even the third objective was achieved by accident since if it had not been for the last minute question posed by Adriana she (the teacher) would have concluded the lesson without tackling that objective. The first view is that for a lesson of 30 minutes the five objectives were too many for the lesson. It gave the teacher very little room to manoeuvre, when one considers the fact that the classroom is a complex environment and the interactions that take place within it are sometimes very erratic and unpredictable. Dealing with a class of 49 pupils with different experiences and previous knowledge about the subject matter, enough time should be allowed for exchange of ideas and discussion of various viewpoints.

If one were to arbitrary allot time to the five objectives something like what is given below may be the situation.

a. Objective 1: 3 minutes

b. Objective 2: 9 minutes

c. Objective 3: 3 minutes

d. Objective 4: 7 minutes

e. Objective 5: 3 minutes

These give us a total of 25 minutes leaving 5 minutes to be shared among the introduction - 2 minutes and conclusion 3 minutes.

It is my considered opinion that this is too tight a schedule that is bound to present problems to the teacher. For one to successfully implement this time schedule in a class one lesson then the teacher has to control tightly all the classroom behaviours. He has to shut out a lot of discussion that may emanate from pupils different previous knowledge, probably reduce the number of pupil questions and limit severely interactions that can enhance better understanding and transfer of learning. She was likely to hurry the children through the various activities. For example, with the drawing it was definitely going to be difficult to get all the children to finish the activity e.g. drawing, colouring and labelling of the flag within 7 minutes. For instance from the observations made using the pre-diagnostic instruments employed in this research for over 300 class one pupils, the fastest time used in drawing and colouring a human being was between 4 - 6 minutes and others used between 8-12 minutes to complete the same task. It must be stated here that in this case, the pencils, papers, erasers and all the colours needed were presented to the child at once and therefore no time was wasted looking for or searching for these. But in the case of this class, pupils were now going to turn the pages of their book to the appropriate place, start searching in their bags for pencils, some may need to sharpen their pencils, others may not have and will have to borrow or wait for others to finish. The distribution of crayons by the teacher would have also consumed time. Apart from that, they were not going to use free hand to draw as was in the case of drawing a human being. According to the teacher's notes they were required to use straight edges to make neat and proportional drawings. Looking for these straight edges will also consume time since very few pupils will have these implements. Thus on the average, the class needed about 15 minutes to complete the drawing.

Another point that makes the five objectives difficult to achieve within the 30 minutes period is the fact that though not stated in the objectives, the teacher's lesson notes indicated that she expected pupils to write down simple sentences as notes in their books. I produce below the notes as presented by the teacher in her lesson notes:

> "*The Ghana flag has three colours.*
>
> *They are red, yellow and green.*
>
> *In the middle is a black star.*
>
> *The red means the blood of our forefathers.*

The green stands for our forest.

The yellow stands for our rich mineral resources.

A flag represents the independence of a country."

She expected pupils to copy down the above notes into their books from the summary that she will build on the chalkboard. It must be noted that she didn't build any chalkboard summary or points as the lesson progressed. Both activities by teacher and pupils needed time that could not be accommodated in this lesson within the 30 minutes time frame.

2.2.3 The Introduction

The introduction was weak, non-motivating and did not link previous knowledge of pupils to the new lesson. In fact, there was effectively no introduction to the lesson. Why did the children come up with answers like football, Black Stars and Black Satellites? They have seen that when there are international matches involving the national team the (Black Stars and the national under twenties, the Black Satellites) people usually hold these mini flags and wave them in support of their national team. That is the immediate background knowledge available in the repertoire of the children that the teacher should have harnessed to build a bridge unto the new lesson, which she apparently ignored. The exclamation of the pupils *"Ahaa!"* was to say something like *"Oh! I see this is what the teacher wants."* Thus the principle of teaching from the known to unknown was not effectively exploited by the teacher.

It is very important as teachers to be flexible enough and resourceful to be able to tap and utilize to the full the experiences and responses of pupils unless it is far fetched. Even in such a situation, you must let the children know why these responses do not fit into the issue or topic being discussed. In other words, no child's response should be ignored. Each person or response must be properly and fully "disposed off". By ignoring the previous knowledge of the children, she missed out on building out effective linkages that would have probably generated very interesting and enthusiastic class participation.

2.2.4 Time Management

Closely linked to the issue of achieving objectives is how time is managed within the teaching-learning encounter. As postulated by GOOD & BROPHY (1991) Adjoa appears to be

deficient in action-system knowledge. She spent 15 or more minutes distributing samples of the mini flags of Ghana and exercise books for the children, both of which were not used in the lesson. Thus, wasting precious time, which could have been used to focus attention of the children on the subject matter. The associated problems these two 'non critical' activities created for class control also took away vital time from meaningful engaged time and time for on-task behaviour. The teacher had to spend a lot of time as it were to 'steer the class back unto the road'.

It is important for teachers in the preparation of the lesson notes to allot time frames to the various sections of the lesson development. These should not only exist in the teacher's mind as estimated but written down in the lesson notes to guide the steps or stages of the lesson. This time allocation aids one to know how much information or activity to push into the allocated time frame. For example:

- Introduction: 3 minutes
- Step / stage 1: 6 minutes
- Step / stage 2: 5 minutes
- Step / stage 3: 6 minutes
- Closure which involves the following:
    - Summary
    - Pupil/teacher questions that directly relate to the objectives
    - Assignment/exercise(s) or pre-lesson preparation:

        10 minutes.

2.2.5 Questioning Technique

The teacher almost always begins her questions with *"who can"* e.g. *"who can tell me the first colour of the flag?"* It is therefore not surprising that Akroboto and Edward responded *"I can"* and *"I"* to the above question respectively. Questions should be direct and indicate exactly what it is intended to elicit.

Questions are supposed to be posed to the class, not to individual students. The principle is to pose the question to the class, allow some time for pupils to digest it, and then call on one person to answer. When it is done the other way round, the other pupils shut themselves out

assuming that the question is only for the named pupil. For example, though Ekua brought up the issue about Obuasi, it didn't mean that she must be responsible for answering a question emanating from it. The teacher should not consider it as her duty to answer all questions posed by pupils. They should be redirected to the pupils. This increases the number of pupils who participate in the lesson.

It is also important to watch the type of questions that are asked by pupils. Though I have indicated that every individual pupil must be properly disposed off, it does not mean that one is bound to give an answer to every question posed by pupils. When the question is clearly the subject matter of another lesson you can inform the pupil as such e.g. "this issue will be discussed in our Social Studies lesson next week so hold on to that question". For example, since the subject of independence was the subject matter of another lesson according to the forecast of the teacher, there was no need to go into details about it, e.g. responding to the 'when' of independence and for the teacher to follow up with another question on "how many years is it now?" That took up considerable time when the main objectives had not been addressed. By the teacher following up this question on independence, she only succeeded in derailing her lesson. She clearly shifted emphasis in the conclusion, focussing on the issue of how old the flag was and the need to respect it because it is old which had no place in the objectives of the lesson. The conclusion of a lesson is meant to tie in all the loose ends and ensure that the pupils carry with them the major issues or points you wanted to pass on to them in the course of the lesson. It is thus critical and must relate to the main objectives of the lesson. Therefore when the conclusion of a lesson is at variance with the main objectives the children leave the classroom with a wrong picture and that is a discredit.

2.2.6 Calling out Behaviour (Credibility)

Consistency is important to send a message to the pupils. In the beginning of the lesson, the teacher rightly ignored Akroboto when he shouted out a response. But subsequently she accepted responses from students who called out and even in some instances asked the class to clap for them. If there is a behaviour one intends to discourage among pupils, it is important to consistently do that. But if one time you disallow it, another time you inform them not to do that and another time you accept and applaud it, pupils don't take you serious and the problem cannot be checked.

Another problem of credibility the teacher had was in relation to pupils calling her while their hands were raised. At the beginning of the lesson, she called Edward who was calling her

name while his hand was raised. But when others started shouting her name with their hands raised, she told them not to call her but just to raise their hands. Such inconsistencies or intermittent reinforcements only tend to strengthen the occurrence of the undesired behaviour. Such discrepant teacher behaviours may lead to countless discipline problems, since they convince pupils that the teacher does not mean what he says or is not aware of much of what happens in the classroom in relation to his behaviour. This creates classroom discipline problems.

2.2.7 Sequential and Logical Flow

The lesson suffers seriously from a logical flow thus rendering it non-sequential. The teacher begins with the distribution of sample flags of Ghana to pupils, attempts to introduce the lesson with questions, she is jolted back by the unexpected answers she gets so decides to introduce the topic and writes on the board.

Just when pupils' attention was getting focused on the Flag of Ghana, she breaks into this with distribution of books, and then goes back to the main subject again. She disrupts the flow again by stopping midway to scream at three pupils who sought to attend to a call of nature. Though I do not want to go into the merits and demerits of refusing them permission, the act of addressing them before the entire class distracts the whole lesson.

Attending to calling out behaviours takes her off her main focus e.g. to now discuss how long we have been independent instead of the flag of Ghana and what it stands for. Thus, she appears to be going back and forth and the flow is seriously disrupted. She even concludes the lesson on a 'non critical' emphasis only to be brought back by a pupil's question to address one of the major objectives of the lesson.

2.2.8 Teaching Learning Materials

It is important to make available teaching learning materials but if they are not put to use at all or used in a creative and imaginative way, then its role in the teaching-learning session is greatly minimised.

In the first place, the sample flags were not enough. This created some disruptive behaviour that affected the flow of the lesson, time management and class control. In the pre-planning stage of the lesson, if the samples were known to be inadequate in terms of number then, one

needed to figure out or plan how the distribution should be done to avoid dislocations in the lesson presentation.

A set of cut out papers on the basic colours could have also been used. So that instead of only three or four pupils given answers to the colours of the flag, colour matching and other activities could have been used to increase pupils' participation in the lesson. Also it would have broken the monotony in asking, which is the first, second, or third colour. The tragedy in this lesson is that at the end of the day, despite the time spent sharing these inadequate flag samples they were not at any point in time in the lesson referred to or used consciously by the teacher. So what role it was expected to play to harness learning is not clear.

2.3 NARRATIVE ACCOUNTS OF SOME GHANAIAN CLASSROOMS

Following the analyses of the classroom case study I personally observed, I will present here other analytical observations made by Dr. Esther Goody of Cambridge University, England. She spent several years in the Northern part of the Ghana doing classroom research. Also the views of another research team that reviewed the Basic Education Sector of Ghanaian Education in 1996 which I and Dr. Goody participated will be analysed. These accounts will relate to the instructional language policy, pedagogical skills of teachers, school physical infrastructure and how they impact on classroom learning and other teaching-learning interactions among others. I discuss below some of the narrative accounts of the Ghanaian classroom that are also documented in "The Tale of Two Ghana's: A Look in the Classroom" MOE (1995).

Since narrative accounts or anecdotes describe live situations of ongoing phenomena, they have a powerful revealing potential. They bring to light many things that the ordinary observer may ignore. They are the stories of the classroom interactions and each reader can assess and focus on the elements or factors that are of interest to him. Each narrative will be preceded by a research question, which captures in essence the focus of the account.

These are accounts of rural classrooms, focussing on the way in which the language of instruction influences teaching and learning. The first two accounts will examine the problems created when English is used as a medium of instruction in an environment, which does not support the laying of a firm foundation in the language. The next account will highlight the problems encountered on the other side of the coin when the local language used to teach the children is different from the one children speak at home and in the community. The next set

of accounts will focus on the necessary conditions that support the teaching of the local language (L1) and using English as a medium of instruction.

2.3.1 Research Question: *What kind of learning takes place in the rural classrooms when children who never hear English at home or in the community are taught solely in English.*

In this account English Language which is the second language of the pupils (L2) is the medium of instruction and there is no teaching of reading and writing in local language. The narrative summarises the observations done in P 1/2, and P 3/4 English classes in a village called Birifor village in 1991.

Birifor is a cluster of 10 compounds, each holding several farming families. The village was founded in 1926. The present elder of the community came there as a youth and is the oldest survivor of the pioneer settlers. The community has been the centre of dispersion for several other Birifor villages, and its historical precedence probably accounts for the fact that it had one of the earliest schools in a Birifor community, which started in 1957.

The head teacher has found a room in the village to live in, and only goes to the district capital at weekends. This means on Thursday afternoon, since the market is every Friday, and it is accepted that no one goes to school on Fridays because of the market. (Hardly anyone else in Birifor goes to the Friday market, since this means a walk of 24 km, which is only undertaken if there is something to sell or to buy). As it is the rainy season there is usually one day a week when it rains, or threatens to rain, and school is not held. Otherwise it is also when the children are needed to clear the school grounds, or work in the head teacher's farm, that there is no school (usually not more than one day a week). During this year there was only one teacher in this school in Birifor who was also the head teacher. It was not until the following year that only one teacher from Cape Coast, a Fanti speaker, was sent to join the head teacher.

The school, (which for purposes of identification will be denoted with the letter **'A'**) has been under two huge silk cotton trees since it was first founded. The children sit on poles supported by forked sticks, and lean their elbows on another, higher pole which serves as a 'table'. The head teacher is a Gonja who does not speak Birifor, and so teachers entirely in English. The lower classes sit in the front row, and the upper classes behind, but a big boy who is in P2 sits on the higher pole with those in P5 and P6. The children in the front are mainly playing, as the teacher is busy helping a P6 boy who is preparing for the final primary schools exams. He is sitting on a stool under a different tree. There are no books visible, but this is not surprising

since everything has to be carried back to the head teacher's room when school closes at noon, and be brought out again next day. (Some books and the blackboard were burned when the thatched room they were being stored in caught fire. Money for another blackboard has finally been collected from the parents).

The teacher leads P1 and P2 in reciting the English alphabet, but makes no attempt to sound out the letters with them. He writes 'm', 'o', 'p', 'q', and 'r' on the blackboard, and tells them to practice these letters. Some write the letters in the sand, and a few use pencils in tattered exercise books. The teacher now turns his attention to P3 / P4.

It is time for English reading. There are three copies of the book for the eight children in this group. The teacher puts several words on the blackboard (they are the new words in this lesson). He reads the first word and the children repeat it after him, then teacher reads the second word, it is repeated, and so on. Teacher asks one of the girls to start reading. She falters after the first few words. He calls on another child who has no much success. The teacher now reads the passage. Next, he asks the first girl to read again, and she does better this time. The words on the board seem to help. Each of the children in this group is called on to 'read' the same passage. (By now even I can remember it.) Now the teacher calls out one of the words on the board and the children are called on in turns to come up and identify which it is. The child points to the word, repeats it and the rest repeat it after him. Finally, the words are erased from the board and the children write them from memory as dictation in their books and others write in the sand. The teacher scores each child's work and the wrong words are re-written correctly so that the exercise books contain only correctly spelt words.

By now none of the P1/P2 children are still practicing the letters of the alphabet. Some girls have gone to kick a leaf 'ball' in a counting game. The boys are tossing a snail shell so that it spins on the point. If you don't get it to flip the right way up it won't spin and you lose your turn.

There is no discussion of what this reading passage means, beyond the naming of the English words. No child asks a question. There are no exercises, which let the children select words with appropriate meaning. The children do not put words together themselves into phrases or sentences. The emphasis is on being able to recognise words and pronounce them correctly. (This is 'reading').

The second observation takes place in another school in Birifor, which will be denoted by the letter ‘B’. The ‘B’ school is made up of three little low rooms. The community built it from local swish after several appeals by one parent in particular. The straw roof provides some

shelter, but leaks both sun and rain. The furniture consists of two benches in each of the two classrooms used by P3/P4 and by P5/P6, while the smallest children in the third room sit on mud blocks intended for strengthening the school walls. There is one blackboard, which is moved between classes depending on where the teacher is. The space in front of the schoolroom has been beaten hard and swept clean, and is framed by low shrubs. The borehole is nearby, so clean water is plentiful.

There are two trained teachers assigned to this school. One is the head teacher, whom I will call Simon, who lives 14 kilometres away in the district capital. He comes from Lawra District in the Upper West region and speaks Dagari, a language which is not as Birifor. The other trained teacher speaks Fanti, which might as well be like Greek to the Birifor children, and so teaches entirely in English (which is equally difficult to comprehend, since no one in the village speaks English, it is also seldom heard in the district capital either). The head teacher comes by bicycle, and the younger one hitches a ride when he can, or walks.

There is a third man who teaches in the school, Gbolo, who lives and farms in Birifor. He was a pupil teacher in the school when it first started in 1987. He has not been paid since pupil teachers ceased to be employed by the District Education authorities in 1989. However Gbolo's contribution is positive since he is the one who is most likely to be found teaching, faithfully every day. This is good since the head teacher is there only one or two days a week (often being unable to leave the district capital, owing to the need to see to his farm, or collect his pay, or attend market every Friday). The trained teacher was faithful when he first came, but by February he had not yet received any pay since taking up the post in September and became demoralized. He borrowed money to return home to the south where, he said at least he would be fed.

The observation takes place in Simon’s class. He is teaching Maths to P5/P6 (7 children). Only English is spoken during this class. He is at the blackboard doing examples with the class, which involve the calculation of distances travelled at given speeds in a given length of time. He has a textbook, but none of the children has one, or do they handle the teacher's book. (Problems must seem to come out of thin air.) Simon explains how to do this sort of problem, gives an example and writes the critical information, which is speed and time on the board. He asks for volunteers to solve the problem. A youth volunteers but has no real idea what to do. A second volunteers and also fails. Simon does a multiplication on the board, not explaining what the figures represent, and writes the answer “yes”. Simon “yes, that is right!” Now do it in your exercise books and I will check it." (Several more problems were treated in

the same way.) On one Simon makes a basic mistake, no one corrected him and I was not sure whether he noticed it or not. But it made the problem impossible to solve. Neither teacher nor students acknowledge this.

The overwhelming feeling in this class was of lack of comprehension. It was not possible in one period to work out whether this was due to the students' failure to understand English well enough to follow the basic explanation. A brief attempt at conversation quickly reveals that both comprehension and speaking of English are rudimentary. Or the difficulty may lie in their lack of understanding of the basic arithmetic involved. Perhaps in this school, the two problems are not separable, given the history of lack of comprehension. Indeed the problem seems to be an accommodation to failure by both teacher and pupils so that neither side considers it either unusual or capable of repair.

Comment:

The children have very little foundation in the English Language. Yet because the teacher cannot speak the language of the area the school is situated he cannot teach in the local language as the policy demands but in English. Coupled with that is insufficient number of teachers and inadequate school infrastructure. These dictate the above described classroom arrangement as the only plausible alternative. The amount of learning that can take place in such an environment is anybody’s guess.

2.3.2 Research Question: *What kind of learning takes place in rural classrooms when the medium of instruction is a Ghanaian language different from what children speak at home (L1)? What kinds of problems are created when the language of instruction in not a child's first language?*

This observation takes place in school ‘B’ where a different Ghanaian Language now (L2) is the medium of instruction. It takes place in P1/2 and P5/6 maths classes.

Simon is teaching maths to the combined P1 and P2 classes, about 25 children. He knew I would be coming to observe (since otherwise there would have been no GES teaching to see), and has brought several ‘teaching’ aids: two tins of different shapes, a cigarette box, a piece of string and a small ball; he tried to find a straight edge or ruler but failed. The children stand up to greet me when I enter: “Good morning Madam”. I ask (because I know they can answer it). “How are you” Sure enough, they answer, “We are fine, thank you”. Now we all sit down and relax. I go to the back of the room, very dark, (no windows). Soon the children loose interest in me and either listen to the teacher or talk to their friends.

Simon speaks in Dagari, he holds up the two tins and asks if they are the same. Silence. He takes the ball and one tin and again asks ‘Are these the same?’ Silence. Simon sends a boy to bring the blackboard, and when it comes he draws the shapes of the tin and the ball on the board. Are these (drawings) the same? Silence.

(Simon is trying to use these objects as examples of different shapes for a simple geometry lesson). But he cannot find a way of explaining what he is doing for the children to understand. The children think he is talking about the actual objects, and not their abstract shapes. I sense that at least the older children (and some must be nine or ten), are embarrassed because it is so obvious that the objects are not the same, that it cannot be the answer that the teacher wants. (They may think). But then what does he want them to say? I sit there wondering why the children do not ask any questions and why Simon does not create any context for separating of actual objects from their abstract shapes. I conclude that both teacher and pupils have a problem in talking to each other. The pupils can certainly understand some Dagari words, but cannot speak it, and fell awkward speaking Birifor since the teacher does not speak it at all. Simon knows the students can only understand very simple Dagari, and in keeping his presentation very simple, has failed to get across the basic ideas necessary for an understanding of the lesson.

Simon arrives at a partial solution, which is to get one of the older boys to come and draw several different objects on the board. Then he calls another boy to do the same underneath. Now he can ask them to compare two sketches of the same object, and in different objects. He has arrived at "The naming of shapes-in English: “This is a square” This is a square” “Good”. Now this one: “This is a parallelogram." (All) (Honestly - P1/P2) "Say it after me: This is a parallelogram." (And so on for circle and oval). The lesson ends on this note of declaiming in unison, much I feel to the relief of both teacher and pupils. The situation can be likened to using first Spanish and then Hindi to teach Geometry to French speakers.

Comment:

These accounts bring into sharp contention the policy regarding instructional language in the schools. It is indeed a problem-ridden policy that needs a holistic re-examination.

Research Question 2.3.3: *What kinds of learning take place in rural schools when literacy is first taught in the child's own language (L1)? What are the effects on motivation? What are the effects on facility in reading and writing?*

This account is based on the project of Dr. Goody called the Local Language Initial Literacy Project (LLIL). It is based on the use of local literates to teach P1 and P2 children to read and

write in their own language. Because it has been established that young children learn much better in small groups than in large classes, two teachers were assigned for each P1 class in the nine schools of the pilot project. The teachers were asked to divide the class into two so that each would be teaching not more than 15 or twenty children. In Birifor the teachers were Gbolo and Simwareju. Gbolo, as an experienced teacher, volunteered to take the younger group of children. Simwareju, who had just completed secondary school and was waiting for his results, was keen to take the slightly older P1 children and see how much they could learn. Because the agreement with the head teacher was that additional demands on classroom space would not be made, the LLIL classes were usually under trees. Gbolo worked under one tree where the small children practice the Birifor alphabet by writing in the sand. At first, there were 12 children in the younger class, but parents kept bringing more and Gbolo was reluctant to send any away. By the end of the year there were 17 in his class (P1a). Every day they practice writing letters, and combining these into syllables and simple Birifor words. They liked to 'play' with the sounds and were proud that they could write.

Simwareju's class met under another tree some distance away. This class, P1b. contained about 15 children. Benches are brought from the school if they are not in use, and the children sat in rows following the lesson (which is based on a Birifor primer written for adults by Mr. and Mrs. Koch of the Ghana Institute of Linguistics and Bible Translation based in Tamale). After the first practicing of letters in the sand and on slates, these children quickly begin writing in exercise books. They have raced through Book 1, and had nearly finished Book 2 by July (the end of the academic year). They are extremely enthusiastic about their Birifor work, and proud that they could do it so easily. Simwareju continued with them for another year (they were now in P2 of the primary school). In January of 1992 they wrote individual essays describing a Bagre festival they had attended in a neighbouring village. These essays were typed on stencils and stapled into a little book for the school to use the following year for P2 reading practice. The school 'A' children in the P2 Birifor class also wrote essays for booklets, and the teachers plan to exchange booklets between schools 'A' and 'B' so each has two types of Readers.

Comment:

It is necessary to restate here the instructional language policy. It is Ghana government policy that the local Ghanaian languages are used as the medium of instruction during the first three years of primary school. Reading and writing in the local language should also be taught as a basis for studies of literature and local history in the higher primary classes and JSS. It is

intended that oral English should be emphasised during the early primary grades to provide a basis for leaning to read and write in English and eventual fluent English literacy.

This project was reported to be highly successful in creating literacy in the local language and Dr. Goody strongly supports the notion that a mastery of the literacy in the (L1) makes transfer to (L2) easier. My observation in the teaching of English Language in German schools lends weight to the above notion. Though the Federal Ministry of Education is trying to introduce the teaching of English from primary one the present practice is that children start the learning of English from the fifth grade onwards. An examination of their English books reveals this principle. Often times portions of the English book are written in German; these may include instructions for the children and translations of certain grammatical concepts.

For example: Auxiliary Verbs

Wortbedeutungen: can (können), may (dürfen – bittet um oder erteilt Erlaubnis), must / have to (müssen), must not /(nicht dürfen – verbietet etwas). Beachte: "Must" und "needn't" kann man nur im "present tense" verwenden! Bei anderen Zeitformen vervendet man "to have to" (Englische Grammatik pg. 18).

I gather that it is assumed that since the available relevant previous knowledge is the German grammar it is used to explain the principles involved in using the auxiliary verbs in English. With this approach the child is able to rely on his previous mastery of the principles in the German Language to transfer to English. But the question is what happens to the child if there is no base from which to transfer?

In examining the use of Ghanaian Language as a medium of instruction a pattern emerges**.** Teachers of the early primary grades that are from the same language community as their pupils used this local language as the medium of instruction. However, when teaching English, English was used as far as possible. It is familiar to see classes in which maths is taught in the local language, using English names for numbers. This appears to work very well, with children participating in a lively fashion.

Incidentally, where shortage of teachers leads to combining P3 and P4, the prescribed pattern, where the lower class should be taught in the local language, and the higher in English, cannot be followed. Clearly a teacher must choose one language or the other in addressing the combined class. Some teachers extend the use of local language through the fourth year while others begin the use of English as the medium of instruction from this point onwards. Some teachers also mixed up the two languages, shifting briefly into the local language though English remains dominant. Teachers explain that this is necessary otherwise some of the children do not understand.

Both school policy and practice differ from place to place depending on the circumstances of the school, the philosophy of the head teacher and the demands from the community.

Regarding the teaching of reading and writing in the local Ghanaian Language, the following observations can be made. The teaching of reading and writing in a local language requires that the teacher has learned to represent in written form the sounds used in that language. This usually involves a few symbols for sounds not present in English. It also requires the (learned) ability to hear sound contrasts so that they can be accurately represented. Teachers who went to school during the 1950s and 1960s were usually taught in their local language the first three years, and learned to read first in this language. They remember with pleasure learning from flash cards made by their teachers, and reading stories written out by them. Such teachers have no difficulty in teaching the local alphabets in early primary classes, and some take pride in creating materials to use for reading and writing. However, from recently trained teachers, experience with Ghanaian language tends to be more academic oriented to the passing of examinations in secondary school. Often they have not learned to read or write their own language easily, and feel awkward about trying to teach it. None appears to have been taught how to teach vernacular literacy. These are the teachers who say that they use the local language as a medium of instruction but do not teach reading or writing in this language. They cannot, they say, because there are no materials, syllabus, no teaching aids. (And in

fairness to them, it is certainly the case that current emphasis on teaching for examinations put pressure on the teacher to teach in approved ways, according to the prescribed syllabus).

Research Questions 2.3.4: *What are the conditions under which the use of English as the sole medium of instruction in early primary classes is effective in producing fluent command of English?*

These narrative accounts are based on observations carried out by a research review team, which I participated in 1996. They were in two English classes in a newly built primary school in a town in the Upper West Region of Ghana. English is the sole language of instruction in this school, beginning with P1. The lesson observed was English spelling and word building in P1. After that it will be contrasted with two other observations from rural communities in the Northern Region of Ghana.

There are two trained teachers in this class because there are a lot of children. The teachers share the teaching, each taking certain subjects. This morning the teacher is Sister Theresa (Sister T) who is teaching the phonetics of the English alphabet as the basis for forming syllables and words in English. This whole class is conducted entirely in English. First the children recite *"a-as-in-apple" "b-as-in-box" "c-as-in-cat..."* Then the teacher puts two letters together to form syllables on the board. She then gets children to combine these to form short English words e.g. *"may, cat"*. This appears to be going over previous work.

Sister T. Now puts >o-o< on the board and asks *"What sound is this?"* "O-o". She then writes >book< on the board. *"Who can sound this for me?"* A boy volunteers *"book"*. T. says *"You are right, but that is not what we want, we want to find the sounds that make it > book<"*. Boy fails to do this. *"Who can sound it for us?"* Another child sounds *"b-oo-k"* "*book"*. T. *"Right! Clap for him!"*

The teacher continues with 'ee' 'b-ee' 'oa' 'b-oa-t'. 'ee' 'sh-ee-p'. As she builds words she goes to the alphabet that she wrote on the board as the children sounded the letters at the beginning of the lesson. She says *"Now I am going to 'lift' the 't' and carry it over and add it to 'b-oa' so we have >b-oa-t<". What have we got now?" "Boat". "Right, clap for yourselves, you have all done well."* Children clap.

This lesson continued for an hour during which the 60-odd children remained quiet and mostly attentive. Sister Theresa varied the activities around the learning of sounds of double vowels – her own active teaching was children coming to the board and writing in their exercise books. I was particularly struck by her sensitive handling of children who made

mistakes. She found ways of leading them into the correct response so they seemed to have discovered it themselves. Often this involved calling another child to answer a related question, and then helping the first child to see how this would change his own answer. When doing so she always called a girl to help a girl, or a boy to help a boy *"Who can come and help Abu?"* all quietly and without any indication that she was 'managing' anything other than spelling.

Sister Theresa spent three months to learn the Montessori method from a Nigerian sister who came to Ghana to train a few Catholic sisters. Her own language is Twi and she would like to become a Twi specialist, but otherwise to continue teaching reading by this method which she loves. The children in this class are mainly from middle class professional homes where English is familiar or even the main language. It is hard to see how the method would work unless children already have quite a wide English vocabulary so that they can recognise both the syllables and words being built from them. But it would be easy to use this method to teach the children to read in their own Ghanaian language. I have never seen this done.

The second observation took place in P2 classroom and the activity was children "Memorize and Recite Short Poems."

The children are reciting short poems in English that they have memorized. They are called to the front of the class, one by one. Each child bows and says*: "My name is ... I am ...Years old. I am in class 2. The title of my poem is..."* and then recites the poem. The teacher comments on loudness, and the correct order of the preliminary introductory information. Three times a child is sent back to his seat to correct his dress: tuck his shirt into his shorts, correctly button shirt etc. The children speak very quietly and some are clearly shy. But among them they have memorised 6 or 7 poems (very probably more), and can render them with sense. They are encouraged to use appropriate gestures (it becomes clear that teachers suggested these). Shooting at 'bird-in-a-tree', etc. i.e. the teachers are emphasizing conveying the meaning of each poem.

After a child's recitation of a poem newly learned for today the teacher corrects his pronunciation and makes the class repeat several words in unison. For example:

Teacher*: Not 'dey' {the} 'de' {the}. The teacher is almost saying 'th' but it still sounds like 'd'. When I look at her lips I see she is forming 'th', but it isn't audible as 'th'. The children must hear this as a correction of 'de' instead of 'dey'. Later in the poem the word 'rat' occurs and I hear the child saying 'lat'*

but the teacher does not correct this. (It is difficult for teachers not alert to sound contrast to help children correct English pronunciation).

It is astonishing to hear so many 7-9 year old children over half of a class of over 50 – speak a short poem all in English, clearly understanding the words. Most/many of the parents of children in this school are professional or government employees or teach at the Wa Secondary School across the highway. One child said in the interview with pupils that English was her favourite subject ‘ because it is easy to practice at home.

Observations carried out in more rural communities on the patterns of teaching English in the lower primary classes revealed a huge range in the methods used for teaching English, and in their effectiveness. In some village schools extremely large classes made it impossible for the close involvement of children in the teaching-learning process.

I give examples of reported observations of an observation in a village school by the (Northern Sector Basic Education Review team in 1996) in Kanga community. It saw in a P1 class some English picture readers’ (enough for the perhaps 30 children present to share a book between two or three children). But if all 119 children were present this would be, say 8 children to one book). Standing in front of the children seated on cement blocks under a majestic silk cotton tree, the teacher took them through four pages, pointing to a picture and saying the name in English. The children then chorused the name after him. This was repeated several times for each picture. But the teacher then went to do something else, leaving the children to 'read' on their own. The P2 pupils (also without a teacher) had now joined them and clusters of children formed around each book, one child pointing at the pictures to guess, and one boy took his book to ask the P3/P4 teacher whom one researcher was interviewing nearby. She impatiently told him not to bother her (Perhaps because she was talking to one of the researchers). In a little while, most children had wandered off or were talking to their friends.

The same picture reader was used in a P1 English class observed in Sakai another northern village school, but in an entirely different way. First the teacher led the class through pointing to and naming the pictures on several pages. This was clearly a review of previous practice. The children took an active role, and the teacher was ingenious in finding different ways to involve them. Then it was time for the short break (15 minutes). After break, the teacher took up flash cards showing the English word as he held it up (this too was clearly a repetition of familiar work). At first children seemed to guess at random and were usually wrong. Gradually they seemed to find a way to recognise the word on a card, and eventually most of

the children were giving correct answers (in English) to the six or seven cards in use. (This class met in a classroom though half the roof was off. The blackboard was in the dry end and the English alphabet and a matrix of numbers 1-100 were permanently at either end of the blackboard. There was no sign of the Issali alphabet (the local language of the area). This teacher mixed Isaali and English during this lesson, asking a child in Isaali what an object was - and accepting an answer in Issali. One child identified the 'bell' as something that went ‘clang, clang, clang’ and everyone laughed (perhaps thinking of the bell that signals the end of classes in this school).

This teacher succeeded in involving the children, securing attention and a high level of participation. The children obviously enjoyed the lesson. On the other hand, the attempt to use pattern recognition of written English words was clearly not effective at this level of English vocabulary, since children gave virtually random responses (to what was familiar material) at first. Although the English alphabet was on the board, there was no other written material in this rain washed classroom. I felt that the words written on the flash card had an almost magical quality for the children. If you concentrated very hard, and looked at the teacher's face for a clue, you might get it right. But there was no evident framework of written materials such as stories, songs let alone books or magazines within which to fit these quizzes on the cards that the teacher held up. These are children of farm families in an almost entirely illiterate community. None of the members of the PTA executive is literate, (apart from the Head teacher who is the 'Secretary'). They do not see books or magazines at home; there are no billboards or signs in their village (even on the fertiliser storehouses for FASCOM and the Ghana Cotton Board). It is some kind of miracle that many of these children do learn to read and write in English. All 23 of the JSS3 students from the Sakai JSS who took the BECE the previous year passed, and 15 have found places in secondary schools. But this small number represents students from several neighbouring villages that persisted through the 9 years of basic education. More effective teaching in the early primary years might significantly increase the proportion that make it through to the end.

Comment:

The above accounts provide evidence to support the fact that skilled teaching and home background are important when English is not a first language. Thus a clear dichotomy is presented. In the communities where there is a total absence of supporting facilities including a population of English speaking people, attempting to teach children in English will be an uphill task if not a total failure.

2.4 THE COMPLEXITY OF THE CLASSROOM

The above case study and the other narrative accounts forcibly draw home the point that classroom life is extremely complex in nature. It is a complex inter-play of many factors. Some events are intentional, predictable while others are accidental. This complexity is further deepened and sometimes to chaotic dimensions when classrooms are teacher-dominated, teaching is based on an inflexible syllabus, whole class methodologies are predominant, coverage rather than mastery become the objective of teaching etc. One can therefore safely conclude that majority of the problems in teaching emanating from the perspectives that will be discussed below are self imposed as a result of the form of teaching adopted. But, irrespective of what the objective of an action or behaviour in the classroom is, it influences the teaching-learning process in desirable or undesirable ways.

2.4.1 Classrooms Are Complex

In a single day, for example, a primary school teacher may engage in more than a thousand interpersonal exchanges with students (JACKSON, 1968). Teachers in secondary schools may have interactions with 150 different students a day. Yet teachers must interpret and respond to their students' behaviour on the spot. It is not surprising that most teachers are hard pressed to keep track of the number of the substance of the contacts they have with each student. It may not be important for teachers to remember all such contacts; however, they must recall certain information (the ten students who did not get a chance to present their class reports; the student who had trouble with vowel sounds during reading, etc).

Because teachers constantly respond to immediate needs while they teach, they have little time during teaching to consider what they are doing or planning to do. Unless they look for signs of student boredom or difficulty, they may not see them. Teachers are so absorbed in their work that it is difficult for them to get a perspective on what happens in their classrooms. CHANNON (1970), an elementary teacher in New York City, described it this way:

The teacher, like the doctor in the midst of an epidemic, is so busy with the daily doings that she finds it hard to get some distance between herself and her functions, to see what is happening. As a result she is vulnerable to each day's experience in a special transient way (p. 24).

Those who study teachers often comment on how busy they are:

Being a schoolteacher is having so much to do and so little time to do it that keeping up with the growth in knowledge is a luxury. Even the most dedicated teacher finds that trying to stay

abreast of subject matter is like paddling upstream on a fast-moving river. For the typical high school teacher, meeting with 125 to 175 students a day, marking many of the papers at night, and preparing for the next day's classes – not to mention maintaining a family life ad possibly a part-time job – it is a task without beginning or end (MAEROFF, 1988, p. 36).

Other teachers note that they are not only busy but also alone. FREEDMAN, JACKSON, & BOLES (1983) quote one teacher who describes the problem:

We never had any administrative encouragement to work together. There was never any time, there was never any made, there were very few group decisions. It's a very individual thing. If you found someone you wanted to share materials with you did it on your own. No, nobody has ever encouraged that route... (p. 270).

These observations by other teachers outside the borders of Ghana depict without any equivocation the complexity of the myriad of stimuli that impinge on the Ghanaian teacher too. If teachers all over the world are faced with these challenges but others in other less advantaged cultures have added problems of infrastructure, teaching-learning resources, large class sizes, inflexible curriculum, identifiable deficiencies in pre-service and in-service preparations, then their competence to deal with these challenges are seriously undermined.

If teachers are to grow as professionals, they have to overcome these problems by learning to monitor their teaching as it occurs, to reflect on it afterward, and to engage in professional development activities with colleagues.

GOOD & BROPHY (1991) put forward 5 indicators of classroom life as follows:

*a) Multidimensionality***:** Many deferent tasks and events occur. Records and schedules must be kept, and work must be monitored, collected, and evaluated. A single event can have multiple consequences. Waiting a few seconds for one student to answer a question may increase that student's motivation but negatively influence the interest of another student who would like to respond, and slow the pace of the lesson for the rest of the class.

*b) Simultaneity***:** Many things happen at the same time in classrooms. During a discussion, a teacher not only listens and helps improve students' answers but also monitors students who do not respond for signs of comprehension and tries to keep the lesson moving at a good pace.

*c) Immediacy***:** The pace of classroom events is rapid. SIEBER (1979) found that teachers evaluated student conduct in public an average of 15.89 times per hour, or 87 times a day, or an estimated 16,000 times a year.

d) Unpredictable and public classroom climate: Events often unfold in ways that are unanticipated. Furthermore, many other students see much of what happens to a student as well. For example, students can infer how the teacher feels about certain students by the way the teacher interacts with them in class.

e) History: After a class has met for several weeks or moths, common norms and understandings develop. Events that happen early in the year sometimes influence how classrooms function the rest of the year.

2.4.2 Teacher Knowledge

Many teachers, especially elementary teachers, fail to fulfil their potential not because they do not know the subject matter but because they do not understand students or classrooms. LEINHARDT & SMITH (1985) distinguish between subject matter knowledge and action-system knowledge. Subject-matter knowledge includes the specific information needed to present content. Action-system knowledge refers to skills for planning lessons, making pacing decisions, explaining material clearly, and responding to individual differences. Systematic study of such knowledge will help you understand how students learn and develop; how classrooms can be managed; and how to present information, concepts, and assignments effectively.

Recently, there has been increased interest in better understanding pedagogical, content and knowledge issues to how to teach particular subject-matter concepts (PETERSON, P. & SWING, R. 1982). Further, there has been enhanced discussion and analysis of the broad issue of how teachers learn to teach to how students move from the position of student to the role of teacher. LEINHARDT & SMITH (1985), further contend that teachers who possess both action-system knowledge and subject-matter knowledge are more effective than teachers who are deficient in one of these areas. A view I actively support. I have sufficiently argued in the first chapter that a greater number of our teachers in the Ghanaian primary schools may be deficient in one or both of these areas. Thus, the problems that emanate from these deficiencies as argued by LEINHARDT & SMITH are relevant to our situation in Ghana.

They argue that even with both kinds of knowledge, however, some teachers may fail because they do not apply the knowledge they possess. They may have inappropriately low expectations for students' ability to learn or for their own ability to teach. Or they may not be active decision-makers. Lacking an integrated set of theories and belief systems to provide a framework for informed decision making, they may not have effective strategies for

organising information gained from monitoring the rapid succession of events that occur in their classrooms.

However, in addition to knowledge, much teaching involves hypothesis. For example, we might assume that a student who has been out of his or her seat creating behaviour problems needs more structure (shorter assignments, more explicit directions, self-checking devices) to work alone productively. However, other factors may be producing the misbehaviour. If the problem is not improved by the correction strategies suggested by the first hypothesis, other strategies will have to be used. Teachers who have a rich fund of action-system knowledge are able to develop better hypothesis and adapt their behaviour more appropriately to the needs of their students but many Ghanaian primary school teachers have 'deficient funds.'

Teaching presents enduring problems. For example, teachers must teach a class or group most of the time but still try to respond to the needs of individuals. Similarly, they are constantly faced with the dilemma of covering a broad range of topics, yet doing so in sufficient depth to allow for meaningful learning. There are identifiable weaknesses in the knowledge base and methodological competence among teachers in most Ghanaian primary school classrooms who may find it difficult carrying out these.

GOOD & BROPHY (1974) argue that teachers do not perceive many classroom events because:

- classroom interaction involves fast and complex communication,

- teachers are not trained to monitor and study their behaviour, and

- they rarely receive systematic or useful feedback about their behaviour.

Finally, they emphasize that neither teachers nor observers are likely to understand classroom behaviour unless they know what behaviours to look for, know how to collect information accurately, and have a conceptual framework to use in analysing their observations.

2.4.3 Teachers' Perceptions of Their Classroom Behaviour

What proof do we have that teachers are often unaware of or misinterpret their behaviour? Some particularly revealing information is provided by BORG, KELLEY, LANGER & GALL, (1970), who prepared a number of in-service mini courses on specific teaching skills. For example, their mini course on independent work activity is designed to develop skills for the following:

(1) Discussing with students the meaning of working alone,

(2) Discussing the assigned independent learning task

(3) Eliciting potential problems and solutions,

(4) Establishing standards for what to do when finished,

(5) Providing delayed responses to completed student work, and

(6) Evaluating student's success in working independently.

These skills seem to be clear enough to allow teachers to know whether or not they have performed them in their teaching. Such was not the case. BORG et al. (1970) reported that the majority of teachers observed teaching small groups of students in mini course laboratory situations felt they had included the skills related to independent work; however, an analysis of data from observations showed that this was not usually true. If teachers cannot accurately describe their performance in laboratory teaching of small groups, it is unlikely that they could accurately describe their behaviour when teaching an entire class.

EMMER (1967) also presented evidence that classroom teachers are unaware of much of their teaching behaviour. He reported that teachers were unable to describe accurately even simple classroom behaviours such as the percentage of time that they and their students talked. Most teachers grossly underestimated the amount of time they talked.

A study conducted by GOOD & BROPHY (1974) provides even clearer evidence that teachers are unaware of some of their behaviours. These researchers found that teachers differed widely in the extent to which they stayed with students in failure situations (repeated or rephrased a question, asked a new question) or gave up upon them (gave the answer or called on someone else). Interviews with teachers showed that they were largely unaware of the extent to which they generally gave up on or stayed with students, let alone of their behaviour toward specific individuals. It appeared that teachers were so preoccupied with running the classroom that awareness of this dimension of classroom life eluded them.

Other researchers have reached similar conclusions. Indeed, even seemingly simple aspect of teacher-student interaction can be a complex perceptual problem in a fast-moving, complicated social setting such as a classroom. For example, MARTIN & KELLER (1974) noted that teachers usually do not accurately recall the extent to which they call on boys or girls, the frequency with which students approach them, the number of private contacts they initiate with students, or the amount of class time they spend on procedural matters. Thus to be able to help the teacher become aware of these he has to be assisted with skills of self evaluation and reflection.

2.4.4 Teacher Domination of Classroom Communication

Teachers dominate classroom discussion, even though they sometimes do not want to and may be not aware of their behaviour. ADAMS & BIDDLE (1970) concluded that teachers are the principal actors in 84 percent of classroom communication episodes. HUDGINS & AHLBRAND (1969) reported similar figures. CUBAN (1984) found that the basic structure of classrooms (heavy reliance on teacher-student recitation) has remained unaltered for decades. It has already been argued that as a consequence of some traditional philosophies and practices as well as pre-training orientation, most Ghanaian teachers use teacher-centred methodologies and pupils' talk is mostly limited to answering teacher questions. (GODWYLL, 2002; AKYEAMPONG, 1997; MOE, 1995; CRIQPEG, 1995).

HUDGINS & AHLBRAND (1969) believe that teachers can talk either too much too little and that both types of teachers may be unaware of their behaviour. In any case, the quality of teacher talk is just as important as its quantity. The same is true, of course, for student talk (MORINE-DERSHIMER, 1987).

2.4.5 Lack of Emphasis on Meaning

What teachers talk about is important. DURKIN (1978-79) found after 300 hours of observation in reading and social studies classrooms that less than one percent of the time was devoted to comprehension instruction. Two other studies indicated that mathematics teachers who actively instruct and emphasize the meaning of concepts obtain higher achievement from students than teachers who use instructional time for other purposes (e.g. transitional actives) or assign considerable independent work without much teaching (EVERTSON, EMMER, & BROPHY, 1980; GOOD, GROUWS, & EBMEIER, 1983). The case study for example has shown how Tawia (the teacher) shifted from the focus and main objectives of the lesson to focus on areas that are not central to the lesson. And also from the narratives we see how Simon shifted from the teaching of Geometry to learning to pronounce the names of shapes as if it was an English lesson. Thus, unless teachers are aware of how and why they use time as they do, they are unlikely to be effective.

2.4.6 Overuse of Factual Questions

Researchers have also examined the effects of teachers' questions. Borg et al. (1970) found that the types of questions teachers ask have not changed in more than half a century, despite

the demonstrated need for more variety. Factual questions help teachers to determine whether or not students know basic information. However, teachers ask many more factual questions than they probably realise. We are not advocating that all teachers ask fewer factual questions and more thought questions (which place higher-level cognitive demands on students). Our point is that many teachers who emphasise factual questions are unaware of their questioning patterns, and they are unable to analyse or change them. The usefulness of a question depends on why it is asked and at what stage in the lesson. It is clear from the case study earlier in this chapter that all the questions asked were factual. This is not an isolated situation but a typical index of the general picture in Ghanaian classrooms.

2.4.7 Few attempts to Motivate Students

After over 100 hours of observation in six intermediate-grade classrooms, BROPHY & KHER (1986) found that only a third of the teachers motivated students in the course of teaching. These few comments mostly consisted of general predictions that students would enjoy a task or do well on it. There were only nine attempts to explain to students why it was important to learn material, and none at all to explain how students could derive personal satisfaction from learning relevant skills or knowledge. They suggested that teachers make few attempts to motivate students in these ways because they do not know how to do so or to assess this aspect of their behaviour. The observations and experiences in Ghanaian classrooms do not negate the findings above (see classroom narrative accounts in chapter two).

2.4.8 Effects of Seat Location and Grouping

Sometimes the way a teacher assigns students to seat influences communication. ADAMS & BIDDLE (1970) discovered an “action zone” in classrooms, which included students who sat in the front row and in seats extending directly up the middle aisle, these students received, more opportunities to talk than other students, probably because their teachers tended to stand at the front of the room, where their attention was focused on nearby students. In any case, students seated in this zone received more teacher attention. Other researchers also have identified action zones where certain students monopolise classroom discussion, although the form of some action zones is quite different from that reported by ADAMS & BIDDLE (see, e.g., ALHAJRI, 1981).

Seating patterns can also influence peer relations. Teachers often group students by ability in order to reduce the range of individual differences within each group. Some teachers segregate low and high ability students by seating them apart. The top readers sit at the same table, the next best group sits together, and so on. In most Ghanaian classrooms the children either sit in rows or in ability groups. In order to increase interaction among the children classroom seating arrangement is critical. There is the need to harness the potential inherent in the children to assist each other in the learning process. This helps to reduce teacher domination in the teaching-learning process. Such seating patterns may create status differences among students and engender an attitude of inferiority in low achievers that removes them from the mainstream of classroom life (RIST, 1970). We suspect that many teachers are largely unaware of how seat assignments and grouping practices influence student behaviour.

2.4.9 Over Reliance on Repetitive Seatwork

Many students spend considerable time doing seatwork while the teacher instructs other students. During such times some students may engage in off-task behaviour that escapes teacher attention. ANDERSON, BRUBAKER, ALLEMAN-BROOKS, & DUFFY (1985), conducted one of the few studies that examined in depth what students do during seatwork times and how they attempt to understand and complete their assignments. Results showed that half of the time allocated to reading instruction was used in doing some other type of seatwork. The case studies from the Ghanaian classrooms highlighted earlier in this chapter and also in chapter six clearly lend weight to this finding.

In most Ghanaian classrooms instructional time is limited as a result of a combination of factors (see chapter one). Thus, engaged time would be further limited and on-task behaviour would also be affected. If observation or measurement of on-task behaviour is not even an index of understanding concepts taught, then when engaged time is reduced subsequently affecting time on task the natural consequence is that comprehension and mastery of tasks taught would be seriously limited in scope in most Ghanaian classrooms.

ANDERSON et al. (1985) further indicate that an average of 50 percent (but in some classes virtually 100 percent) of seatwork assignments used commercial products such as workbooks, dittos, and reading material. Although there were differences from class to class, seatwork assignments within each class were similar across time. The same form of assignment often was used two to five times a week (e.g., read a sentence and then choose on of three to four

pictures that represents the meaning of sentence, or copy sentences with blanks and choose the correct word from several options). These patterns do not differ from Ghanaian classroom practices (see classroom narrative accounts, chapter two). ANDERSON et al. also found out that teacher instruction related to seatwork assignments seldom-included statements about what would be learned or how the assignment related to other things that the students had learned. When teachers observed students who were doing seatwork, they typically monitored students' task engagement but not their understanding of what they were doing.

2.4.10 Differential Teacher-Student Interaction

When teachers do allow students to speak, which ones do they call on? JACKSON & LAHADERNE (1967) found that student contact with the teacher varied widely within the same classroom. Observing four sixth-grade classroom for about ten hours each, they found that teachers interacted with some students as few as 5 times and with others as often as 120 times. Analyses of Ghanaian classroom teacher-pupil interactions in class two to class five from 14 schools in Western and Central regions of Ghana confirmed these observations (SCHUBERT, 1993; Yakubu, 1993; CRIQPEG, 1993/95)

Although CAREW & LITHTFOOT (1979) did not find evidence that teachers discriminated on the basis of race or gender, they did find that teachers' affective reactions to students resulted in uneven attention. BROPHY, EVERTSON, ANDERSON, BAUM, & CRAWFORD (1981) also found that, teachers' affective reactions to students (attachment, concern, indifference, rejection) influenced their behaviour toward them. However, this influence was complex. Some teachers tried to hide feelings of attachment or rejection, whereas others expressed their preferences more openly. In general, research suggests that teachers vary widely in how they behave toward boys and girls and toward students who differ in ethnicity or ability (WILKINSON & MARRETT, 1985).

2.4.11 Student's Achievement

Perhaps the most consistent finding concerning teacher-student interaction is that teachers tend to call on students they believe to be the most capable more frequently. Some teachers show this tendency more than others. Many teachers call on high-and low-achieving students equitably, and some even call on low achievers more often than on high achievers. These

patterns were not different from the practices of Ghanaian teachers observed in this study. Other studies also confirms these patterns in Ghanaian classrooms (MOE, 1995; CRIQPEG, 1995)

BROPHY & GOOD (1970) studied the classroom behaviour of four first-grade teachers toward high-and low achieving students. They reported only minor differences in the frequency of teacher contact with students of different achievement levels but found important variations in the quality. Teachers were more likely to praise high-achieving students, even when differences in the correctness of students' answers were taken into account. When high achievers gave a right answer, they were praised 12 percent of the time. Low achievers, however, were praised only 6 percent of the time. Even though they gave fewer correct answers, low achievers received proportionately less praise. Yet low achievers were more likely to be criticised for wrong answers (18 percent of time compared to only 6 percent for high achievers). Furthermore, teachers were twice as likely to stay with high achievers (repeat the question, provide a clue, ask a new question) when they made no response (or said, "I don't know," or answered incorrectly).

It is important to note that not all teachers behave differently towards high and low achievers; teachers vary widely in the extent to which they are influenced by their expectations and treat low achievers inappropriately. Many teachers develop appropriate expectations for low achievers and treat them fairly (BROPHY & GOOD, 1974; COOPER & GOOD, 1983). Many others, however, especially those who are unaware of their behaviour, favour high achievers.

I have already established the fact that due to the pressure or demands on Ghanaian teachers to meet targets, there is a high propensity towards relying on high achievers to help move ones lesson forward as well as achieve objectives. If international research is consistent on the fact that teachers tend to call high achievers, then the situation in Ghana is not an isolated case. But to diversify ones methodology to include the pupils who were previously sidelined, it is critical to examine the attitude of the teachers towards the different ability groups in his class.

2.4.12 Student's Gender

Although Ghanaian classroom researches do not point to official or clearly expressed discrimination or preference for either sex, there is ample evidence that certain mental sets, prejudices and traditional sex role socialization models influence classroom practice. (GODWYLL & ESSIAW ,1997; MOE 1996). Thus, examining the complexity of the classroom

interaction provides the background to determining the areas to focus on in an intervention with teachers and the gender factor cannot be overlooked.

Patterns of school achievement differ for boys and girls (FENNEMA & PETERSON, 1987; HYDE & LINN, 1986; MACCOBY & JACKLIN, 1974). However, gender differences in intellectual functioning are quite small (FEINGOLD, 1988). Thus there is no reason to believe that boys and girls cannot succeed equally well in different school subjects or subsequently in various vocational fields.

Performance differences between the sexes are for the most part learned behaviours (induced by societal expectations and the behaviours of adults). For example, the tendency for girls to read better than boys in elementary school but to avoid advanced mathematics classes in secondary school appears to be due to motivational factors related to social expectations and experiences (GOOD & FINDLEY, 1985).

Some teachers overreact to student gender by forming unwarranted perceptions or by testing boys and girls differently. A number of studies demonstrate that teachers tend to perceive male and female students differently. MOTTA & VANE (1977) examined teachers' perceptions of students' creativity, aggression, dependence, and achievement orientation. They found that teachers viewed girls as more dependent, creative, and achievement-oriented, but saw boys as more aggressive. SIMMONS (1980) found that teachers expected boys to be more aggressive, independent, and physically skilled, but expected girls to be more emotional, intuitive, ambitious, and empathetic.

Student gender also affects the quantity and quality of students' communication with teachers. Studies consistently show that boys have more interactions with teachers than girls (BROPHY & GOOD, 1974; COOPER & GOOD, 1983), with the difference being greatest for disciplinary exchanges and smallest for instructional messages. MORSE & HANDLEY (1985) studied seventh and eight grade students during science instruction over two consecutive years and found that in the seventh grade, 41 percent of the student–to–teacher academic interactions were initiated by girls; in the eight grade, these same girls initiated only 30 percent of the interactions. Thus, as they matured, girls initiated fewer interactions in science classes. In contrast, the boys' initiation of interactions increased over the two years.

Subject matter may also affect teachers' treatment of boys and girls. LEINHARDT, SEEWALD, & ENGEL (1979) studied teacher-student interactions in 33 second-grade classrooms and found that in reading, girls had a higher percentage of academic contacts with teachers and received somewhat more instructional time than boys. The opposite was true in mathematics,

however. In all classrooms, boys had more management contacts with teachers than girls. The authors suggested that differential instructional behaviour was lined to student achievement in reading. Although there were no differences in initial abilities, significant gender differences were found in end-of-year reading achievement, presumably because the teachers spent relatively more time with girls in reading.

BOSSERT (1981) noted that when students work in mixed-gender groups on projects or experiments, boys are likely to manipulate objects and set up equipment, whereas girls are likely to watch and listen and to perform note-taking duties. BOSSERT further found that boys and girls have varied interests and behave differently, so that even if teachers do not assign girls to act as recorders, most girls may assume these duties on their own. He contended that teachers needed to be aware of the different interests that students bring to the classroom and be prepared to encourage all students to participate in a variety of classroom work. Similarly, FENNEMA & PETERSON (1985) argued that gender related differences in mathematics achievement might exist in part because of subtle differences in students' participation in mathematics over time. According to these authors we learn to do high-level maths tasks by choosing, persisting and succeeding at such tasks, so that girls need to be encouraged to do so.

In conclusion the deployment of unsupported, potentially harmful pedagogies is particularly pernicious at the early-childhood level. It is during the early years, ages four to seven, when children's basic attitudes toward themselves as students and toward learning and school are established. Children who come through this period feeling good about themselves, who enjoy learning and who like school, will have a lasting appetite for the acquisition of skills and knowledge. Children whose academic self-esteem is all but destroyed during these formative years, who develop an antipathy toward learning, and a dislike for school, will never fully realise their latent abilities and talents. If we want all of our children to be the best that they can be, we must recognise that education is about them, not us. If we do what is best for children, we will give them and their parents the developmentally appropriate, high-quality, affordable, and accessible early-childhood education they both need and deserve. (ELKIND, 2001).

CHAPTER THREE

THE THEORETICAL BASIS FOR ABIMUS MODEL OF SCHOOL FAILURE

3.0 INTRODUCTION

The classroom narratives have revealed how diverse relationships, practices pedagogical approaches, learning styles, the impact of inadequate infrastructure and insufficient number of teachers intermingle to create a near chaotic situation in the teaching learning endeavour in some Ghanaian classrooms. The resultant effect is the high rate of failure and drop out that the Ghanaian school system is experiencing.

Thus this chapter will be a follow up of the previous one and will highlight the basis that support the model of school failure by examining the context within which the school can be said to have failed. Since the other player in this model is the child I will discuss the peculiar conditions of the child which when not taken into consideration lead to failure.

In an attempt to address the issue of school failure this work purports to focus on developing and evaluating diagnostically supported teaching strategies to reduce the incidence of school failure in Ghana. In order to ascertain the assumption that some pupils have a lower than expected pre-requisites for school entry, I intend to use a curriculum based pre-diagnostic instrument. The next segment in this chapter will therefore focus on the theoretical basis for the choice of the skill areas of concentration in the instrument. The chapter will be concluded with a brief overview on the importance of the use of curriculum based diagnostic instruments in teaching and learning.

3.1 WHEN THE SCHOOL FAILS

This segment will discuss the conditions under the school that contribute to failure as depicted in the model (see fig. 1.2). Many people argue with a clear dichotomy between the school failing and the child failing. But in this segment I will be presenting a new argument, which radically departs from this dichotomous line of thinking. Every child is unique in his own right and he brings this uniqueness to bear on the teaching-learning encounter. Whether this uniqueness is what is generally considered as normal or abnormal, regular or irregular, standard or sub-standard it is what makes up his humanity in totality.

Thus, when the school begins to selectively categorize them and preclude them from educational settings that hitherto would have led to maximum utilization of innate capabilities and potentials it is tantamount to discrimination and the school has already failed in its bid to assist the child.

The UN Convention on the Rights of the Child built on varied legal systems and cultural traditions is a universally agreed set of non-negotiable standards and obligations. It spells out the basic human rights that children everywhere - without discrimination - have: the right to survival; to develop to the fullest; to protection from harmful influences, abuse and exploitation; and to participate fully in family, cultural and social life. Every right spelled out in the Convention protects children's rights by setting standards in health care, education and legal, civil and social services. These standards are benchmarks against which progress can be assessed.

The Convention on the Rights of the Child can further be supported by the Salamanca Declaration, which states that:

- every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning,
- every child has unique characteristics, interests, abilities and learning needs,
- education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs,
- those with special educational needs must have access to regular schools which should accommodate them within a child-centred pedagogy capable of meeting these needs,
- regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system (Salamanca, 1994).

To buttress further the claims of these two powerful documents the following six pillars that have become the core of the definition of Inclusive Education will be used to support the argument above. For the school to carry out its responsibilities equitably to the child the following six tenets must be observed:

- acknowledges that all children can learn,

- acknowledges and respects differences in children: age, gender, ethnicity, language, disability, HIV and TB status etc,
- enables education structures, systems and methodologies to meet the needs of all children,
- is part of a wider strategy to promote an inclusive society,
- is a dynamic process which is constantly evolving,
- need not be restricted by large class sizes or a shortage of material resources (Seminar on Inclusive Education Agra, India, 1998).

The above sighted points, forcibly establishes the ground rules against which the performance of the school will be measured.

In one sentence, FROEBEL, father of the kindergarten, expressed the essence of early-childhood education. He indicated that children are not born knowing the difference between red and green, sweet and sour, rough and smooth, cold and hot, or any number of physical sensations. The natural world is the infant's and young child's first curriculum, and it can only be learned by direct interaction with things. There is no way a young child can learn the difference between sweet and sour, rough and smooth, hot and cold without tasting, touching, or feeling something. Learning about the world of things, and their various properties, is a time-consuming and intense process that cannot be hurried. And here the school plays a major role. Thus, if the school does not create the necessary stimuli in the appropriate way that are critical for the development of these competencies a vacuum is created and "failure fills the vacuum," so to speak.

There is an increasing realization among educators that the educational system is failing to meet the needs of many students, especially basic needs such as reading and writing. One of the most telling signs of this is the appalling number of students who 'fail' in end-of-cycle national examinations. Failures and dropouts constitute a major source of educational wastage and unduly strains already tight education budgets. More importantly, repeated failures and school dropouts deprive the country of the educated future citizenry who could contribute more fully to its social, political, and economic well being, if they were given every opportunity to succeed.

Increased access to schooling in recent years has had a corresponding increase in the diversity of the population served in schools. In many instances, educational systems have not kept pace with this change. Curricula objective that were established when only the brightest and the elite attended school have not been re-evaluated. In the past, setting high standards served

to restrict access to limited school places and the accelerated pace of learning was used to sort out those who could not measure up. Now, with universal primary education becoming a reality, rather than a cast aside those who don't 'measure up' or slow everyone down to a pace that inhibits fast learners are not catered for. Pedagogical approaches need to recognize the diversity of student needs and adopt educational approaches that match curriculum and instruction to the learner.

To be effective, the education process should result in the highest levels of learning in the shortest possible time and with the least possible expense. Thus, it can be said that an efficient education is one that is characterised by the 'maximisation of effectiveness for a given level of cost or the minimisation of cost for a given level of outputs.' True productivity occurs when all children achieve. Schools need to provide the conditions that will enable all students to succeed and achieve their greatest potential. This requires among other things, that the school curricula need to be made more flexible, and assessment procedures need to be more success oriented.

Learning is a complex process, maximised when the student is actively engaged on a task that is neither too hard nor too easy. Ideally, a true flexible curriculum would take full advantage of what students can do so that can be guided successfully towards the attainment of progressively higher levels of cognitive objectives. Such a curriculum would allow students to progress through a logically and carefully sequenced learning continuum towards the acquisition of increasingly complex skills needed to function effectively in present day society. Students would be motivated by instruction that is challenging but not so difficult as to be beyond reach.

Unfortunately, most school systems throughout the world have difficulty in moving away from the traditional lock-step approach in which all students at a particular grade level are expected to cover the same curriculum, regardless of whether the material is too difficult or the skills from prior years have gone not mastered. Resistance from educators seems to stem from a fear that flexibility will lead to the very problem it seeks to avoid. Children who can't keep up leave school and the country's illiteracy rate remains unchanged.

Finally, assessment of children's condition at school entrance may play an important role in accountability measurement, because this information can provide baseline data against which future data on children can be compared. It should be noted that different assessment methods and instruments might be needed to accomplish these separate and distinct functions. The importance of positive early life experiences is widely recognised; however, questions about

how to describe children at the time of school entrance through both formal and informal assessments have been the subject of considerable debate over the past decade.

Here I discuss the context within which certain individual characteristics of the child present strong challenges to the educational enterprise. Some people interpret these challenges as constituting child failure. Thus, the child is seen as the causal factor for the inability of the school to deliver. I wish to strongly contend that this line of thinking though quite common among some educational practitioners and planners is misleading and unjust. It should rather be seen as “the expectations of the school”. The child did not the choose the unique characteristics he bears it is therefore the schools responsibility to plan adequately and competently in terms of programming, resources and personnel to meet the challenges presented by the child rather than shift blame to the child.

Children who have difficulty in learning the basic skills in writing, reading and mathematics present a problem for their full participation in the curriculum of their age group. The schoolwork depends more on reading and writing so if the difficulty encountered in writing and reading is not remedied, the disability becomes an increasing handicap, as the child grows older and older. This problem can lead the child into having unsatisfactory and non-enjoyable experience of school resulting in opting out from school.

Reaction to failure depends on many variable factors: the personality of the individual, the existence of compensatory success, interests, parent and teacher support and the expectations of the social environment. The effects of failure on a child are not limited to the obvious aspect of school achievement. A child is deprived of the wealth of knowledge, language in books and vicarious experience of human situations and emotions in stories and novels when he lacks independent reading skills, including pleasure and enjoyment. Living, doing, conversing and watching television are other experiences, which provide compensation, but it is not so easy to compensate for limitations in written expression, which is a means of extending language skills and organizing thoughts.

Children with learning difficulties in general usually show a slower pattern of progress in infancy in achieving the developmental milestones of walking and talking. This pattern continues in relation to the developmental milestones of school such as social skills and learning to read and write.

There will be some expectations from children who learn to write fluently and neatly and read easily. On careful observation, it may be noted that they fail to understand at the same level, the content of the writing is immature, and extra support with more challenging tasks is

needed. In a large and busy classroom their special needs may go unobserved and they can fall further and further behind as they move through the school system, achieving far less than are capable of doing. Here diagnostic tests may be useful to back identification. For example an IQ test may show mental functioning at the 8-year level when the chronological is 10 years but attainment in reading and spelling show performance around the 10-year-old level. This pupil facility in reading and writing can easily obscure the general learning problem and when more challenging tasks are given, the pupil has few learning strategies and resources to fall back upon and unaccountably begins to experience failure for the first time. This can lead to early exit from education without any externally recognized qualifications and with a feeling of failure, rejection and frustration. Early intervention in developing particular learning strategies can help such pupils and support their higher order learning and protect them from low attainment.

General learning difficulties centre upon three main areas namely: memory, language and thinking. The problems created by depressed functions in these areas permeate all their in-school and out of school activities. A general below average performance will be noted across all curriculum areas in the majority of cases.

Just as a few may have a facility with literacy skills so some may perform well in performance art and psychomotor skills in sports. Where this is the case it is most important to encourage them in these special areas of ability and to offer them better support strategies in the intellectual areas so that they can make the best of their skills and life chances. General learning difficulties are characterised by the following:

1) memory:

- difficulty in getting material into storage
- poor attention span
- poor retention of ideas
- confused by lengthy sentences
- confused by a sequence of instructions
- loss of comprehension during reading
- loss of main ideas during writing.

2) language:

- limited vocabulary

- limited grasp of syntax for age
- limited powers of understanding language
- limited powers of oral expression
- tend to be monosyllabic.

3) thinking:

- lacking in spontaneous curiosity
- impulsive motor response to questions
- lack of coherence and sequence in explanations
- confusion in problem solving tasks
- trial and error-shotgun type responses
- limited thinking skills and strategies
- limited knowledge of cognitive schemas
- limited repertoire of concepts
- inability to learn easily from experience
- inability to generalise from experience
- lack of incidental learning.

KORNMANN (1991) postulates a dynamic interactional model to development. His approach characterises the actual developmental state in terms of possibilities / opportunities for learning and experience, organic pre-requisites, social pre-requisites and harmful consequences that result from inadequate or unsatisfactory fulfilment of the necessary pre-requisites. With this model one can decide two different children of the same age regarding the same surface characteristics as to whether one child has had good conditions for his development e.g. normal environmental conditions well adjusted to his special individual state of development at every time of his life or whether the other has had restrictive conditions. Regarding the first child, principles of education can to be continued in a regular or “normal” system. But in the case of the second one, the conditions need to be modified but accommodate any disparities that might have occurred as a result of those deficiencies in the child’s ecology. These considerations are important for managing the early beginning of school career.

It is thus typical of pupils with general learning difficulty that they are usually behind their peers in reading, writing skills, social skills, language skills and thinking abilities. They seem to be immature, may tend to seek the company of younger children and are often picked on and teased by their peers. They may have mild speech difficulties in addition to poor vocabulary and language use so that they may lisp slightly and immediately become the subject of taunting and bullying by others so that they become increasingly reluctant to speak. This further hampers their language development and can make them anxious and depressed or angry and frustrated. In the former case the pupils withdraw and avoid schoolwork whenever they can. It often becomes possible for them to do the minimum or to copy other pupils' work systematically and covertly and so avoid notice. If they can copy very neatly this is very helpful to them in concealing their other difficulties. If not their frustrations may lead to misbehaviour in class as soon as work is set and these pupils can finally become cases for exclusion.

The weaker pupils are unable to build the critical bridges among concepts and courses to enhance understanding. Mathematics is a spiral subject requiring the mastery of lower level arithmetic skills for the learning of higher order skills. For example, one needs addition to understand subtraction, multiplication and division. So if to understand fractions one needs to master division as well and the child misses critical principles that underpin the mastery of one skill area he will definitely encounter difficulties in the other areas. The magnitude of the prerequisite skill lost or un-mastered will determine how severe the problems of the child in the subject area will be.

Most skills are hierarchically structured involving many sub-skills. The mastery of the sub-skills or antecedent skills is critical for the understanding of the subsequent skills. As the cycle of lack of mastery of antecedent skills continue from term to year without remediation a cumulative deficit syndrome occurs. This leaves the child lacking about three years behind the grade norms in reading, arithmetic and academic skills (BLOOM, 1965).

Undifferentiated teaching approaches ignore pupil's differential abilities and present tasks in the same quantum and speed for everybody irrespective of the level of competence or mastery. In typical Ghanaian schools where early diagnostic procedures are almost absent the tendency for a classroom to have a complex population with varying degrees of impairment and difficulties is high. When these differences are not recognised either as a result of lack of skills on the part of teachers or lack of planning on the part of policy makers and

implementers those with weaker foundations suffer. Thus, overlooking these differences among pupils and forcing all of them to work up to pre-determined standards or levels perpetuate conditions that lead to individual or child failure.

As a result of a combination of training, traditional philosophies and practices as well as classroom demands on teachers, most Ghanaian teachers adopt the ‘Class Method’ of teaching. This approach assumes a standard for the class and the whole class is taught using that standard. The standard that is assumed always leaves some of the pupils lacking behind because they possess lower than expected pre-requisites. This method of teaching allows for very little differential teaching to take place.

Thus, it can be seen from the above analyses that whenever the structures of the school remain inflexible to accommodate the unique challenges posed by some of the children institutional objectives are not achieved and failure results. The needs of the child given certain modifications, alterations or adaptations of the existing structures could have been met and his chances of success enhanced. But so long as the school is unable to embrace the six tenets outlined in the beginning of this segment school failure is eminent and the blame lies squarely at the doorsteps of the school.

3.2 THE THEORETICAL BASIS FOR THE CHOICE OF PRE-REQUISITE SKILLS

The diagnostic instrument developed for this study focussed on drawing, mathematics and language in an integrated way. The rationale for the choice of these three areas; drawing, language and mathematics are explained here.

All the giants of early-childhood development FRIEDRICH FROEBEL, MARIA MONTESSORI, JEAN PIAGET, EDOUARD SÉGUIN, and LEV VYGOTSKY, have echoed this view of early-childhood education. It is supported by developmental theory, which demonstrates that the logical structure of reading and math requires syllogistic reasoning abilities on the part of the child.

The educators who established early childhood as a legitimate time for guided learning all emphasized the importance of manipulative experiences of seeing, touching, and handling new things and of experiencing new sensations. FROEBEL, MONTESSORI, and SÉGUIN all created rich, hands-on materials for children to explore and conceptualise. Each of them

acknowledged, that the capacity to discriminate precedes the capacity to label, that the understanding of quality precedes that of quantity. Children, for example, learn to discriminate among different colours before they can distinguish different shades of the same colour. Thus, they intimate that children acquire skills through exposure to and the manipulation of the environment.

ARISTOTLE said "the soul never thinks without an image" (DI LEO, 1973 p. v) and PIAGET & INHELDER (1971) also indicated that drawing consists of externalising a previously internalised mental image. The interest in everyday world, the visual world, and the relationship between 'knowing that' and 'knowing how' all help to focus attention on children's drawings. That does not mean that drawing was not a focus of attention before. One wave of interest in the early 1930s, for instance, emphasised longitudinal studies and the possibility of describing change as a transition from drawing 'what one sees' to drawing 'what one knows should be there'. The approach reflected a search for ways of describing development and a belief no longer widely held that 'seeing' and 'knowing' are qualitatively different from one another.

Another wave in the 1930s reflecting a concern with education, stressed the analysis of pictorial skill and ways of developing it. A third, roughly in the 1950s and stemming from developmental psychology's increasing interest in tests and other predictive measures, stressed the use of drawings as indicators of intellectual level of emotional state. Given these previous waves, is there still much to be understood or said? The answer to the first question is yes. For all the attention given to drawings, there are still mysteries. In addition, much of what we know is fragmented. Drawing pictures, copying geometric shapes, printing numbers or letters of the alphabet, copying or making maps are all called drawing and all have features in common, but they are typically assigned to separate areas; 'art', 'writing', and 'geography'. If we cannot find concepts that link them up, then we are a long way from understanding any of them.

Human figure drawings and copying of simple geometric forms can be most helpful in the early diagnosis of perceptual-motor difficulty. They may give indications or warning signals of future learning disorders, especially as they relate to the recognition and use of the symbols of the written word. Children express in their drawings the early perceptions of their personal and material environment. Though the child perceives naturally, his graphic representations are his very own quite unlike pictures taken by a camera. The validity of intellectual maturity has been established DI LEO (1973). He further indicates that drawings can be most helpful in

revealing the perceptual-motor impairment that pre-shadows difficulty in the key areas of writing and reading.

Quantitative differences in drawings of the human figure have been related to chronological age and intellectual maturity, forming the basis for assessment of intelligence DI LEO (1973). Drawings are been viewed as expressions of the body image that is shaped by external as well as maturational influences. As manifestations of the body image, human figure drawings may be regarded as a distillation of the cognitive, affective and perceptual complex from which that image is derived.

BENDER (1940) was the first to report on human figure drawings by children whose brains have been affected by encephalitis. She called attention to the aforementioned discrepancy between intelligence and concept of body image as reflected in the human figure drawings. Her observation has been subsequently and repeatedly confirmed by numerous investigators, including DI LEO. But while there is recognition that the drawings are inferior, the same cannot be said for attempts to identify specific features that clearly differentiate them from those by children who are emotionally disturbed. The problem may reside in terminology. The same or similar terms are often applied to both groups e.g. “distorted,” “bizarre,” “grotesque,” “disorganised,” these generally, ill-defined terms confuse the issue. The images they evoke are much too vague to be meaningful. This is especially so with “grotesque” and “bizarre”; probably less so with “distorted” and “disorganised.”

BENDER (1940) saw drawings as an aid to diagnosis of brain damage but also as suggesting therapy that could help the child develop an adequate body image. According to SUNBERG (1959) the Draw-a-Person Test (D-A-P Test) is widely used throughout the United States as sources of information in psychological and mental services. DI LEO (1973) describes the observations that can be made from the drawings of brain-damaged children. He says these are: “immature concept of body”, “preservation,” “poor planning” (drawing without considering beforehand whether the figure will fit into the available space), “impulsivity” (rapid, slapdash execution), “going out-of-bounds” (drawing off the paper), “uninhibited”, (uncontrolled, random activity), “poor coordination” (overlapping of lines or lines that do not meet, poor control over the writing instrument), and “tendency to revert to scribbling.” Attempts have been made to arrive at greater specificity by noting “asymmetry”, “slanting at an angel of more that 15 degrees”, “arms incorrectly attached”, “incorrect number of fingers.” These observations may have validity if considered within the framework of the

child's development age, since all of the traits are common, usual, and normal during the pre school years (p. 33).

In part, our interest is a direct response to children's drawings in their own right. Most of them have charm, novelty, simplicity, playfulness, and fresh approach that is a source of pure pleasure. They are simply 'good at', even if we have few words to describe why we find them so 'good'. But we are also interested because drawings are indications of more general phenomena of human life. They may be regarded as expressions of our search for order in a complex world, as examples of communication, as indices of the type of society we live in, as signs of intellectual development, as reminders of our own lost innocence and verve. Allied to these views of drawings is the thought that they are 'natural' rather than initiative-that spring from within. If this is correct, then if we can understand children and development in general we must pay attention to their drawings. It is no wonder that books on child development so often use children's drawings on their covers (GOODNOW, 1977).

I, in fact, also subscribe to the view that children's drawings contain much beneath the surface, and in particular they are often indicative of general aspects of development and skill. Drawings can tell us something not only about children but also about the nature of thought and problem solving among both children and adults.

For age related development of abilities in manual dexterity see ASHTON & WEBB (1986), BRITTON (1973), BRITTON, BURGESS, MARTIN, MCLEOD, & ROSEN (1975), GUERIN & MAIER (1985), CHUKOVSKY (1963), KELLY (1955), KERR (1974), JOHNSON, MOORE & JEFFRIES (1978), SCHIAMBERG (1985), BURTON (1984), WAREN (1992), SCHWARTZ & ROBINSON (1982), and WEEKS & EWER-JONES (1991).

Thus to establish the basic learning prerequisites that children enter the school with, the choice of drawing as a component of the pre-diagnostic instrument, is critical in revealing the intellectual maturity of the children and how ready they are or otherwise to meet the expectations and challenges of the school.

Mathematics is not a collection of abstract numbers and figures but an everyday phenomenon we use in our moment-by-moment activities. As one thinks of how old he is, how long he has walked, how high a tree is, how big the classroom is, how long the house is from the school, or how many weeks there are in the school term or how long the school session is, he is already grappling with mathematical concepts. Mathematical concepts are fundamental to life

and I cannot imagine a world without mathematics.

In addition to this a good knowledge in mathematics as a discipline is required at every entry level of our educational system e.g. the senior secondary schools, universities, teacher training colleges, nursing training colleges and other diploma awarding institutions just to mention a few. It is not only the school system which demands a good knowledge in mathematics but many jobs require that a prospective job seeker demonstrates knowledge and ability in mathematics in addition to paper certification of a pass or better in mathematics.

Take the concept of numbers. The three levels of numerical understanding - nominal, ordinal, and interval - correspond to different forms of scaling. Nominal numbering is the use of a number as a name, such as the numbers basketball players wear on their uniforms. By the age of two or three, children can use numbers in the nominal sense. By the age of four or five, children can begin to use ordinal numbers; they can order things according to quantitative differences. For instance, they can arrange a series of size-graded blocks or sticks from the smallest to the largest. Once the arrangement is complete, however, they are not able to insert a new, intermediate-sized element into the perceptual array.

It is only at age six or seven, when they have attained what PIAGET calls “concrete operations,” that children can construct the concept of a “unit,” the basis for understanding the idea of interval numbers. To attain the unit concept, children must come to understand that every number is both like every other number, in the sense that it is a number, and at the same time different in its order of enumeration. Once children attain the unit concept, their notion of number is abstract and divorced from particular things, unlike nominal and ordinal numbers. Mathematical operations like addition, subtraction, and multiplication can be performed only on numbers that represent units that can be manipulated without reference to particular things.

The interval concept of numbers is an intellectual construction. It builds on children’s practice in classifying things (attending to their sameness) and arranging them serially (attending to their difference). At a certain point, and with the aid of concrete operations, children are able to bring these two concepts, of sameness and difference, together into the higher-order concept of a unit, which brings together the ideas of sameness and difference. It is only when children understand that something can be the same and different that they have a true understanding of quantity. Learning the names of numbers and rote counting are less

important in this attainment than the practice in classifying and serial arrangement of many different materials.

Thus, I deem it critical that in assessing the learning prerequisites of school entrants, their predispositions, readiness and maturity necessary for a firm development of mathematical thinking be considered.

For systematic development of mathematical concepts see LESLIE (1994), WOLF & NEUGEBAUER (1996), MOON & SCHULMAN (1995), AMES (1992), HAMMILL (1987), BATES & BENIGNI (1979), BROWN & PALAS (1970), WYNE & O'CONNOR (1979), SPENCER, & BRYDEGAARD, (1952), WILDER (1968), WEINER, (1972), GENESHI (1987), DAMON (1998), OATES (1979), CARPENTER, MOSER & ROMBERG (1982), PETTY & JENSEN (1989), SCHIAMBERG (1985), BERGER & THOMPSON (1996), SCOTT (1987) and TOUGH (1977).

Mathematics and reading are complex skills acquired in stages related to age. Children will acquire these skills more easily and more soundly if their lessons accord with the developmental sequence that parallels their cognitive development. A similar hierarchy of understanding is involved in learning to read. In fact, in some respects reading is a more complex process than arithmetic, in that it involves auditory and visual discrimination as well as cognitive construction. Nonetheless, the principle is the same.

The universal importance of reading as one of the components of literacy was highlighted when the United Nations Educational, Scientific and Cultural Organisation (UNESCO) declared 1990 as the “International Year of Literacy.” Indeed, most societies require their adult members to be able to read and understand written language to participate fully in all processes and activities within their communities. Therefore, one of the main purposes of education in these societies is to ensure that school leavers have acquired the skills to read with understanding. While efforts are aimed at enhancing the interfaces of most recent technologies by adding graphics and sound, reading is still the most important basic skill involved in accessing an ever-increasing amount of information. In most societies, the education of children is organised in some formal way, usually through primary and secondary schooling. While primary schools in general are responsible for the teaching of basic literacy skills, students in secondary schools are expected to use these skills for the learning and understanding of more specific subject areas.

There is widespread agreement that reading is a pre-requisite to the work of secondary school students for the acquisition of new knowledge and hence is a key to success or failure in school learning (BARTLETT, 1995; NEVILLE & PUGH, 1982; PUGH & ULIIJN 1984; MANNING, 1996). THORNDIKE (1973a) has emphasised reading as a key component of successful learning at the secondary school level by pointing out the central role of reading as a determiner of achievement in the more specific subject matter skills. Policy documents for educational systems (see CARRON & BODIA, 1985, p. 31) for the United States as well as for teachers and school boards (HARSTE, 1989) emphasize the conditions and resources that foster students' reading skill because reading is usually not taught as a separate subject at the secondary level.

The following are ways in which secondary schools could promote reading competence and the same can be adapted for the primary level, too:

(1) provision of appropriate library resources and guidance by librarians (WOULLS, LOERTCHER & SHIRLEY, 1977)

(2) inclusion of reading as one of the key study skills (BADER, 1997)

(3) organisation of extra-curricular activities such as academic clubs, drama programmes, student government activities, all of which require the reading of text.

The earliest level of reading is the recognition of words by sight. At ages two or three, a child may learn "stop" and "go" in part by the perceptual configuration and in part by the colours associated with these words. Sight words are like nominal numbers; they reflect a very early level of reading achievement. A second level of reading is phonetic; this concept corresponds roughly to ordinal numbers. Children at four or five can learn the sounds for single letters and are able to read words like "hat," "cat," "sat," and so on.

The same child who can read phonetically, however, may not be able to read phonemically. To read phonemically, a child must be able to recognise that a letter can be pronounced differently depending on the context. A child who can read "hat," "cat," and "sat" may have trouble with "ate," "gate," and "late." Likewise, a child who knows "pin" may have trouble with "spin" because it involves a blend of consonants that may throw kids off. In PIAGET's terminology, "concrete" operations are required for this highest level of reading.

For systematic development of reading abilities see APPLEBEE (1978), CHANNING (1987), DAMON (1998), AMES (1979), OATES (1979), BERGER & THOMPSON (1996), BATES & BENIGNI (1979), MCGHEE & RICHGELS (1990), WARREN (1992), PETTY & JENSEN (1989),

RAINES (1990), RHODES & SHANKLIN (1992), BURTON (1990), Hammill (1987) and SULZBY (1990).

Language, though not the only medium of communication is the major medium for interaction. Children are spoken to, given instructions and they are required to respond to. In the schools teachers use the local language prevalent in the school's locality or English to teach. The strengths of the child in the area of Language ability needs to be assessed to know how to further build and prepare them to gain the required competencies. Thus establishing the basal knowledge and abilities of the child in Language is gamin and non negotiable. For reference on the systematic development of language abilities for school entrants see RHODES & SHANKLIN (1992) and SULZBY (1990).

Having briefly examined the rationale for the choice of the three major skill areas I will proceed to discuss other general abilities that are indicative of readiness for school.

Despite the recent attention that the topic of school readiness has received, there is still much debate on what it means to be "ready" for school. Parents, teachers, school administrators, policy makers, and politicians are all concerned about young children and whether or not they enter school "ready to learn." This concern has been especially true since the National Education Goals Panel adopted the first goal that "by the year 2000, all children in America will start school ready to learn" (National Education Goals Panel, 1991). Most people (KAGAN, 1999; National Association for the Education of Young Children, 1988) argue that all children are ready to learn and prefer to use the phrase "ready for school." So what does it mean to be "ready for school?" Both terms appear to be problematic because of unintended consequences of presuming that children need to know certain things before they can enter school.

Age is one characteristic that children generally have in common when they start kindergarten. However, when children are 5 years old, they vary greatly with regard to their physical, social, emotional, and cognitive development. The National Education Goals Panel (KAGAN, MOORE & BREDEKAMP, 1995) has established five dimensions in which children vary and that contribute significantly to children's success in school. According to the Goals Panel, school readiness should be thought of as having at least the following dimensions:

- health and physical development
- emotional well-being and social competence

- approaches to learning
- communicative skills
- cognition and general knowledge.

Although most researchers, educators, and policy makers agree that these dimensions are essential elements of readiness, there is some debate as to whether these dimensions are exhaustive (MEISELS, 1999). Further, individuals vary with regard to what they believe should be included as indicators of the standard to be met on each of these dimensions. Although the five dimensions guide us with regard to what we should measure, the question of how to measure these domains remains unanswered.

An examination of a number of instruments in use for assessing pre-school and school entry abilities support the skill areas selected and used in the instrument developed for this research. For example the Kindergarten development Profile in use in the State of Louisiana in the US, the Chicago Early Assessment Developmental Skills Checklist, the Alabama Early Learning Inventory and the Alaska Developmental Profile just to mention a few converge on areas such as:

- physical well being
- fine motor skills
- gross motor skills
- speaking
- listening
- emergent reading
- emergent writing
- social development
- approaches to learning
- problem solving

- number concept
- English proficiency and
- language development.

Apart from this consensus from international perspectives, the curriculum of the Ghanaian schools on which the instrument was based requires these competencies for effective learning in schools. An examination of the curriculum for the last term of Kindergarten two requires the following competencies:

a) number work:

- recognition and writing of numerals from 0-10
- making sets with number names and numerals
- using the signs greater than and less than
- measurement concepts.

b) language:

- familiarity with the letters of the alphabet
- building vocabulary through drama and story telling.
- following instructions
- social courtesies e.g. taking messages, greetings, responding to rudimentary information about a person
- reading of story books.

c) health and safety:

- dealing with emergency e.g. fire

d) nature and environment:

- differentiating various sounds e.g. animals, humans, musical instruments, wind and rain

- developing the five senses through active interaction with the environment.

e) creativity:

- painting
- making things
- sewing
- drawing
- printing
- tracing
- pasting
- pottery
- modelling.

If these competencies are expected of the child by the end of the kindergarten period, then the necessary pre-requisites or sub-skills needed to build these abilities are critical. These have already been referred to in the early part of this chapter (see the theoretical basis for the choice of pre-requisite skills). The primary one syllabus builds on the foundations laid at the kindergarten or the kindergarten curriculum. KRETSCHMANN, BEHRING & DOBRINDT (1998) and BEHRING, KRETSCHMAN & DOBRINDT (1999) also support these broad areas in their work that put together a very comprehensive diagnostic instrument in mathematics and language.

3.3 ARGUEMENTS FOR THE USE OF DIAGNOSTIC INSTRUMENTS

Assessing preschool-age children is challenging. At this age, children's development is rapid and uneven, and their development is greatly impacted by environmental factors such as the care they have received and the learning environments they have experienced.

Furthermore, typical standardized paper-and-pencil tests given in later grades are not appropriate for children entering school (SHEPARD, KEGAN & WURTZ, 1998). The demand for

standard methods to document children's readiness has become increasingly strong despite the difficulties in assessing young children. A number of organizations have developed policy statements to outline how children should be assessed. Six professional organisations (Association for Childhood Education International, Association for Supervision and Curriculum Development, International Reading Association, National Association of Elementary School Principals, National Council of Teachers of English, and the National Association for the Education of Young Children) issued a joint statement in 1986 discouraging the use of "rigid, formal pre-reading programs" and standardized testing for preschool-age children (International Reading Association, 1986).

In 1987, the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) issued a position statement titled *"Unacceptable Trends in Kindergarten Entry and Placement"*. National Association for the Education of Young Children (NAEYC) and NAECS/SDE joined together to issue a position statement on appropriate curriculum and assessment for children ages 3 through 8 in 1990, and the National Education Goals Panel published "*Principles and Recommendations for Early Childhood Assessments*" in 1998 (SHEPARD, KAGAN & WURTZ, 1998). NAECS/SDE updated and reissued the position statement in “Still! Unacceptable Trends in Kindergarten Entry and Placement in 2000″.

Taken together, these position statements indicate that readiness assessment should

- benefit children and the adults who work with children,
- be used for the purposes for which it is designed,
- be valid and reliable,
- Be age appropriate, using naturalistic observations to collect information as children interact in "real-life" situations,
- be holistic, collecting information on all developmental domains (physical, social, emotional, and cognitive),
- be linguistically and culturally appropriate,
- collect information through a variety of processes and multiple sources (collection of children's work, observations of children, interviews with children, parent reports, etc.),

- be used to guide instruction and not to determine children's placement in school.

State-level efforts to assess children's readiness can best be described as a pendulum swinging from standardized measures that did not meet the above principles in the mid-1980s (GNEZDA & BOLIG, 1988) to limited readiness testing in the mid-1990's (SHEPARD, TAYLOR & KAGAN, 1996). In the mid-1980s, many states had requirements for standardised testing for children prior to kindergarten or first grade.

SHEPARD, TAYLOR, & KAGAN (1996) also found that some states and local districts were moving to new forms of assessment in the early grades. Respondents indicated that there was less readiness testing and increased use of teacher observation assessments such as the High/Scope (1992) Child Observation Record (COR) or the Work Sampling System by MEISELS (MEISELS, JABLON, MARSDEN, DICHTELMILLER & DORFMAN, 1994).

However, learning, too, is a complicated process which can only be measured accurately if the right test is used and in a manner which allows the learner to perform to the best of his ability. This is a technical business and very important decisions may be made on the basis of test performance. It is vital therefore that all testers are quite clear about test procedures, about how to select the most appropriate test for the purpose and how to interpret the results of tests.

A mother wishing to test the temperature of her baby's bath water is often advised to dip her elbow into the water. If the water feels comfortably warm, then it is safe to place baby in the bath. In a simple sense, this situation is representative of the fundamentals of testing. Information is sought using a set procedure, the information is evaluated and a judgement made. However, the reader may already be questioning the elbow-in-the-water test. What if mum's elbow is not very sensitive? Would she get the same reading if she dipped first one elbow, then the other, in the water? What if different parts of the bath are at different temperatures? How certain can the mother be that the baby will not be scalded? Isn't the mother's judgement too subjective and wouldn't it be safer to make the decision only when the temperature has been measured using a trustworthy and accurate thermometer?

These questions are examples of the checks, which need to be applied to every test situation. Fundamentally they seek the following information:

- the suitability of the test for the purpose,

- the validity of the information yielded,

- the reliability of the procedure,
- the objectivity of the conclusions, which may be reached.

It is important for all testers, researchers as well as teachers, to be clear about the answers to these questions. Much of this testing is informal in nature but there are more sophisticated and exact ways of gaining test information. Naturally, one would expect the researcher to be meticulous in the ways he collects his information. But this does not imply that the information sought by the teacher is less rigorous and may be collected more casually. As pointed out earlier, educationists on the basis of test performance may take very important decisions.

A test is a procedure designed to elicit responses from an individual. On the basis of the responses a score is assigned signifying or quantifying the extent to which the individual possesses the characteristics, which the test is supposed to measure.

Diagnostic tests seek to identify causes of learning difficulty or to pinpoint specific difficulties. These tests may be applied to any area of learning and to learners of any ability level. They are usually given in an attempt to discover the reasons why learners are failing to make satisfactory progress in school subjects.

The motives for giving attainment and diagnostic tests may vary. Generally, the following reasons will account for most instances of testing:

- to place an individual in a group,
- to check on on-going learning,
- to check on the outcome of a course of treatment or teaching,
- to help identify causes of learning difficulty.

Regardless of the reasons for testing, it is important to follow procedures, which will help produce information critical for the purposes of the tester. It is tempting to use a test chiefly on the basis of availability but this has to be weighed against the usefulness and quality of the results obtained.

Diagnostic instruments are used for the following purposes:

- improving instructional effectiveness,
- monitoring student progress,
- creating and using diagnostic profiles for individualised teaching.

3.3.1 Improving Instructional Effectiveness

Student learning is closely related to academic learning time (DENHAN & LIEBERMAN, 1980; LEVIN & LOCKHEED, 1993). When instruction is too easy, students become bored and assignments are not taken seriously. When instruction is too difficult and students do not have the necessary prerequisite skills, they become frustrated and discouraged. Academic learning time occurs when the student is motivated by a task that is appropriately challenging. Thus, it is critically important to identify what skills each student possesses and to use instruction to progressively build upon this foundation (BLOCK, 1971; HARGIS, 1987; POPHAM & BAKER, 1970).

Diagnostic instrument techniques enable teachers to maintain diagnostic profiles of the students in their class and to build instruction around student strengths. Using available textbooks and instructional materials, teachers prepare for each unit by identifying the skills their students will need for the new lesson to be appropriately challenging. To do this, the teacher (or the teacher guide) analyses the learning task and identifies prerequisite skills or knowledge (such as needed oral and or written vocabulary or underlying numerical concepts). For efficient instruction, the new unit should build on what the students already know, with only a small proportion of the unit introducing new concepts (GICKLING & ARMOSTRONG, 1978; KAMEENUI & SIMMONS, 1990). When diagnostic instrument indicates that students don't have the prerequisite skills, the teacher breaks the task into sub-tasks and introduces needed skills or knowledge in the context of what the students already know. For example, prior to starting a new unit, the teacher introduces a few of the new words and with the students constructs sentences using the new words and already mastered words. After this preliminary learning, the students can approach the new unit with greater likelihood of success.

In every classroom there are slow, average and fast learners. Diagnostic instrument facilitates adapting instruction to accommodate individual differences. Frequent classroom level diagnostic instrument alerts teachers to those students who are learning at a different pace than the others. Then, on the basis of the individual diagnostic profiles, the teacher can design or select appropriate remedial or enrichment activities.

3.3.2 Monitoring Student Progress

Educational leaders, policy makers, and donor agency representatives frequently ask. How do you know the educational system is working for of all children? Are children learning more today than in the past? Nationally administered criterion-referenced testing programmes have attempted to address these questions. However, until children are literate, these group-administered tests don't tend to be very useful. Large numbers of primary school children can't read well enough to make sense of the exams and what is expected of them. Plus, by the end of the primary school cycle, it is often too late. Children who haven't learned to read are demoralised and available instruction is targeted for those students who can read.

One advantage of diagnostic instrument is that children can be tested individually and they don't need to be literate. The assessment process can be individualised such that each child is placed on a continuum from having minimal pre-reading skills to being a fluent reader of upper grade level reading passages. Using diagnostic instruments, it is possible to determine what percentages of children at each level have mastered pre-reading skills and reading skills. The same is true for writing and innumeracy. That is what percentage of the children can write their name or perform addition problems using coins or pebbles, and so on? Without information on the skills leading to functional innumeracy and literacy, it is difficult to evaluate whether available instruction and instructional materials are appropriate. It is also difficult to determine when and where the process breaks down. End of cycle testing tells educators only the extent to which the system did or didn't work whereas frequent mid-cycle testing allows educators to monitor student progress and intervene before it is too late. No one should have to wait until a child has completed six years of school to find out that the child can't read or compute.

Curriculum-based measurement (DENO, 1985; FUCHS, DENO & MIRKIN, 1984), continuous curriculum measurement (COHEN & SPRUILL, 1990), criterion-referenced-curriculum-based assessment (IDOL, NEVIN & PAOLUCCI-WHITCOMB, 1986), and continuous assessment

(PASIGNA, 1993) are just a few of the labels that have been used to describe different models of diagnostic instruments. Some models focus more specifically on the assessment process (e.g., DENO, 1985) while others combine assessment and intervention (GICKLING & HAVERTAPE, 1982; PASIGNA, 1993). What distinguishes diagnostic instruments is that the specific tasks that students are asked to perform are drawn directly from the curriculum and the tasks are selected, administered and scored using standardised procedures.

How diagnostic instruments are used depends on the questions that are being asked. Data derived from diagnostic instrument can be used to generate individual, classroom, school, and district level profiles of pupil performance. These profiles have implications for instructional planning at all levels of the specific student's score can be compared to a normative sample (SHINN, 1988) or in a criterion-referenced manner in which performance is linked to identified instructional domains with an associated interpretive metric (SHINN & GOOD, 1992).

3.3.3 Creating and Using Diagnostic Profiles for Individualised Teaching

Although diagnosis is commonly taken to mean the identification of a learning problem, diagnostic profiles in Diagnostic Instrument focus more on each pupil's hierarchically ordered learning continuum. The basis for this continuum is the curriculum. Diagnostic instruments assume that there is an underlying ordering in the curriculum such that the year 2 textbook builds on what was covered in year 1, and the year 3 textbook on what was covered in year 1 and 2, and so on. It follows that if a class four pupil can perform a task in the class four textbook (for example, reading a passage with fluency and comprehension), this student should have comparable or better success on similar tasks taken from lower level texts. Similarly, if a year 4 student is unable to perform the reading task, it is functionally useful to determine a what level the student can perform the task. Thus, rather than stopping the assessment at the point that the child fails, the examiner continues probing downward on the curriculum continuum to the point where the child succeeds. Similarly, if a year four child is unable to perform the reading task, it is functionally useful to determine at what level the student can perform the task. For some preliterate children this probing extends to finding out if the student has pre-reading skills such as letter identification. When the assessment is complete, it is possible to construct diagnostic profiles of individual students and groups of students. These profiles are relevant for instructional planning and for decision-making at all levels of the educational system ranging from the classroom to national policy.

Diagnostic instruments can help improve the quality and effectiveness of the education process. Among other things diagnostic instruments can be used to, improve instruction, monitor student progress, evaluate educational programmes, and inform curriculum development and revision.

The various personnel involved in the education of the child can also benefit from the appropriate use of curriculum based diagnostic instruments. I have listed below some of the personnel involved in the education of the child and the uses they can put curriculum based diagnostic instruments.

1) Teacher:

- Is my concept of teaching appropriate to the inter-individual differences the children usually show?
- What abilities do my children have?
- What extra assistance and support do some of them need?
- Which of my children are ready for more advanced intensive materials?
- Which kind of modifications can I make in my teaching to ensure that the learning of the children with their differing ability levels is made more effective and pragmatic?

2) Assessor:

- How do I get to know what children know when they are not yet ready to read?
- In the absence of commercially available tests how do I measure the learning of my pupils?
- When pupils ‘fail’ paper-and-pencil test is there a way of establishing whether there is the existence of related functional abilities?

3) District Education Officer:

- Are children learning effectively in the classes and schools under my supervision?
- What inputs do teachers need to become effective teachers?

- Do teachers prepare age appropriate and competence based lessons for their pupils?
- What is the relationship between pupil learning and teacher supervision?
- What inputs are needed to make teacher supervision more productive?

4) Policy Maker:

- Is literacy and innumeracy among pupils higher today than last year?
- What is the impact of the reform on quality learning among pupils?
- Is the entire educational system working or only a part?
- What inputs are needed to make teacher training more relevant and effective?
- Are textbooks relevant, appropriate and adequate to meet the needs of pupils in the learning situations?
- Is there the need to provide instructional support materials?

In summary data derived from diagnostic instruments can be used to produce individual, classroom, school and district level profiles of pupil's performance. In all diagnostic instrument models, instructional decisions are based on information generated by an ongoing assessment of student performance on the curriculum. The primary goal is to guide the instructional decision-making process. These have implications for instructional planning at all levels of the educational system. Diagnostic instruments guide the instructional decision-making process (BLANDENSHIP, 1985; GRADEN, ZINS & CURTIS, 1988; MARSTON & MAGNUSSON, 1985) so that instruction continues to be relevant to the students' instructional needs, thereby increasing the chances of successful learning.

CHAPTER FOUR

METHODOLOGY

4.0 INTRODUCTION

This chapter will discuss the methodology adopted for the collection of data on the learning pre-requisites of Ghanaian primary one pupils. It will consider the design, sample, sampling technique, assumptions of the study, the instrument, procedure and data analyses. The discussion of methodologies for the pilot and the main studies will be done side by side.

4.1 DESIGN

This study was a survey research. Since it was aimed at gathering information about which learning pre-requisites Ghanaian primary one pupils possess, the survey method was deemed the best in producing the data needed. More specifically the aim was to show the extent of the inter-individual differences regarding pre-requisites of school beginners in Ghana and whether it is realistic to use a fixed syllabus for all children. For this reason a wide variety of items based on the Ghanaian school curriculum were put together in a pre-diagnostic instrument to assess the learning pre-requisites of school entrants. An extensive sample was also chosen, which is not representative for indicating the frequency of every sign, but appropriate to demonstrate what differences one should expect in Ghanaian schools. Thus a pre-diagnostic instrument developed by the researcher and used in a one to one or face-to-face interview with the sample was adopted. This chapter will discuss both the methodology of the pilot and the main studies since similar approaches were adopted.

4.2 SAMPLE

For the pilot study a sample size of 120 primary one and second year kindergarten pupils was used with an age range of between 5 - 9. They were randomly selected from 6 schools in 4 districts in the Central Region of Ghana. The main study had a target sample of 192 but the data-producing sample was 158 primary one pupils. Their ages ranged from 5 - 10. The tables below show the distribution of schools. The authorities asked for anonymity therefore numbers would denote them.

TABLE 4.1a:

DISTRIBUTION OF PUPILS BY SCHOOL (PILOT STUDY)

School	No of Pupils	%
1	13	10.8
2	10	8.3
3	11	9.2
4	24	20.0
5	35	29.2
6	27	22.5
TOTAL	120	100.0

TABLE 4.1b:

DISTRIBUTION OF PUPILS BY SCHOOL (MAIN STUDY)

School	No of Pupils	%
1	10	6,3
2	10	6,3
3	9	5,7
4	9	5,7
5	12	7,6
6	10	6,3
7	12	7,6
8	9	5,7
9	9	5,7
10	9	5,7
11	9	5,7
12	8	5,1
13	8	5,1
14	9	5,7
15	9	5,7
16	9	5,7
17	7	4,4
Total	158	100,0

The sample was categorised into 3 ability groups namely, above average, average and below average. This grouping was done in order to obtain a representative group of all the different ability levels that can be found in the Ghanaian school system. The cumulative knowledge of the teachers of their pupils was used where available information from their nursery or kindergarten teachers was sought. Thus, teachers assigned the pupils into the three categories or ability groupings. As an improvement upon the pilot study selection the researcher and his

assistants corroborated assessment of teachers by examining the exercise books and cumulative records from nurseries or Kindergarten where available. The distribution is presented in the tables below:

TABLE 4.2a:

DISTRIBUTION OF PUPILS BY ABILITY GROUPS (PILOT STUDY)

Ability	No of Pupils	%
Above Average	33	27.5
Average	60	50.0
Below Average	27	22.5
Total	120	100,0

The average group had the highest representation of 50% with the below average group having the lowest the 22.5%. The reasons for the above distribution have been explained under sampling. There were 58 males representing 48.3% and 62 females representing 51.7% of the sample population. Interestingly, the reality on the ground shows that females are more highly represented in the lower classes of the school system but the percentage drops significantly as one moves up the ladder in the educational system (MOE, 1995). The details for the main study appear in the table below:

TABLE 4.2b:

DISTRIBUTION OF PUPILS BY ABILITY GROUPS

(MAIN STUDY)

Ability	No of Pupils	%
Above Average	51	32,3
Average	53	33,5
Below Average	54	34,2
Total	158	100,0

The table below shows the distribution of the sample according to locality or area**.**

TABLE 4.3a:

DISTRIBUTION OF PUPILS BY AREA (PILOT STUDY)

Locality	No of pupils	%
Urban	37	30.8
Semi urban	25	20.8
Rural	35	29.2
Semi rural	23	19.2
Total	120	100.0

It was originally envisaged to have an equal representation of 30 pupils in each of the 4 localities, but due to absenteeism the above distribution was attained with the highest percentage coming from the urban locality, 30.87% and the lowest from the semi-rural locality (19.2%). Since the differences between the semi-rural and rural or the semi-urban and urban were not significant in the pilot study, the main study had only two, rural and urban categories. The distribution is presented in table 4.3b.

TABLE 4.3b:

DISTRIBUTION OF PUPILS BY AREA (MAIN STUDY)

Locality	No of pupils	%
Urban	81	51,3
Rural	77	48,7
Total	158	100,0

4.3 SAMPLING

The pilot study adopted purposive and simple random sampling techniques in selecting the schools and the pupils in the Central Region of Ghana. Four districts in the Central Region of Ghana were purposively selected namely, Cape Coast, Winneba, Swedru and Komenda-Edina-Eguafo-Abrem because of their proximity and accessibility. The list of schools in these districts was obtained from their respective Education Offices. With the help of the District Officers the schools were categorised into 4 localities namely urban, semi-urban, rural and semi-rural. In each district two schools were selected from each of the localities using the lottery method. Thus totalling 32. Now each locality had 8 schools. A further simple random

sampling was done to pick two schools each from the localities irrespective of the district. Thus a sample size of 8 schools was obtained.

Working together with the teachers a list of pupils based on their perceived abilities as

assessed by the teachers was prepared for each of the 8 class one classrooms. Five pupils from each of the three ability groups, above average, average and below average were randomly selected. Thus having fifteen pupils in each of the eight schools totalling 120.

Due to the unreliable nature of the school times of two schools one in the rural and the other in the semi-rural category, they could not be used. Also due to frequent absenteeism on the part of some pupils some ability groups were under represented where substitution was not feasible.

The main study adopted the same procedure as in the pilot study and the same four districts were used. But this time the schools were categorised into two localities namely urban and rural. Also in each district two schools were selected from each of the localities using the lottery method. Thus, a total of 16 schools were obtained. Working together with the teachers a list of pupils based on their perceived abilities as assessed by the teachers was prepared for each of the 16 class one classrooms. The researcher and the assistants cross-checked the performance levels from the exercise books, test results and other cumulative records from the Kindergarten and nurseries where available. Four pupils from each of the three ability groups, above average, average and below average were randomly selected. Thus having twelve pupils in each of the 16 schools totalling 192. A 17^{th} school was added because it was going to be the main school for the interventions.

Here too due to frequent absenteeism on the part of some pupils some ability groups were under-represented where substitution was not feasible. A number of pupils also began the interviews but never ended as a result of absenteeism. Several trips had to be made back to the schools in an attempt to complete the work with those pupils but many did not yield results. This explains the difference between the target sample of 192 and the data producing sample of 158**.**

4.4 QUESTIONS OF THE STUDY

A critical examination of the Ghanaian school curriculum of kindergarten and class one, the classroom practices as well as review of literature on abilities for school entrants as discussed

in chapter three reveal that children must possess certain basic competencies. These have been used as basis of formulating the research questions. They are also used as the base information for constructing the pre-diagnostic instrument, which was the main data collection instrument (see appendix 1).

A. Can children tell or write answers to questions pertaining to their immediate background such as the following:

- their name
- their age
- their birthday
- names of siblings
- names of parents
- occupation of parents
- name their favourites animals?

B. Can children draw the following:

- their favourite animals
- a human being
- identify and name the various parts of a human being
- give the numbers of the parts of a human being?

C. Can children answer questions on the following functional items:

- name the school they attend
- tell the names of their teacher
- mention the game they like best
- who they like to play with?

D. Do children have a fundamental number concept. This involves the following:

- recognition of numbers
- transfer of symbols to actual number concept
- counting?

E. Can children draw the following symbols:

- a line from top to bottom
- a circle
- a cross
- a triangle
- a square
- two dots?

F. Can children identify certain basic objects by names, e.g. animals, fruits, play things, natural objects.

G. Have children adequate pre-reading skills in the following areas:

- know the front of the book from the back
- know that reading is from print and not picture
- know that reading is from left to right
- know that reading is continuous from the top of the page to the bottom
- know that we read the left page before the right one
- upper and lower cases are not to be mixed together in a sentence
- individual words are to be spaced out (separated) in a sentence
- finger read?

H. Can children respond to functional items such as:

- whether they like school
- how they get to school
- distance of school from home
- teacher's name
- the class they are in?

I. Have pupils a good concept of time e.g. can they say the following:

- tell how they spend the day stating the time element

- time from the clock
- when their schools begin
- when school closes
- when they wake up?
- Can children interpret from pictures, the various stages in life from birth to death?

Can children give or respond to the following:

- date of the day
- the names of the days of the week
- the number of days in the week
- which day begins the school week
- which days they don't go to school
- tell the current month
- name the months of the year
- tell the number of months in a year?

J. Do children have a good concept about height and can build blocks showing which is the highest, lowest and those of equal heights?

K. Do children have a good concept of money?

L. Do children have basic addition and subtraction concepts?

M. Do children have a good foundation in English language ability in the following areas:

- a good foundation in understanding English language (receptive language)
- a good foundation in English language production (expressive language)?

N. Can children answer questions on some basic functional items such as:

- the type of house in which they live
- whether they have a radio and television at home
- the type of programmes they listen to or watch?

O. Have children some concepts of basic simple proportion?

P. Have children a good concept of time comparison?

Q. Have children a good concept of length / mass comparisons?

R. Have children a good concept of weight / duration comparison?

S. Have children a good concept of speed / area comparison?

T. Can children sort out numerals from among letters of the alphabet, punctuation marks, geometric figures and other symbols arrange them serially write out some of the numerals, also

- sort out letters of the alphabet from numerals, punctuation marks, geometric figures and other symbols arrange them orderly, write out some of the letters of the alphabet?

U. Can children reconstruct stories by the following:

- tell a story from each picture
- arrange pictures logically in a sequence to form a story.
- retell the story in a sequential manner?

V. Can children sort out and identify colours?

W. Can children imitate rhythms?

4.5 INSTRUMENT

The main instrument for both studies was a pre-diagnostic instrument for assessing the learning pre-requisites of school entrants in Ghana prepared by the researcher. This instrument was designed for pupils with the age of six or entrants into class one in Ghanaian primary schools. It covered selected basic school related abilities that are critical for beginning school based on the requirements of the Ghanaian school curriculum. It covered 126 main items with sub-divisions making up a total of 293 items (see appendix 1). All these items in the instrument were very critical in showing the broad characteristics of the entry behaviour of school entrants in Ghana based on the assessment of the demands of the curriculum. But it is also the foundation for collecting data for the development of a diagnostic instrument with relevance to the Ghanaian school curriculum, which will be the subject of future research. The items covered broadly drawing, mathematics and language

abilities in an integrated form. The bases for the selection of these areas have already been discussed in chapter three. They were constructed in simple language thus making it user friendly. They were also made as practical as possible to engage the child in activities that ensured sustained interest and attention.

It has been divided into four parts. Functional items preceded each part. Though these functional items were aimed at finding out how the children respond to elementary but necessary everyday issues considered as essential foundations for school by the design of the school curriculum, they were so constructed as to serve as a kind of “warming up” phase. Thus, the child was taken through familiar items or questions at the start of each phase and is gradually ushered into what may appear as technical things. It was expected that each section takes roughly 30 minutes to complete. Thus, it was anticipated that it takes a total of about two hours to complete the entire instrument.

It was not expected that each child would be taking through the whole instrument at a go but rather through each part at a time. For example, if one is working with five children he takes all the five children through one part and then calls the first child back to begin the part two. All the others have to be taken through this section before the first child is called once more to go through the third part and it follows in that same manner. There could be variations in this approach based on the best judgement of the assessor. But the principle was that a child should not sit through at a go to the extent that his attention suffers which would interfere with his best possible performance. The instructions at the beginning for the assessors are as stated below:

INSTRUCTIONS: *Ensure that you establish a good rapport with the child. Let the child relax and say to the pupil I am going to ask you some questions. Please do your best to answer all questions to the best of your ability. The questions can be asked in English or the local language unless otherwise stated. Introduce yourself by mentioning your name, profession and indicate that you are very interested in the way children learn and you are writing a paper on children as old as they are to find out all that they know and can do already to be able to help them learn better in school. Say further to the child that this is not a test so he should be relaxed and when a question is not clear he should feel free to ask for clarification. NOTE: (You may explain this again in the local Language, if necessary).*

It was further sub-divided into sections from A-W with each section focussing on a specific skill or ability as already indicated.

4.6 PROCEDURE

The procedures adapted for both pilot and main studies were the same. The first stage of the research procedure during the pilot study covered the trying out of the instrument by the researcher on his own. This lasted for a period of 5 days. During this try-out stage the researcher worked with selected children from a cross-section of schools. A total of 10 pupils were used. The focus was to look out for difficulties with item construction, understanding of items by the subjects, strategies for establishing rapport with the pupils, efficient and uniform ways of recording responses etc. Thus armed with the knowledge gained from the try-out period, a one-week intensive training of the research assistants ensued. This try-out phase was not repeated during the main study.

During the training the rationale for the project and the relevance of the items in relation to the objectives were all thoroughly explained. Procedures for establishing rapport with pupils and rules for uniform recording of responses were all thoroughly discussed. Suggestions were adopted and practical-training sessions using the instruments began. First the try-out was among research assistants. Later on it was done with actual kindergarten children and some class one pupils. This phase also provided the opportunity for the contact with the class teachers and the heads of the schools to be made. Thus at the end of the 5 day period we were all relatively equipped on an equal footing to begin the actual data collection phase. Though the majority of the assistants for the main study had taken part in the pilot study it was still necessary to go through this phase to ensure that we were all on the same sheet of music.

The next phase was the sampling procedure, which I have earlier explained. This phase provided the much-needed contact with the head teachers of the selected schools and the class teachers. During this phase discussions were held with head teachers and their respective class one teachers as to the choice of venue for carrying out the interviews, the times most appropriate for the researchers to come to the schools and the roles expected of each party were clarified. Thus when the actual data collection stage began there was enough understanding and co-operation from both sides.

During the data collection phase the researchers got to the schools, got their rooms ready with adequate tables and chairs for both researchers and pupils. They then went into the classes and called out one child based on the sample list already prepared. After going through one

part with one child he/she was released and as soon as he/she reported to class the teachers called out the next child or children to be interviewed. That was basically the pattern adopted in each school.

At the end of each day a review of the day's activities were carried out. Interviewers were to comment on their findings or difficulties and any concerns or uncertainties were discussed. These review periods were also used to go through the instrument once again to identify any lapses or uncovered areas so that they could be addressed the following day.

4.7 METHODS OF DATA ANALYSES

The results of the pilot study were discussed basically using percentages, tables and qualitatively to be able to give a feedback to the schools and to serve as a foundation for developing the interventions (see GODWYLL, 2002). To make for easy reading and presentation the analyses was done by sections. Both the general picture and school specific performances depicting the learning pre-requisites that the children possessed were highlighted. These results will not be presented here, but they were very useful in determining the bases for the school interventions and the consensus-building seminars held in the schools with the teachers and heads before the intervention phase began.

The data of the main study will be analysed in four parts. The data will be recategorised into 15 identifiable major skill areas and the variance to item difficulty (using $p = NR / R$) calculated for each of the areas.

Secondly different emerging patterns of performances will be qualitatively discussed.

In the third part statistical significance of the performances of the pupils based on six identifiable independent variables will be analysed using the chi^2 test. These independent variables are, sex, age, use of language during the interview, pre-school experience, locality or area and private versus public school.

In the last part two diagrams will be drawn to show the dependencies and interactions between some of the independent variables in each of the two groups. Information from classroom observations, interventions undertaken with teachers, conclusions from the pilot study as well as results from other studies may be used to support or buttress a point or a finding.

CHAPTER FIVE

ANALYSES OF DATA

5.0 INTRODUCTION

In this chapter the analyses of the data will be shown. There were two field data collected one for the pilot and the other for the main study but this chapter will focus on the data from the latter. The instrument already described in chapter four was the main source of obtaining the data to be discussed here. The emphasis of the analyses will be to show how wide the variance is among pupils in their abilities and pre-requisite skills to grapple with schoolwork.

This chapter will have four parts. In the first part I will describe the variance to item difficulty under the 15 skill areas. Secondly different emerging patterns of performances will be discussed. In the last part performances of the pupils based on the dependencies or interactions with six identifiable independent variables will be analysed using the chi^2 - test. The sample to be used for the chi^2 analyses will be the two groups of very strong pupils (24) and the weak pupils (36) totalling 60 about 37.9% of the sample. The chi^2 is calculated at $p < 0.001$. In the last part diagrams will be drawn to show the interactions between some of the independent variables and the each of the two groups.

Information from classroom observations, interventions undertaken with teachers as well as conclusions from the pilot study as well as results from other studies may be used to support or buttress a point or a finding.

5.1 VARIANCE TO ITEM DIFFICULTY

Under this subheading using the formula ($p = NR / N$) the item difficulty will be calculated. It will be categorized under three sub-divisions namely; high level difficulty, medium level difficulty and low level difficulty.

5.1.1 Skill Areas with High Level Difficulty

- **Picture interpretation:** ($p = 0.43$). This skill area involved interpreting pictures that showed the stages of life from birth to death(see appendix 1d, or Section F, Item 47 of instrument).

- **Pre-reading skills:** (p = 0.30- 0.87). The interviewer was to hold the book in such a way that the child can see the cover page and the back at the same time and ask the child questions on fundamental ideas on pre-reading skills including identifying page, lesson or chapter, left-right eye movement in relation to reading etc. A little book of eight pages adapted from “Das Verückte Buck” (CLAY, 1979), which literally means ”That Crazy Book" (see appendix 1e or Section G, Item 48 – 50 of instrument).

- **English language stand/ability:** (p = 0.20- 0.60). In this skill area the child was supposed to exhibit his/her grasp over the English Language. Thus it was expected that the interaction would be carried out in English. Two puppets were supposed to be used one for the child and the other for the interviewer. The puppets were to be manipulated as if they were the ones speaking. The interviewer was to show the child how to use it before the main tasks began. For example, “say to the child I have here something for you to play with, I want us to play together with the puppets so take one and I will show you how we are going to play together.” The child was to be corrected when he made a mistake. Interviewers were to observe whether the child learnt to correct himself with time.

- **Story reconstruction:** (p = 0.27- 0.29) were able to reconstruct 100% of the story whereas 0.30-0.57 reconstructed between 25%-50%. This skill area had three different sets of stories in pictures namely the a) Ladder, the b) Balloon and the c) Cake (see appendices1j-L, or Section U Item124 of instrument). For each of the sets the procedure was as follows: The child was allowed to choose the language he can best express himself in. Then the pictures were placed before the child one after the other and in each case the child was to say what he saw or thought was happening. He was also to arrange the pictures in a serial form that made sense in terms of logical flow and sequence. Finally he was to retell the story as he saw it.

- **Identification and sorting of basic colours** : (p = 0.40). In this activity objects or cards with different colours were placed before the child and asked to sort and identify the various colours. Although this skill area fell under sorting and identification it was the only area where children experienced the greatest difficulties. The rest of the skill areas fell into the medium level difficulty category as indicated below.

5.1.2 Skill Areas with Medium Level Difficulty

- **Ability to draw:** (p = 0.68 – 0.88). This section dealt with finding out the abilities of the child to represent images or objects in graphical forms. In other words, can the child draw? If so what abilities are evident in his drawing that are critical for developing the ability to write?
- **Number concept:** (p = 0.69 - 0.90). This involved a dice game, which the interviewer played with the child. The play pieces were in two different colours and the interviewer was to ask the child to select the colour he liked and he chose the other. They took turns to throw the dice and count with the play pieces.
- **Concept about time:** (p = 0.39 - 0.60). Here the child was to tell you how he spent the day stating the time element e.g. “I wake up at 6 o’clock”. Also pictures showing examples of activities on how a typical day was spent was placed before the child (see appendix 1f or Section I Item 59-60 of instrument) and asked to arrange them in the order in which they occurred. There were variations to accommodate children who encountered difficulties with the original task. Here pupils were also supposed to show their knowledge of dates, time, months, weeks and days.
- **Experience with money:** (p = 0.69-0.91). The child was given some local currency in coins s e.g. c100 and c10 and c 50 and asked to compare which is more or how many of one would make the value of one etc.
- **Basic addition and subtraction & simple proportion:** (p = 0.69 - 0.91). This skill area had two tasks. In the first task a game of "hide and seek" was played. Here e.g. pebbles were hidden in the palms and children sought to find how many one had in a palm at any time the palms were presented. First the child was shown the number of coins or pebbles one had altogether and then some were hidden in one palm and the other palm shown. The child is supposed to indicate how many there were in the closed palm. E.g. one showed the child 3 coins or pebbles, hide 2 in the closed palm and showed 1 in the other palm. The child is expected to indicate the number of pebbles in the closed palm. There were many variations in this game using up to 10 pebbles.

  The second task placed before the child pictures of pairs of footwear e.g. 1 pair, 3 pairs and 6 pairs (see appendix1h or Section O, Item 102 of instrument) one after the other. The child was to assume that his friends had came to visit him at home and have removed

their foot wears and placed them before the entrance. He was to tell how many children would be visiting in each case based on the pictures shown.

The other variation in this task on simple proportion was to place before the child pictures of feet that protrude from under a bed sheet or blanket (see appendix 1i or Section O, Item 103 of instrument) one after the other and ask the child how many children will be lying under the bed sheet or blanket in each case.

- **Comparisons:** (p = 0.48 - 0.69). These skill areas involving comparisons were grouped under two broad headings namely; weight and duration as the first and comparison with length, mass, speed and area as the other. Here simple practical everyday events and activities as well as objects were used in the various areas to identify the child's abilities and experiences in these fields. Although comparing height was under this skill area that had a low difficulty level as well be indicated in the third area below.

- **Sorting and identification of numerals, letters of the alphabet & colours:** (p = 0.48 - 0.69). In this skill areas two activities were put together. In the first activity cards with numerals, letters of the alphabet, punctuation marks, geometric figures and other symbols were given to the child and given systematic instructions on how to sort them out. The activities involving sorting out and identifying colours had a high level difficulty as already indicated above.

5.1.3 Skill Areas with Low Level Difficulty

- **Functional Items:** (p > 0.90). These items covered areas such as greetings, giving their names, birthdays, names and number of siblings, names of parents their occupations and about their pet's name of their schools, and the games they liked. It also covered feelings about school, their teacher's names and in which classes they were. Type of accommodation they lived in and television and radio programmes they listened to were also covered.

- **Comparison with height:** (p = 0.86 - 0.98). This activity was categorized under comparisons but yielded a low level difficulty unlike the others, which had a medium difficulty level.

- **The concept of symbols:** (p = 0,64-0,90). The child was to be provided with a sheet of paper and he was to write his name on it. The child was asked to draw some symbols (see appendix 1c or Section E, Item 41 & 44 of instrument). These were:
    - a line from the top of the sheet to the bottom
    - a circle
    - a cross
    - a triangle
    - a square
    - two dots.

There were six other variations of this task namely:

- Naming the symbols
- Drawing abstractly in the air symbols and asking the pupils to draw after you.
- Copying the symbols after they have been drawn by the interviewer
- Tracing the symbols
- Sorting out the different shapes and symbols
- Fixing up the various points of the symbols in a puzzle task.

In this task each variation is envisaged to be easier than the previous one, thus it was only when a child was not able to perform the proceeding task that he moved on to simpler tasks. According to KORNMANN (1983) these variations are only necessary when the child fails to accomplish the original task.

The rationale for the exercise was to establish the fore-knowledge of pupils on the following:

- relationship between symbols and their meanings
- identification of appropriate word meanings
- ability to differentiate auditory
- ability to visually differentiate
- ability to draw.

- **Picture identification:** (p = 0.70-0.95). There were two parts of this task. This task focused on picture identification. The child was given a sheet of paper with 14 pictures (see appendix 1d) and the child, was to look at them and mention the names either in the local language or English as the interviewer pointed to each one of them.

- **Imitation of rhythm:** ($p = 0.85$). In this task the interviewer played a beat or rhythm on the table or drums and the child was to listen and watch carefully and then imitate. Variations ranging from simple rhythms to complex ones were used.

5.2 BACKGROUND DATA OF SAMPLE

One hundred and fifty-eight class one pupils were sampled from 17 schools. Nine schools were from urban centres and eight from rural areas. In terms of sample selection 48.7% were from the rural setting while 51.3% were urban. Though sex was not a criterion for selection there were 52.5% males and 47.5% females in the sample. Purposive sampling was used to categorise the pupils into ability groupings and simple random sampling used to select the required number in each class. 32.3%, 33.5%, and 34.2% were in the below average, average, and above average groupings respectively. The cumulative knowledge and records of teachers as well as a critical review of their work samples were relied upon in this categorisation process.

The age range was between 6 and 10 years but the mode was between 6 and 7, which represented 60.8%. About 63.9% of the sample had had early education in the nursery or kindergarten. 29.7% used less than 1 hour to complete the diagnostic instrument. While 57% used between 2 to 3 hours, 13.3% completed the instrument between three to four and half hours.

With respect to the use of language the local language of the child was used with the exception of where it required ability in the English language but the child had the option to choose which language he felt at home using. He could also switch in between the languages to his comfort unless otherwise stated. But the analyses of the use of language for the completion of the interview revealed the following: 28.5% of the sample used the local language for between 90%-100% of the instrument. On the other hand 18% used English for the same proportion of the instrument. However, 11.3% used the local language for up to 50% of the instrument.

5.3 PATTERNS OF PERFORMANCE

A critical look at the performances of the pupils reveals very interesting patterns of performance. The following are discernible:

a) There were 24 children who are very good in all the ability skill areas.

b) There were 36 pupils who are very poor in all areas.

c) Twenty-two pupils were very poor in some areas and good in some.

d) Here there were three different groups satisfying this category. These were: six girls, thirteen pupils and seven boys who were very good in some areas, medium in some and low in others.

These patterns will be discussed one after the other.

5.3.1 Pupils Good in All Areas

In eight (47.1%) out of the seventeen schools used for the main study three children each in six schools and four each in two private schools could score on all the 293 variables of the instrument. That makes it a total of 24 out of the 158 pupils.

Thus, these 24 pupils representing 15.2 % showed excellent abilities in all the functional items that showed them to be well at home with the knowledge of things in their environment. Their abilities in all the 15 skill areas were also excellent. Interestingly in 2 of the schools 1 child each came from the average group. 5 of them were 5 years old and the rest were between 6 to 7 years.

The social class did not play any role here since children came from all the 3 social classes. A similar finding was found with the sample from the pilot study where 25% of pupils from the low social class belonged to the above average group.

In the main study about 25% of the children in the low and middle social classes were in private schools. The fees charged in these schools on the average is ten times more than what is charged by the public schools. Thus, for parents within the low and middle income brackets to strive to send their children to these expensive schools is an indication of their determination to see their children acquire a better and higher educational level than theirs. They may engage in trading, farming or other income generating activities to raise extra income to be able to support their children in school.

Such parents will undoubtedly strive to provide the basic necessities that the child needs to be able to learn both in school and at home. Having paid a “fortune“ on the child's education supervision at home to ensure the child does his homework given or at least learn something at home is likely to be high.

Apart from this the intrinsic motivation of these children was very high. When asked the question "Do you like coming to school?“ their responses were in the affirmative. And when asked to give reasons for liking school they offered such positive statements as:

- "I want to learn to be clever."
- "I want to learn very hard."
- "Because the school can teach you more things."

They appear to know exactly why they are in school and they work to fulfil that objective. Thus in Ghana performance in school does not depend on ones social class per say. In other words irrespective of ones social class, one can perform provided certain minimum conditions are met.

Another point worth noting here is that in 6 out of the 8 schools the language of instruction was English. The other 2 schools did not enforce the local language policy, thus were flexible and teachers could choose whichever language they found fit for their children. The observations in these classrooms revealed that between 80%-90% of lessons were carried out in English. Occasionally it was interspersed with the local language. All the 24 pupils came from predominantly urban settings.

The language of instruction seems to play a role. The general impression one gathers from the interviews with the children is that pupils from schools in the sample where English was used as a medium of instruction from class one were more impressive than their counterparts from schools that did not. A high significant level on a chi² analyses as will be discussed below further supports this impression.

The above situation may be explained by the fact that there are more reading materials in English in the children's environment than in the local language. Furthermore, either due to wrong methodology or a lack of motivation to learn the local language most children though can speak their local language cannot read or write in it. Thus the children cannot decode the few educable materials in the local languages. Interestingly, the performance on number concept revealed that about 88% of the entire sample spontaneously countered in English when counting even though that was not a requirement. If children are so familiar with their local language why do they opt to count in another language? Also the tasks involving giving the names or the month and those of the week were generally poorly done. The logical conclusion one can draw is that those who can use and read English get a better opportunity to

broaden and enrich their experiences and therefore have an advantage over their counterparts who cannot.

5.3.2 Pupils Very Poor in All Areas

Thirty-six of the children representing 22.8% were very poor in all the skill areas. This cuts across schools. Localities, age, sex, and social class. This involves children who scored between 0%-20% on the tasks involved in each skill area. Fifteen (9.5%) of them were on the lower point of less than 10% in each skill area.

This percentage of children could not draw anything of their own choice, or could they count numerals from 1 to 6, or identify 3 out of 14 pictures of objects they meet in their daily lives. Furthermore, they could not identify the front of the book from the back or indicate whether reading is from print or picture, essential pre-requisites for reading. They showed very low ability to add or subtract. They were poor in sorting out of numerals and alphabets from punctuation marks and other symbols as well as making comparisons with height, weight, speed and duration just to mention a few.

They were only able to give for example their names but not the surnames in most cases, how old they were but not their birthdays, how many siblings they had and their names. They were able to imitate rhythm and reconstruct the stories to a level. They were also able to tell the type of house they lived in, the radio and TV programmes they liked and the reasons for liking them. They were able to tell the time the school closed but not when it started. With the days of the week they were able to give the names in the local language but not in English. They could mention maximum of three names of the month of the year. The picture was the same in both the local language and English. These in a nutshell are some of the areas they could perform.

Granting this entry behaviour of these children a lot of damage and injustice is done if they are neglected in the teaching-learning process through the approach of teachers. Since the class method of teaching was prevalent in many schools these children stand the risk of been left behind in the teaching-learning process.

The entry behaviour of this group clearly falls below the take off point of the class 1 syllabus, which can at best be described as a continuation of nursery 2, or kindergarten work. None of these pupils had ever had any early education experience and the pre-requisite skills necessary for learning writing; reading and number work was either weak or non-existent. The question

to ask here is, ‘why should a curriculum be structured in a way to favour those with advantage of early education and the teaching methodology as well as the classroom demands make it difficult for the disadvantaged to adjust? This state of affairs is undemocratic, discriminatory, and unfair and undermines the fulfilment of the fundamental human right of providing every child with quality education.

5.3.3 Pupils Very Poor in Some Areas and Good in Some

The other pattern that emerges from the data is where pupils were good in some areas and poor in others. There were 22 pupils representing 13.9% who bore these characteristics. Coincidentally they were all from rural schools. They were poor or weak in the following areas:

- Concept about time
- Concept about symbols
- Concept about print
- English language ability and
- Sorting out numerals and the letters of the alphabet.

It may be necessary for a future study to examine these factors in the rural areas to see if there are certain conditions in these environments that doesn’t foster the development of these abilities. But the experience I have with living, schooling and working in the rural areas is that everyday living is not tied to the clock, in the sense that they do not live from hour to hour. Life is more divided into three, morning, afternoon and evening. There are some families who may not even live with a watch but use the changes in such natural phenomena as the position of the sun in relation to mans shadow, the early morning cock crow and the cry of certain birds, animals or reptiles to determine the time. It is therefore understandable that if a child grows up in this environment and is suddenly confronted with regulating his life with a watch and by the hour or minutes he will naturally encounter problems.

Again in the narrative accounts in chapter two it was made abundantly clear that teaching English in an environment which has very little or virtually no support systems for the language is an uphill task. In a community where there is very little exposure to print of various forms in both English and the local language, ability to function on the symbols and codes of the language will be low.

They were however good in the following areas:

- Imitation of rhythm
- Comparison with height, weight and duration
- Comparison with length, mass, speed and area
- Experience with money
- Basic addition and subtraction
- Identification of pictures.

The above areas may also have something in common with the rural environment. For instance the main medium of movement is by walking. Children accompany their parents to farms and they are constantly estimating how far the distance of one farm is from the other, how long it takes, how fast one has to walk, how big their fathers farm is in comparison to that of the neighbour. They may have to climb a tree to cut down some fruits and it is natural that they will be making comparisons with other trees they have climbed before as to which is higher and so on. A good number of children sell some farm produce on the market and are therefore exposed to money. Since in calculating change for buyers they add and subtract it provides them with a good platform to gain some competencies in these areas. Drumming and dancing are common pass times for many children. These activities involve imitation and rhythm thus they normally have a fairly good foundation in these areas.

5.3.4 Pupils Very Good in Some Areas, Medium in Some and Low in others

The other pattern mention characterised those very good in some areas medium in some and poor in others. Six girls fell into this category. All of them were from the middle class families spread over 5 schools all of which were in the urban setting. Two of them were left-handed who were also 5 years old. Three of them were 7 years while 1 was 6. They all had nursery education and used between 40%-60% English to complete the interview.

While they were very good in concept about print, English language, ability drawing, and story reconstruction, their performance on experience with money and basic addition and subtraction was medium. They were however very poor in comparisons.

The other group that satisfied this category was made up of 13 pupils. They were spread over 7 schools and aged 7 - 9. Three of the schools were urban and 4 were rural. They demonstrated high proficiency in the functional items, sorting out numerals and the letters of

the alphabet as well as story reconstruction. They had medium performance in drawing, concept about print, concept about time, addition and subtraction and English language ability. They were however low or weak in doing comparisons, concept about symbols and number concept.

The last example of interest is a group of 7 boys from three rural schools. They could draw and imitate rhythm perfectly. They were also good on the concept about symbols. But the rest of their performance was not striking in any way.

Apart from showing these examples that indicate variance among the children of the sample there are some interesting case studies from single classrooms that typify variance among children in the same class. The following case studies will be used.

In one school whereas *Jonathan Mensah* had a firm grasp over the concept about print and pre-reading skills, *John Arthur* did not demonstrate any proficiency in this area.

Case 1.

Jonathan could do the following:

- Tell the front of the book from the back
- Identify that reading is from print and not pictures
- Know that we read from left to right and that it is continuous from top of the page to the bottom
- Know that the page is read before the right one
- Know that upper and lower cases are not to be mixed together in a sentence
- Know that individual words are to be spaced out or separated in a sentence
- He could finger read and even read without pointing to the words.

John on the other hand could not even tell the front of the book from the back let alone grapple with the other tasks. What is the moral justification for teaching children how to read using the same approach?

Case 2

In school 4 *Ama Frimpomaa* demonstrated a good concept of time she could tell how she spends the day indicating the time element. Could tell the time and indicate when school begins and closes. She could give the date of the day, names of the days of the week tell the number of days, in a week, indicate which begins the school week, and the days they don't go to school, tell the current time and name all the months of the year.

But *Albert Kweku Sam* demonstrated no orientation with regards to time. He appeared simply lost and just gave out some random times that had no bearing on the questions. For example when asked to give the time he comes to school he indicated 4.00 p.m. but he is in a single shift school which begins school at 7.45 a.m. When asked which day began the school week he indicated Wednesday which coincidentally was the only day out of the week he could mention and he gave the same day as the date of the day which happened to be 22/10/99 a Friday. Regarding the other issues he demonstrated no knowledge of them.

Case 3

Charles Agyekum in school 6 demonstrated proficiency in the following:

- Sorted out numerals from the letters of the alphabet, punctuation marks, geometric figures and other symbols
- Arranged them serially
- Wrote out the numeral from 1-30
- Sorted letters of the alphabet from numerals, punctuation marks, geometric figures and other symbols
- Arranged them sequentially
- Wrote out the letters from a-z.

Kofi Gyimah in the same class could only pick two numerals, (3 & 5) from the first activity and could write numerals 1 & 3 only when asked to write any numerals he knew of. Regarding the letters of the alphabet he could only pick out A & D and could write 'a, c, k & G. The rest of the activities *Kofi* could not do.

Comment

If the children in the same class differ in their abilities then there is no justification for teaching the children with the class method, which were the observations of the researcher in most classrooms. This method assumes a standard for the class and all children are taught with one approach based on an assumed uniformed standard. The chances are that those individuals who fall below the assumed level of performance will begin their school years with a lot of difficulties. And if a remedial programme, does not address these difficulties, which is often the case then a sizeable number of the children, will fail to achieve the required standard or thresholds. It is my presupposition that one of the major causes of the high percentage of dropout, and wastage in the school system can be traced to the methodologies of teachers in the beginning class or classes. This therefore has serious imports for our teaching.

These case studies have been cited not because they are the only isolated cases but just to buttress the point made earlier. Generally the abilities of the children differ widely in the various skills. Whereas others had a mastery over them, others demonstrated difficulties and others had no competence at all or in some of the skill areas. This prevailing method of teaching the whole class as if it had nameless and faceless members is no longer tenable.

5.4 ANALYSES OF CHI-SQUARE RESULTS

In the last part of the analyses the interactions and dependencies of the six independent variables on the performance of 24 strong pupils and the 36 will be calculated using the chi^2 test. The chi-square distribution at ($p < 0.001$) had the following results and they are presented in the six tables shown below:

TABLE 5.4.1:

RESULTS AMONG THE SEXES

	MALE	FEMALE	TOTAL
WEAK	17	19	36
STRONG	12	12	24
TOTAL	29	31	60

Not significant.

Since the data did not show any significant difference in the abilities of the sexes it cannot be the base for differential treatment or access to educational provision. Though there is no identifiable policy or law that explicitly discriminates against the girl-child classroom research reveals certain covert behaviours of teachers and male pupils that can inhibit the learning of the girl child (see MOE, 1995; GODWYLL & ESSIAW, 1997). Generally a lot of traditional mental sets outside the classroom also militate against the well being especially of the girl-child in school. I recall an incident that occurred at a market place in a small village called Sakia in the Northern part of Ghana.

I had travelled to the Northern part of Ghana to do an evaluation of the Basic educational sector for the Ministry of Education. During the weekend I went to the market place with the head teacher of one of the schools to buy a few food stuffs. As we walked through the market looking out for something cheap to buy a parent (mother) came up to the head teacher. She told the head that the husband had sent her to inform him that their girl-child in primary 3 should be withdrawn to come and help in the household chores and his son who was then at home would be brought to replace her. She also said the rest of the fees for the girl should be transferred to cover the boy.

This is an incident that typifies certain traditional mental sets about the girl-child. The lack of significance in the learning pre-requisites between the sexes is very critical for the body politic. It re-emphasises the point that the girl child has the potential and the basic learning pre-requisites for successful schooling and must not be inhibited in anyway. The clarion call is for parents, guardians, significant others and the entire society to remove all stumbling blocks in the way of the girl-child to learn. If an individual is not performing the causes are therefore to be identified rather than based on the persons gender.

TABLE 5.4.2:

RESULTS AMONG LOCALITIES

	URBAN	RURAL	TOTAL
WEAK	15	21	36
STRONG	24	0	24
TOTAL	39	21	60

$Chi^2 = 14,86$ ($p < 0.001$)

The schools in the various localities indeed differ in their practices ranging from those who pre-test-children and therefore select only those demonstrating most of the learning pre-requisites for beginning school, to competencies of teachers, supervision and control of the learning time of the children, to methodology, infrastructure, learning and teaching materials etc. and these favour the urban areas. It is therefore not surprising that differences exist among the localities in performance.

But the critical point here is that if the majority of the weak children were from the rural setting which shows them to be disadvantaged through no fault of theirs. It is therefore unjustifiable for the child from the rural area whose first encounter with paper and pencil may be the class one classroom to be forced to move at the same pace with his counterpart in the urban setting. The child in the rural setting should have an equal chance or access to good quality education as his counter point in the urban area. For this to be feasible there is the need for a differentiated approach to educational delivery in the rural areas.

TABLE 5.4.3:

RESULTS ON LANGUAGE USAGE

	HIGH ENGLISH LANGUAGE USAGE	HIGH LOCAL LANGUAGE USAGE	**TOTAL**
WEAK	2	34	36
STRONG	24	0	24
TOTAL	26	34	60

$Chi^2 = 34,26$ $(p < 0.001)$

Though the interviews were conducted in the local language of the children except where the items were for establishing the English Language ability of the child, the general impression from the field study shows that children with strong English language facility performed better as confirmed by the table above. All the 24 strong pupils used between 80%-100% of English language to complete the instrument.

The writers of the ‘Tale of Two Ghana’s’ remark that; “Ghanaian children, particularly in the rural areas, have only 1% of the contact hours that a child growing up in England or the United States might have” (MOE, 1995, p.24). I support the views of this research team that language is the fundamental skill needing to be developed and that the difficulties faced by

Ghanaian children in learning to read and write in the native languages and in English is the fundamental problem facing the educational system today. The researchers further pointed out that Ghanaian children succeed at developing the informal, basic oral communication skills in their own language and often in two or more Ghanaian Languages. They obviously suffer from no lack of linguistic ability but the reality is that under the current language policy Ghanaian children fail to reach the cognitive threshold necessary for successful transfer to English by BS4.

TABLE 5.4.4:

RESULTS ON PRE-SCHOOL EXPERIENCE

	PRE-SCHOOL EXPERINCE	NO PRE-SCHOOL EXPERINCE	TOTAL
WEAK	11	25	36
STRONG	22	2	24
TOTAL	33	27	60

$Chi^2 = 19,33$ $(p < 0.001)$

The high significant level shown in table 5.4 shows that pre-school education plays a major role in the preparation of the children for school. In a country where the curriculum places premium on literacy in an environment which has the percentage of the population age 15+ who are illiterate as 30 (WORLD BANK, 1999) makes early schooling a necessary ingredient for success. This may explain the increased interest in early childhood education among the populace lately. Despite this increased interest the management of this sector of education lies predominantly in the hands of the private sector. Some private individuals taking advantage of this increased awareness of the need for pre-school education charge very high fees in some cases between $ 200-$ 250 which is far over and above the monthly salary of the middle class e.g. University lecturers. This state of affairs leaves much to be desired.

TABLE 5.4.5 :

RESULTS ON AGE

	> 8 YEARS	< 7 YEARS	TOTAL
WEAK	15	21	36
STRONG	0	24	24
TOTAL	15	45	60

$Chi^2 = 11,20$ $(p < 0.001)$

The above results show that age is a critical factor in the performance of the children. They also show that children with younger ages had higher learning pre-requisites than those with older ages. It re-echoes the viewpoints already discussed.

TABLE 5.4.6:

RESULTS OF SAMPLE FROM PRIVATE AND PUBLIC SCHOOLS

	PRIVATE SCHOOLS	PUBLIC SCHOOLS	TOTAL
WEAK	0	36	36
STRONG	8	16	24
TOTAL	8	52	60

$Chi^2 = 11,11$ $(p < 0.001)$

In Ghana the private basic schools perform far better than the public schools. So the high significant level shown in the above table is not surprising. From the conclusions of a study by GODWYLL, ADDAI & AYUGANI (1996), they contended that the use of English language as a medium of instruction from the onset by the private schools is a major contributory factor for their higher performance over their counterparts in the public schools where the medium of instruction from classes 1-3 or lower primary is the prevailing local language of the area where the school is situated. Furthermore, results from nation-wide Criterion-Referenced

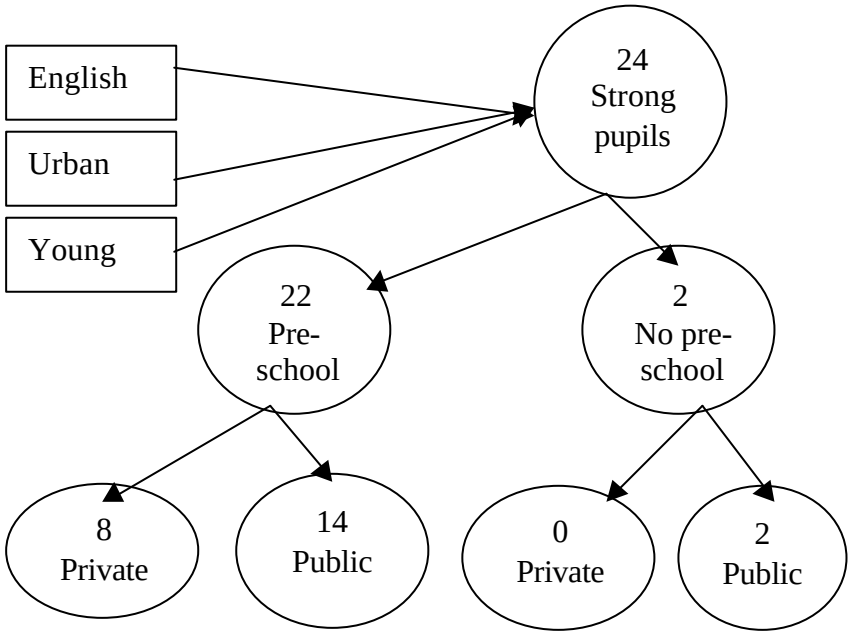
Tests from 1994-1997 support the better performance of private schools. Since 1994 when the private schools were added to the sample for the nation-wide CRT they have consistently performed better than the public schools in both literacy and innumeracy. The percentage of pupils in the private schools sample who scored at the mastery levels and beyond was 68.7% for the literacy test and 40.4% for the numeracy test in 1997 as against 6.2% and 2.7% in the public school sample respectively. This relatively high performance of the private schools is consistent with the trend in many countries. But a Ministry of Education report laments that the difference in Ghana is extremely large and unacceptable, considering the large share of government recurrent expenditure devoted to the public education sector (UNICEF, 2000).

5.5 INTERACTION AMONG THE SIX INDEPENDENT VARIABLES

In this sub-section the interactions among the six independent variables and the two groups of pupils are analysed. Through diagrammatical representation the relationship among these are shown and discussed.

fig. 5.5.1:

PATTERN AMONG THE STRONG PUPILS



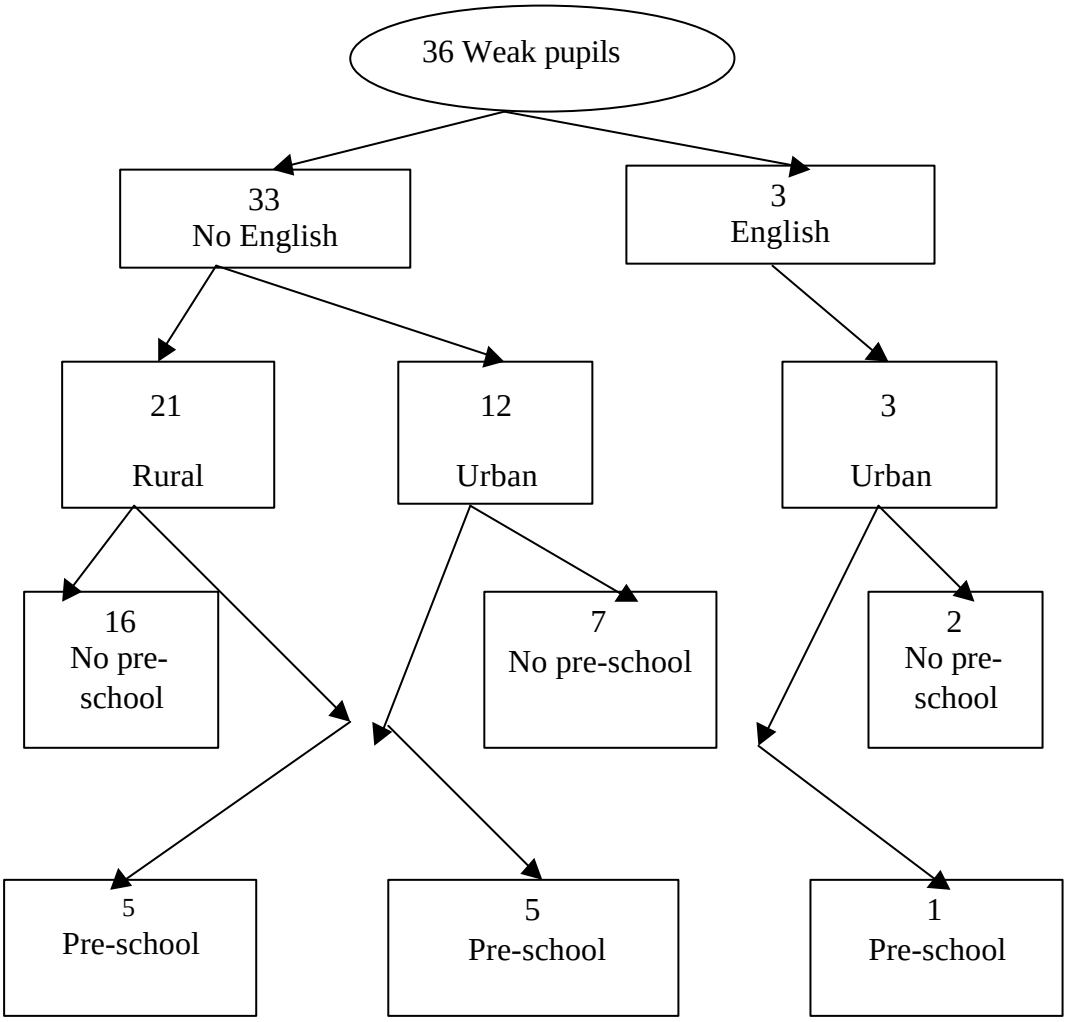
From the diagram above it can be seen that all the 24 high performing children had high English language usage, were from urban schools and were between 5 and 7 years of age. Additionally 91.7% of them had early childhood education and out of this 36.4% of them were from the private schools. It may be interesting to study the structure and operations of

the private school system to identify the strengths of it that can be learnt by the public school system. My observations in the sample schools were that there were more trained teachers in the public schools than in the private ones at least in the class one classes I worked with, but the private schools had stronger teacher supervision practices and demanded higher accountability from teachers for performance.

Thus, Ghanaian children who possess higher English language ability, having pre-school experience, attending an urban school and being in a private school have a higher chance of school success.

fig. 5.5.2:

PATTERN AMONG THE WEAK PUPILS



Interestingly all the weak students of the sample were from the public school system. Out of this 33 (91,7%) were low in English. Only 8,3% were high English users and all from the urban centres. From this number of low English users 63,6% was from the rural setting while

36,4% was from the urban schools. Even among those who had pre-school experience the majority of 27,8% were low in English as against 2,8% who had high English.

The majority of the 36 pupils representing 69,4% had no pre-school experience and out of this percentage without pre-school experience 69,7% were low in English. Again the majority the pupils without pre-school experience representing 72,7% were from rural schools as against 58,3% from the urban schools. Age and gender did not play any significant role in these clusters as such they were left out.

It is clear from the above analyses that a rural a child has a higher tendency the use lower level English, higher chances of not having pre-school experience, and more likely to perform lower. Thus pre-school experience as well as ability to use English are strong determinants of performance in Ghanaian schools, which confirms the pattern already emphasized in the conclusion of the analyses for the strong group above. These determinants of school success tilt in favour of the urban child to the disadvantage of the rural child.

5.6 CONCLUSION

Interestingly, the demographic distribution of poverty in the country follow a similar pattern. In the first place Central region from which 95,6% of the sample was selected is one out of the three regions with increased index of poverty in the 1990's with a ratio of 1 out of 2. Food farmers the majority of whom live in the rural areas experience high incidence of poverty. It has been argued that poverty in Ghana is not only rural but also largely agricultural in phenomenon. Inhabitants of the rural areas though about 2/3 of the population constitute 4/5 of total poverty and particularly food crop farmers, about 2/5 of the population also constitute a high 3/5 of total poverty (DITTOH, & ANKOMAH, 1997; DITTOH, MILLA & ALEBIKIYA, 1998; REPUBLIC OF GHANA, 1998; REPUBLIC OF GHANA, 1999; UNICEF, 2000).

Ghana basically has an agrarian economy, which also engages the majority of her workforce, but denies this majority of their fair share of the national wealth. If education and the school system, which are supposed to fuel the development of human resources, chart the same pattern of the poverty dynamics, then a breakthrough in the cycle of poverty is far from been realized. Education will then become a tool for the production and reproduction of an elite majority and the realization of the right of every child to quality education will remain a far-fetched dream.

In sum, a real dichotomy in the chances of Ghanaian children at school success is drawn. No wonder the research team that reviewed the basic sector of Ghanaian education in 1995 titled their report “The Tale of Two Ghana’s: A View from the Classrooms.” This dichotomy has serious implications for educational policy, planning and practice in Ghana.

CHAPTER SIX

THE PROCESSES OF ADOPTING INTERVENTION STRATEGIES

6.0 BACKGROUND TO INTERVENTION

The Ghanaian school system is structured such that the emphasis is placed more on coverage rather than mastery. Teachers struggle to cover as much material as possible to justify the fact they are doing their work. At the beginning of each term the teacher is expected to present his scheme of work based on the allotted topics or areas of the curriculum. The scheme of work is broken in weekly targets. Thus, at the end of the term the teacher's output is measured more on how far he was able to cover the proposed scheme of work. This emphasis on teacher output relegates the mastery of pupil in relation to the topics, areas, skills or competencies covered by the teacher. No teacher will be sanctioned that ½or 2/3 of his class failed in the end of term examination. But a teacher stands on a dangerous precipe with his job on the line if he appears at the end of the term showing that he could only cover 1/3 - ½of his scheme of work and had 82% - 95% of his pupils attaining mastery in the topics and competencies taught during the period.

Thus, in introducing any modifications or intervention strategies in any Ghanaian classroom, the background has to be taken into consideration. In the first place one must seek to draw a delicate balance between coverage in other words output of teachers and mastery of competencies imparted. It is also critical to consider the philosophical background of the teachers and pupils and how these impact on teaching and learning. Thus the ecology of the teachers, pupils and the classroom needs to be examined and modified to accommodate new trends and practices.

Based on the background assessment of the classrooms and the pattern of teaching-learning practices as explained in the previous chapters the main thrust of the intervention was to democratise teaching and learning, adopt methodologies that will enhance the chances of making every child a successful learner and improving classroom management to enhance learning. It was in the light of these that I adapted co-operative

learning strategies in combination with other eclectic methodologies to assist teachers to maximize the returns on their input. Thus in this chapter the step-by-step processes adopted for the intervention will be discussed. The impact of the interventions on the various facets of the classroom life will be used to conclude the chapter.

6.1 THE INTERVENTION PROCESS

The classrooms selected as the focus of intervention were part of the sample used for the pilot and the main studies that sought to determine which learning pre-requisites Ghanaian class one pupils possessed. They were also among the classrooms observed during the pilot-study in February–March 1999.

In September 1999 when I returned for the collection of data for the main study I organized school-based discussions with the head teachers and the class one teachers on the results of the study as it related to their schools. Those schools that were observed also had a feedback on what was seen in their classrooms. After the initial presentation by the researcher a discussion ensued. These sessions were very fruitful and mostly the question the teachers and the heads asked was whether the researcher had any inputs to give to them. They also shed a lot of light on some of the findings.

When it came to giving suggestions my practice was to turn the session into a brain storming session. The question I always posed was this:

Question: *If we agree that our children we teach differ in ability levels in the same classroom, what teaching strategies can a teacher adopt or use to help each child develop his/her potentialities to the maximum?*

With this topic as our focus a period of brainstorming ensued. The protocol from these sessions was written down. The selected instructional and intervention strategies were based on the collaborative discussions and the consensus of the views of the teachers, head teachers, researcher and the field assistants.

6.2 TEACHING STRATEGIES (VIEWS FROM TEACHERS)

Teachers reacted to the question below and the summary is presented here.

Question: *If children with different ability levels are in the same classroom what teaching strategies will the teacher use to help each child develop his or her potentialities to the maximum*?

6.2.1 General principles

- Allowing the child to work at his/her own pace.
- Children should be allowed to do things that interest them.
- Learning should start from the known to the unknown.
- Environment should be effectively used in re-reinforcing learning.
- Using concrete and manipulable objects to enhance teaching/learning.
- The use of print – there should be a maximum exposure to print of all sorts.
- Teaching to make every child a successful learner.
- Teaching according to the attention span of the children and making learning interesting.
- Verbal and non-verbal communication should be very simple.
- The establishment of rapport between teacher and learner is necessary to reinforce learning.

6.2.2 Methods

- Group and individual activity method.
- Individualised method of teaching.
- Practical demonstration, which is environmental based.
- Role-playing.

- Dramatisation.
- Field trips / excursion.
- The use of visual and audio-visual materials.
- Direct method of teaching.
- Co-operative learning.

Having concluded this consensus building sessions and sharing the results with the schools, I proceeded to have more extensive and intensive discussions with the school I intended to use for the intervention. The following consideration influenced the choice of a school for intervention:

- The class must exhibit deficiencies warranting assistance.
- The teacher must demonstrate the readiness to solicit for assistance to improve his/her work.
- The teacher must also demonstrate the preparedness to implement or try out new ideas and innovations.
- The head-teacher or school administration should exhibit clear signs of lending support and assistance to the teacher in his bid to try out new ideas to impact quality teaching.

Thus, in the course of the school-by-school consensus building these indices were been observed. In addition to the above stated points two out the three teachers in the selected school were my former students as student-teachers in training and I had served one time as a consultant of the Ministry of Education to the school in a school review exercise. Thus I had some good personal connections to the school as well as higher chances of being accepted and assisted to complete this work.

I used the indirect model of service delivery: where a consultant (consulting teacher) directly interacts with a mediator (researcher or other service delivery person), who in turn interacts directly with the targeted person (student/pupil). Thus the consultant does not work directly with the pupils who need assistance but instead works with the teacher.

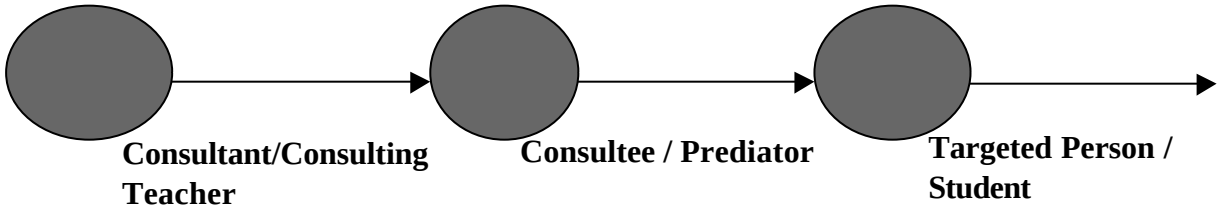
6.3 THE CONSULTING MODEL

The consultant comes into the setting as a result of a request from the mediator (e.g. classroom teacher) for “expert advice" about some identified situation. It is critical for the mediator to acknowledge the need for an expert without any loss of professional or personal confidence. CEGELKA & BERDINNE (1995) argue that the triadic model has been the dominant influence on the development of the consultative process in education.

THARP & WETZEL (1969) put forth the Triadic Model of Consultation. The model is presented in the figure below:

fig. 6.1:

TRIADIC MODEL FOR EDUCATIONAL APPLICATION



Source: Adapted from THARP & WETZEL (1969)

IDOL DAOLUCCI-WHITCOMB & NEVIN (1986), clearly state that collaborative consultation requires team ownership of the identified problem. They further define collaborative consultation as

“an interactive process that enables teams of people with diverse expertise to generate creative solutions to mutually defined problems. The outcome is enhanced that any team member would produce independently” (p.5).

Thus in the collaborative work with the teachers and the head teacher the above stated principles and guidelines guarded our interactions and final outcomes.

6.4 THE CLASSROOM

This school had 3 class one classrooms but the arrangements were similar. It is important to describe the situation of the classrooms before the intervention began. The seating arrangement in the classrooms was in rows and columns with the teacher standing in front of the class and speaking to the class or teaching. There was a small semi-circle in front of the rows and columns, which seated 4 pupils in one class, 6 in the other and 5 in the third class, who were supposed to be very disruptive to classroom routine.

The walls were fairly well covered with posters and charts. See below the following nine pictures:

fig. 6.2:

fig. 6.3:

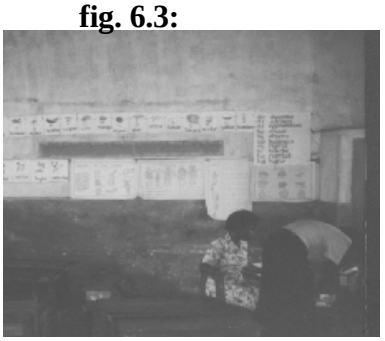


fig. 6.4:

fig. 6.5:

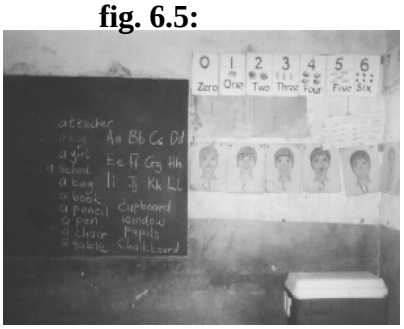


fig. 6.6:

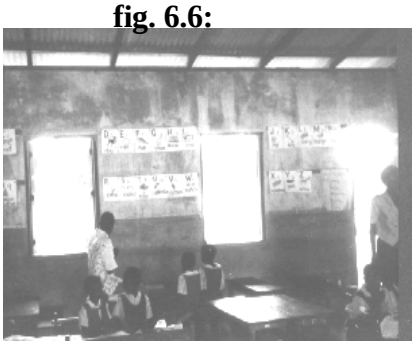


fig. 6.7:

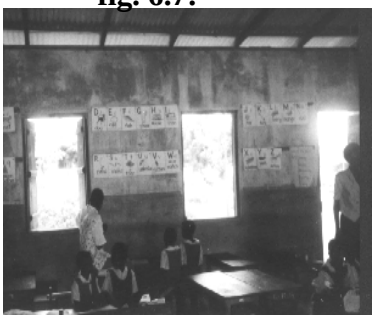


fig. 6.8:

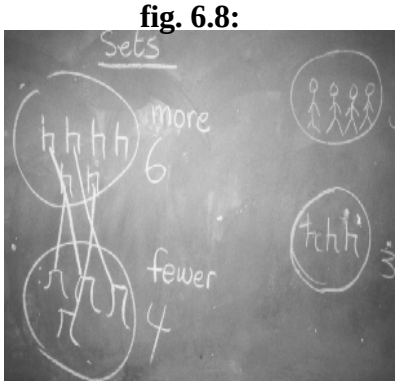


fig. 6.9:

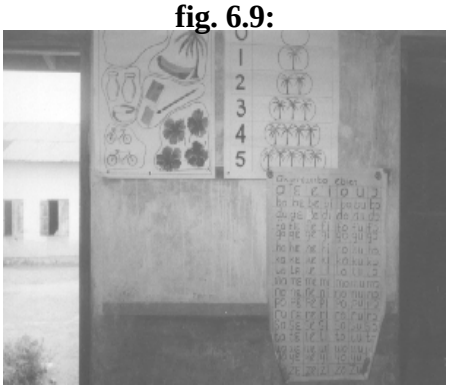
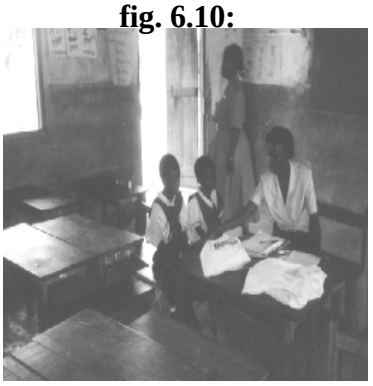


fig. 6.10:

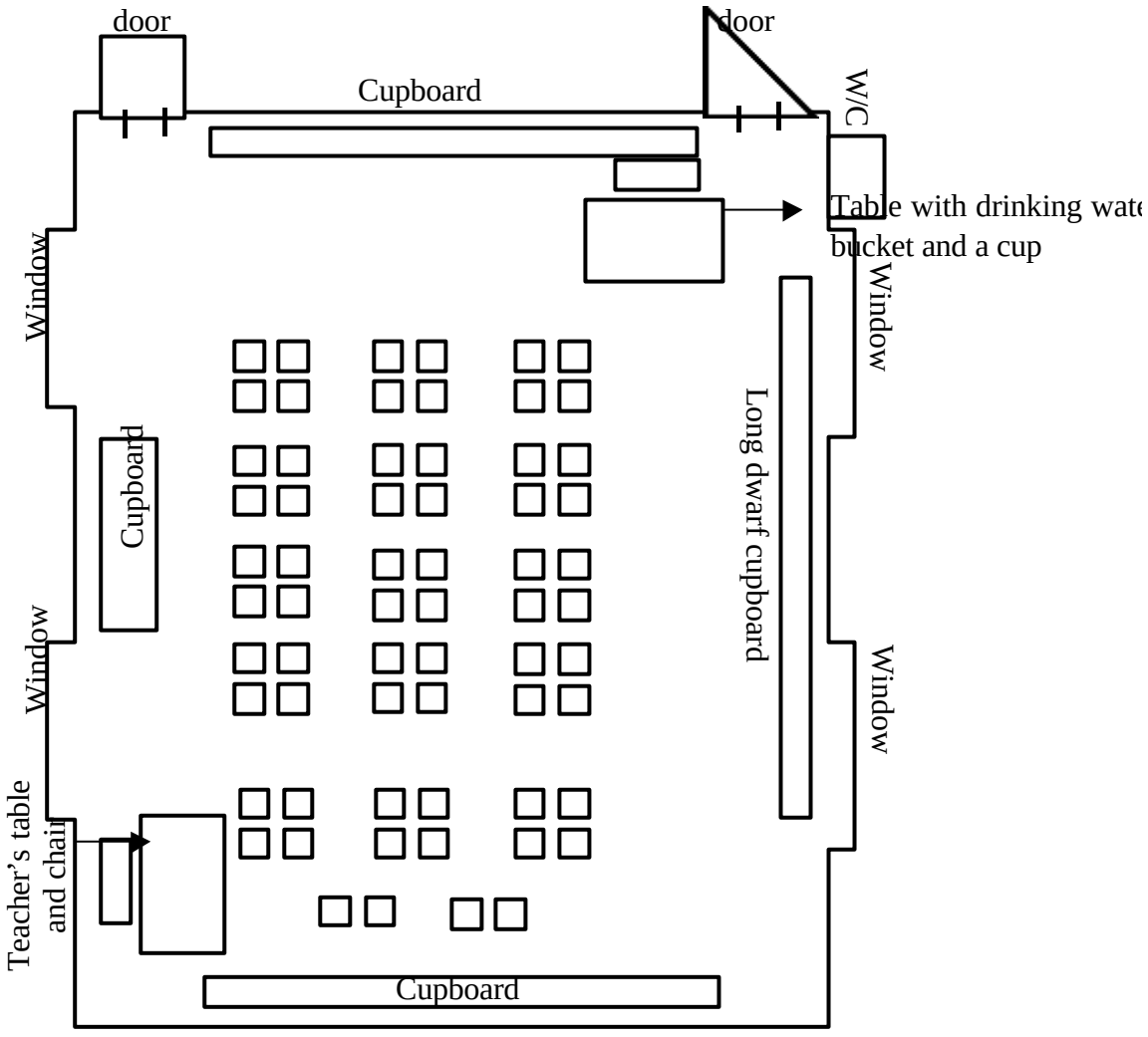


The pictures from figure 6.2-6.10 depict various posters showing objects and fruits and their names, phonemes in the Ghanaian Language (Fanti) combination of two letters to form words in Ghanaian language (Fanti), prepositions in English, nutrition tips, numerals with corresponding number of objects and their translation into words from 0-6, pictorial representation of vowel sounds in the Ghanaian language (Fanti) showing how they are pronounced by the movement of the mouth and a chart on fractions.
These charts and posters were very useful in exposing the children to print. The only problem with these charts and posters was the fact that they have been hanging for too long. The teachers said that some have been there for two consecutive years. The children may grow tired of seeing the same old charts day in and day out. Thus they may gradually fail to pay attention to them. It is necessary to change them from time to time. At worse even if new one's cannot be made their positions could be reshuffled and their arrangements changed.

The population of the classes was 53 with one teacher in each case. The dimensions of the classrooms were approximately 41qm. From a first impression the classrooms look fully packed. The diagram below in figure 6.11 shows the geometric representation of the classrooms. It must be commented here that the facilities available in the classrooms are not the facilities found in the normal average classroom in Ghanaian schools. This school is highly endowed. It receives support from church-based and other non-governmental organisations both national and international.

fig. 6.11:

THE DIAGRAM OF THE CLASSROOM



The pictures below show pupils seated during singing and story-telling lessons in the classrooms.

fig. 6.12:

CROSS-SECTION OF THE CLASS DURING A SINGING PERIOD

(1)

fig. 6.13:

CROSS-SECTION OF THE CLASS DURING A STORY TELLING LESSON

6.5 ANALYSIS OF CLASSROOM INTERACTION BEFORE INTERVENTION

I present below a critical analysis of one out of the three intervention classrooms to give the picture of the state of classroom interactions at the start of the intervention process, under the following headings:

- Classroom order
- Methodology
- Basic Teacher Classroom interaction
- Seating Arrangement.

6.5.1 Classroom Order

The following anecdote will describe the near chaos that the class was sometimes plunged into:

The class returns from the first break. Pupils rush in to sit down. The teacher was already in the classroom. She tries to begin a lesson on vocabulary building in English Language. As she puts the words in the board a pupil gets up from his seat and snatches a book from another pupil three rows away from his. He gets up to try and get back his book. A scuffle ensues. Some members of the class start shouting, "please teacher two boys are fighting". While a part of the class supports the scuffle and are happy screaming in support others feel they must be stopped.

The teacher stops and tries to separate them. After getting the two apart she now has to struggle to get the class calm down again. After about 5-7 minutes used in bringing the class under control, one person comes to ask permission to go and drink water. As soon as she grants permission four other pupils come up to ask to go and drink water. Almost immediately after that 5 pupils line up to ask permission to go and urinate and the class is thrown into another state of turmoil with a great number of children asking for different things either from another pupil or from the teacher. The teacher is lost in a "sea" of request for this or that and is apparently confused and embarrassed noticing that I was still sitting at the back of the class.

Comment

It is advisable not to leave the class unattended to. The children should have been occupied with something to do. The teacher did not tell them anything she just began to write on the board and they found something else to do to occupy themselves by engaging in these disruptive behaviours.

The teacher could have said,

"take your exercise books and copy out the words as I write on the board or read quietly the words I am writing on the board. I am going to ask you some questions about them."

In this way they would have been fairly occupied and less likely to disrupt the entire lesson.

There appeared not to be any established routine in the class. The children had just returned from break where they had eaten and drunk and obviously had the opportunity to urinate. If after 5 minutes of returning from break almost 15 pupils are either asking permission to go and drink water or urinate it may not be genuine. They seem to want an opportunity to escape from the environment, which may not be stimulating to them. In any case the toilet can take at most two pupils at a time (one male and one female) so if five pupils at a stretch came to ask permission to use these facilities and they are granted it may not help. Since I observed that a couple of the pupils who ostensibly wanted to urinate only came to the back of the class to play instead. Another went to take the drinking cup from the bucket and hid it in his shirt instead of going to urinate.

6.5.2 Methodology

The teacher's methodology during the time of observation was basically teacher dominated, class method of teaching. The six hours of observation that was spread over a period of five days revealed that teacher activity ranged from 75% - 95% in the class. This was mainly composed of teacher talk or presentations.

Group work rarely occurred. The trend of teaching could be summarized here as follows: The teacher introduces the topic for the day. For example:

Today we are going to talk about 'A'. She writes that on the board. Children are asked to repeat what is written. Children do so. Teacher begins describing the components of the topic. It is interspersed with occasional questions to pupils. Do you understand what we are talking about today? Class responds, Yes Madam. Take your exercise books and write down or do this assignment for me. Assignment is put on the board. Pupils begin to write asking their friends when they don't understand. Teacher shouting do independent work. After the set time books are sent to the teacher. She tries to score them as the children submit to her. They go over the exercise by trying to get the answers. Some are happy they scored, others are sad that they got the answers wrong.

Comment

It should be borne in mind that when a teacher stands before a class to teach, he must recognize that a myriad of stimuli impinge on the senses of the child competing for attention. The teachers task in the initial stage of introducing his lesson will be to arrest the attention of the child by ensuring that he and what he is saying becomes the most important stimuli that the child will focus on.

Selective attention (which is the ability to filter through all the impinging stimuli and focus on the most important stimulus present in the environment) is not natural for all children. Some have a great difficulty in attaining the above and thus are prone to high levels of distractibility and attention deficits.

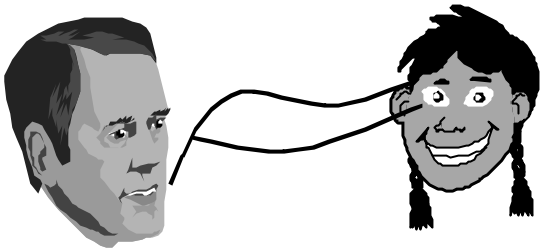
In our educational system where early diagnosis and interventions are non-existent the classroom is composed of all groups of children. This puts together those with and without problems that can inhibit learning in one classroom without any support structures. The challenge and risk the situation posses for the teaching-learning encounter are enormous. Thus the over reliance on unisensory approach to teaching and information delivery is unhelpful and a disservice to the child. This method places a lot of premium on the ability of the individual child to process the information given out from the teacher without the necessary supporting intervening activities that will enhance comprehension and promote transfer. Multi intelligences are largely ignored and not harnessed.

6.5.3 Basic Teacher Classroom Interaction

I present diagrammatically the basic teacher interaction in the classroom to show the fundamental methodology adopted by the teachers in the selected classes before the intervention.

fig. 6.14:

BASIC TEACHER CLASSROOM INTERACTION



In the diagram above the body of knowledge pupils are intended to learn is presented by the teacher. The pupil is expected to figure out what the intended search image should be. There are many intervening variables that can distort the search image. This can occur when the child looses concentration, gets distracted, looses interest or makes the wrong associations in the course of processing the information. He can also simply fail to understand or grasp the concept being presented. This leads to a distortion in the search image and comprehension is compromised.

6.5.4 Seating Arrangement

Some individuals were isolated in the classroom. First the four pupils who were put in front ostensibly to be under the direct supervision of the teacher had negative feelings about their situation. They therefore saw to it that they acted in ways that confirmed their "label". Other pupils said negative things about them. There was one girl who always came to sit at the back of the class on a chair close to the back cupboard during mathematics lessons. According to the teacher she is very good in reading and likes

reading but does not show any interest in doing mathematics. She (the pupil) has thus adopted that strategy of isolating herself anytime it is the period for mathematics.

6.6 STAGES OF INTERVENTION

1) The first stage was rapport building and establishing the basis for the intervention. Since the classes to be used for the intervention were part of the classes sampled for the study, the teachers received a feedback on the learning pre-requisites that their pupils possessed. The discussions that ensued brought out the fact that their pupils vary tremendously in their abilities. Through these consensus-building meetings with the teachers and heads as already described, the need for exploring new ways of meeting the challenges posed was established. Having attained the consensus on the need to explore new ways the following steps were collectively agreed upon.

   (a) Observations by the researcher in the classroom. The focus was to examine the entire ecology of the classroom and discuss collaboratively with teachers what new strategies can be tried out. Here the "ABIMUS PERFORMANCE-RATING SCHEDULE FOR TEACHERS" developed by the researcher to examine the entire ecology of the class was used (see Appendix 2). Below are the activities carried out:

   - Three class one classes were observed
   - Observations lasted 5 days. Each teacher was observed 2 times a day for 4 days except the first day when 3 observations per teacher were carried out.
   - Different subjects were observed. Two each were devoted to English, Maths & Art & Craft with one each for the rest of the subjects.

   (b) Following the periods of observations another round of discussion ensued focussing on observed trends and practices in the classroom. These discussions culminated in the determination of targets to be achieved with teachers during the intervention period.

(c) To encourage personal responsibility of the competencies to be developed the researcher was mandated to itemize all the necessary competencies suggested during the facilitated brain storming sessions into a kind of checklist. It was to be made available to teachers, head teacher and the researcher, for discussion and adaptation. Using the suggestions from the brainstorming session available, literature and experience from teacher evaluation programmes an instrument titled "ABIMUS SELECTED CRITEIA FOR COLLABORATIVE TEACHER EVALUATION" was developed and presented to the group once more (see Appendix 3).

(d) Thorough discussions were held to agree on the list of needed skills and competencies to be developed. Training on explanation of classroom behaviour traits that typify the selected terms and criteria was carried out. These sessions lasted for 1½hours each day for 3 days.

(e) The last step of this phase was to determine the objectives of the intervention. The following were agreed upon as the objectives to be pursued in the intervention phase:

- Creating an atmosphere of active participation of pupils with gender sensitivity
- Creating an atmosphere of mutual respect and trust and among pupils and between pupils and the teacher
- Involving pupils in discussing their own progress and adopting methodologies to make every child a successful learner
- Establishing a classroom routine
- Helping pupils in decision making and getting involved in decisions that concern them
- Getting involved in building a culture of maintenance
- Learning to self-evaluate
- Awareness of rights and responsibilities.

6.6.1 Comprehensive Training Session

Having finished with this phase attention was now turned to the training sessions needed to equip teachers with new methodologies and tools for meeting the challenges identified in their classrooms. These training workshops lasted for two weeks (10 days) 2 ½hours everyday. The breakdown of the themes and topics for each day are presented below:

Days 1,2 & 3 focussed on classroom management. This was broken into 3 themes one for each day

Day 1 covered critical areas in behaviour management and procedures from an eclectic approach. The following were handled:

- Time out predominantly non seclusion procedures
- Verbal reprimands
- Positive reinforcement
- Extinction
- Discouraging punishment
- Classroom police system
- Deducing morale or lessons from stories
- Using drama and acting
- Using drumming and dancing.

Day 2 covered structuring the classroom for effective instruction with the following areas of concentration:

- Arranging the classroom
- Establishing rules
- Establishing routines.

Day 3 targeted time management and the topics covered were:

- Scheduling more time for academics with allocated time
- Adhering to the lesson schedule
- Monitoring transitions
- Maintaining lesson smoothness
- Grouping pupils for instruction
- Increasing pupils' engaged time or on task behaviour.

Days 4, 5, 6, & 7 were devoted to new methodologies and strategies for effective teaching. This was broken into 4 themes, one for each day. The breakdown was as follows:

Day 4 was spent on designing instructional lessons under the following topics:

- Preparation before the lesson.
- Lesson opening
- Gaining attention
- Reviewing prior learning
- Lesson preview
- Lesson body – modelling the target behaviour providing guided practice
- Lesson closing –summary
- Allow for student questions
- Review questions based on lesson objectives
- Pre-lesson preparation.

Day 5 focussed on delivery of instruction with emphasis on the areas below:

- Eliciting frequent responses
- Written responses
- Maintaining a brisk instructional pace
- Providing thinking twice- practical session
- Ensuring high levels of accuracy
- Monitoring responses and providing feedback
- Error drill
- Fluency building drills
- Practical Session.

Day 6 focussed on various ways of individualising instruction such as:

- Feedback following question presentation
- Small group follow- up instruction
- Co-operative learning
- Peer tutoring.

Day 7 was used for additional instructional modifications and development of personal attributes associated with effective teaching some of which are listed below:

- Selecting appropriate assignments
- Preparing for seatwork
- Monitoring independent work
- Providing feedback
- Development of personal attributes associated with effective teaching.

Days 8 & 9 were devoted to the development of relevant teaching-learning materials and games to support teaching and learning. The teachers were given a book entitled *"Games for Learning in School and at Home,"* authored by the researcher in collaboration with three other German Special Education teachers. The book was not to serve as sacrosanct document to be followed at all cost but as a stimulant to tickle the imaginations of the teachers on how simple everyday materials in our environment could be transformed into viable teaching-learning products to assist in the teaching-learning encounter. They were however not bared from adopting or adapting some of the games if they thought it appropriate to assist in the challenges they met in their classes. At the end of the day some games from the book were adopted, others adapted while others entirely different were developed.

The researcher provided the materials needed for the production of these teaching-learning materials and games. In practical hands-on sessions we worked together to produce them. The creativity and ingenuity that emerged from the sessions were remarkable. The hallmark of all the games, teaching and learning materials developed was that it was pragmatically tailored to address specific needs of children in the three classes. At the end of the two-day period 20 different items or materials had been produced. The sessions also provided opportunities to try out the materials, Through these practical trials some had to be modified in form, instructions for use or the number of people required to play it at a time.

Day 10 which was the last day for this session of comprehensive training, was used to do a general review of the topics and activities of the previous nine days. Questions, contributions and suggestions were invited to reinforce the skills learnt. At the end there was an evaluation of the training session.

6.6.2 Training Session for other Objectives of the Intervention

The comprehensive training sessions did not completely cater for all the objectives and the new methodologies to be adopted to address the weaknesses identified. Another one

week (5 days) training session was carried out to cater for those objectives that were not covered during this session. The breakdown is as follows:

- Day 1: Creating an atmosphere of active participation, mutual respect, trust and gender sensitivity
- Day 2: Helping pupils in decision–making and getting involved in decisions that concern them
- Day 3: Getting involved in a culture of maintenance
- Day 4: Learning to self evaluate
- Day 5: Awareness of rights and responsibilities.

Each of these objectives will be discussed showing the strategies that were used in implementing it.

6.6.3 Creating the Morning Circles

The objectives discussed during the first day were, creating an atmosphere of active participation, mutual respect, trust and gender sensitivity. The strategies for creating a morning circle and adopting co-operative learning groups were used.

This morning circle started in the first 15 minutes before classes commenced. In the beginning it was used to melt the “ice” between teacher and pupils and among pupils. It was the period to discuss the problems of the previous day encounters at school and at home and to contribute to or suggest ways of resolving problems presented by their peers. Pupils were also encouraged to comment on practices of the teachers that were not helpful and those they will like repeated. In the beginning it was difficult because it was something nobody was used to. Children did not know or had not learnt how to wait for their turn but with time as they were all taught these skills, these sessions became lively, useful, educative and rewarding for all participants.

As the maturity of the group developed it also became the forum for awareness creation of their rights based on the UN Convention on the Rights of the Child. Then with time it

also became the training forum for imparting the skills for developing the co-operative groups.

6.6.4 Co-operative learning groups

In certain groups, such as sports teams and combat units, there are factors such as contagious excitement, strong norms favouring maximal effort, and intense feelings of commitment, loyalty, and obligation, group members often demonstrate levels of motivation and effort far beyond what would be expected from an individual acting alone. During a basketball game in 1989, for example, Jay Burson, a player on the Ohio State University team, continued to play in a game after he had suffered a broken neck. There are many examples where people like Jay Burson doubled their efforts or placed themselves in great jeopardy because of their devotion and loyalty to other group members and the group. JOHNSON, JOHNSON & HOLUBEC (1993)

Co-operative learning groups and student learning are inextricably connected. The truly committed co-operative learning group is probably the most productive instructional tool teachers have at their disposal, provided that teachers know what co-operative efforts are and have the discipline to structure them in a systemic way. It is a well-known fact that social interaction and learning happens in groups of people.

It is said that two are better than one, because they have a good reward for their toil. For it they fall, one will lift up his fellow; but woe to him who is alone when he falls and has not another to lift him up… And though a man might prevail against one who is alone, two will withstand him. A threefold cord is not quickly broken (Ecclesiastes 4:9-12).

Co-operative learning has been around a long time. It will probably never go away. Its rich history of theory, research, and actual use in the classroom makes it one of the most distinguished of all instructional practices. The effectiveness of co-operative learning in accelerating pupil/student achievement is no longer disputed in the literature. Divergent views are however expressed on the conditions under which co-operative learning becomes optimally effective (STEPHEN & SLAVIN, 1995; JOHNSON, 1970; JOHNSON &

JOHNSON, 1974, 1978, 1983, 1989a; JOHNSON & JOHNSON, 1989b, 1992a, 1992b; JOHNSON, JOHNSON, & HOLUBEC, 1984/1993)

Two conditions are deduced by SLAVIN (1994) as essential based on his review of research on co-operative learning. These are group goals and individual accountability. JOHNSON & JOHNSON & HOLUBEC (1993) however stress five basic elements as positive interdependence, face-to-face promotion interaction, individual accountability, interpersonal and small group skills, group processing.

Not all groups are co-operative groups. Groups can range from pseudo learning groups to traditional classroom groups to co-operative learning groups to high-performance co-operative learning groups. High-performance co-operative groups are rare. Most co-operative groups never reach this level. Many educators who believe that they are using co-operative learning are, in fact, using traditional classroom groups. There is a crucial difference between simply putting students in groups to learn and in structuring co-operation among students. Co-operation is not having students sit side-by-side at the same table to talk with each other as they do their individual assignments. Co-operation is not assigning a report to a group of students where one student does all work and the others put their names on the product as well. Co-operation is not having students do a task individually with instructions that the ones who finish first are to help slower students. Co-operation is much more than being physically near other students, discussion material with other students, helping other students, or sharing material among students, although each of these is important in co-operative learning.
Group goals provide motivation for the students to help their group mates learn. They also help promote positive interdependence between individuals in the group, giving group members a reason to co-operate in a meaningful way. Individual accountability measures each student's willingness to learn. This reduces the potential for a "free rider effect" which takes place when a student does little and depends on other group members to accomplish the goals (SLAVIN, 1994).

Co-operative methods in classrooms promote participatory climate. Children in groups became responsible to achieve their learning outcomes yet, as TCHIOMBE (1996) observed this most valuable unit of teaching in small group discussion is rare. This does not mean

that teachers don't organise their pupils in groups but the methodology is very important to consider here. Most teachers have asked questions relating to how they could encourage faster learners to help the slow learners. This is because high achieving pupils tend to be "selfish " in some ways and may not co-operate easily with slow learners.

The adoption of group evaluation work in the form of graphical representations was very useful in creating a strong “we” feeling. Thus, each child’s mark is taken after an individual's assessment and there after an average is taken and calculated as the group's performance.

The various groups in the class were compared in order to find the best performing group. The emphasis was therefore shifting from individual performance to group collective work. Therefore faster learners who did not want their groups to be associated with failure or low performance were persuaded to help out slow learners. MUMBA (1995) reports that this helping hand could extent as far as to paying visits to individual homes to ensure that they assisted the weak ones at home to improve group performance.

It is true that some teachers argue that even though they acknowledge the worth of co-operative learning groups in enhancing the performance of pupils with lower than expected learning prerequisites, the lengthy training period discourages them. They feel it takes time to train children in methods such as co-operative learning which implies that they may not support methods that take time to plan and start working because they may be lacking behind too much in completing the syllabus. I contend that when children are trained, the operations becomes easier and faster and the morning circle provided the perfect forum and opportunity for imparting of the needed skills.

In this intervention the class was put in groups of six with mixed abilities and sexes. Two pupils represented each group as leaders and both sexes were represented. Though there were designated leaders they were not always playing the role of leaders. Every member of the group had the opportunity to lead and to be lead. But it was necessary to create this leadership core so that in the beginning they could be trained and they will in turn assist in training their teams or groups. I adapted the chain of responsibility for assisting using the zone of proximal development. Thus, teachers had to help the group leaders to know

how to help other pupils participate in their own learning (THARP & GALLIMORE, 1988; VYGOTSKY, 1978).

In a co-operative team spirit the motto is “we sink or swim together” therefore the lessons of teachers should be structured in such a way that pupil work together to maximise their own and each other’s learning. Pupils must work together for the common or shared goals. Among some of the goals they must strive to achieve are:

- Work in small, often heterogeneous groups
- Strive for all group member’s success
- What benefits self benefits others
- Joint success is celebrated
- Rewards are viewed as unlimited
- Evaluated by comparing performance to pre-set criteria.

(JOHNSON, JOHNSON & HOLUBEC, 1993).

In the light of these shared goals the teachers were to help group leaders develop the following roles:

- Ensure that each pupil had the required material to use in the classroom such as pencils and exercise books and possibly the group would help those that were lacking
- Ensure that members were neat in writing
- Encourage corrections as discussed in class are done before any new work
- Evaluate their group's performance and discuss

  problems in the group
- Represent the group in the morning circle meetings with

  the teachers
- Suggest other new ways of learning in consultation with other members according to their needs

- Monitor late coming and ensure that latecomers were paired with responsible pupils for encouragement in collaboration with the teachers
- Monitor absenteeism in groups. They were to encourage their group members to avoid absenting themselves often from school
- Assist performance of other pupils.

6.6.5 Decision-making skills

The second day focussed on helping teachers to acquire the skills of assisting pupils in decision-making and getting involved in decisions that concern them. The details are presented below:
Helping children make decisions is a vital component in the democratisation process. Decision-making is central to life and a lot of adults still struggle with it. Thus, for our children to be able to handle and manage their own lives they have to be helped to learn this critical skill. There are so many problems and difficulties teachers encounter in the execution of their duties. There is an easy temptation to want to control all decision processes in the classroom for fear of creating anarchy in the absence of this control. Thus, teachers want to do everything and thereby monopolise all processes of decision-making, which is an exhaustive business and wears them out daily. Therefore pupils should be co-deciders with teachers as they pass through daily encounters HAWES & STEPHENS (1990). Training for decision-making should therefore be a priority in our classrooms.

HAWES & STEPHENS (1990) have observed that decision-makers usually learn their skills from training and experience. There seems to be no reason why such training shouldn't start from the children themselves during their learning process. The capacity and ability of children to act responsibly in the management of their own learning has been under-estimated and we are all guilty (HAWES, 1988; RINALDI, 1996; DEVRIES & ZAN, 1995).

I contend that children are capable of educating each other and even contributing to their own learning. Decision-making can be introduced to the classroom in such a way that it becomes part of the school curriculum or the "hidden curriculum". With relevance to the activities in the school, children can be helped to:

- Set goals
- Implement and
- Evaluate decisions.

Since it is known that people feel committed to implementing decisions arrived at if they were a part of the process, then there are so many events in our classrooms that challenge teachers and these may be used as training opportunities for pupils in decision-making. For example a teacher is confronted with a problem of non-performance of children in a particular subject area. Plausible reasons may elude the teacher and an attempt to unravel it confounding to him. Why doesn't the teacher throw back the issue to the pupils? For example "why is mathematics so badly done in this class?" Allow pupils to come out with their own perception of the problem and also suggest ways of improving the situation. This approach among other things present the following benefits for the teacher and the entire teaching-learning process.

- Avoids misdiagnosing and subsequently the application of wrong prescriptions.
- The teacher also stands the chance of getting a feedback to his own teaching, which he may not have.
- By eliciting the views of the pupils more objectivity is injected into the diagnosis process.
- The causal factors can be viewed from more than one angle.
- The opportunity to reflect on their own performance and allude reasons for non-performance provides an invaluable resource for pupils to dissect their own behaviours.
- The discussion that will ensue in the various groups will in no small allay deep seated fears of some pupils who may regard themselves as "neer-do wells" as they begin to realise that they are not alone in their problem.

- Since they participate in suggesting ways of doing it better they are more likely to identify themselves with the remedial measures that will be put in place especially if the teacher is conscious to make their suggestions a part of the solutions.
- It is a healthy therapeutic process that vents out all catharsis and rebuilds a healthier classroom where productive activities take place.

PAULO FREIRE (1985) refers to these processes as the "language of critique" and the "language of possibility". They discuss the status quo look at alternatives, both viable and non-viable choices. Discussing the possible solutions lead to involvement and responsibility to participate in deciding collectively and correctly since they were affected by the problem in their classroom and need a change.

6.6.6 Developing a culture of maintenance

During the third day we dealt with getting involved in a culture of maintenance. The details are as follows:

Training children in preventive maintenance also enhances decision-making skills. The Ghana Education Service and the Ministry of Education have been trying to impress upon school authorities and the communities in which the schools are situated to cultivate the culture of maintenance. Thus as part of the intervention we tried to formulate a system of "co-operative preventive maintenance". This involved looking after infra-structural facilities, educational supplies or materials and the environment to make it conducive for learning.

We sort to institutionalise the ideas or concepts so that they could become part and parcel of the schools daily life. Hitherto teacher's plan for their pupils and this places the whole activity in jeopardy. Some children find excuses to avoid participating even sometimes with the connivance of parents or guardians. Children do not feel like participating since they were not involved in planning and if they did, the work was not done properly. I contend that a much more effective way of institutionalising a "co-operative system of preventive maintenance" is to include pupils to participate in the decision making process.

Thus, in training the teachers I did not select for them what I think the problems of the school were but they were encouraged to discuss and bring out a list of the areas that could be addressed with preventive maintenance. The following were listed:

- Erosion of the school playing grounds
- Destruction of teaching–learning materials by pupils
- Wear and tare of play things
- Defacing walls and school furniture.

Teachers were once again urged to suggest ways of addressing them. We then worked together to find ways of incorporating preventive maintenance activities into the curriculum. For example:

- Using parts of the period for Art & Craft to mend books, clean and repair the toys and play things that they destroy
- Using the Friday general cleaning periods to scrub the tables and the walls they have defaced
- Incorporating projects in the lessons for Environmental Studies that address ecological issues in the school compound.

However these views were not to be imposed on children. Teachers were to use the same process of posing the questions to the pupils and allowing for discussion in their groups. For example:

- "What things are getting spoilt in the school that you and I can help to repair?"
- "What specific activities can we engage in to ensure that they are repaired?"

Each group will then present their suggestions and the whole class can agree on the essentials and share the tasks for the groups. The teachers were to be facilitators and not dominant decision-making persons. According to HAWES & SCOTOHMER (1993), by activating and consulting children they become interested in a way they never did before. In this study, each co-operative group had a portion to work on in their school. The portions were later divided per child. Each group had to plan collectively how they were going to work. They were to discuss and decide how they would best implement their activities. They were helped with steps to follow for the purpose of evaluation. They were trained to consider: -

- Setting priorities (what jobs need to be done first)
- Period of activities (time frame)
- Method of execution
- Individual participation
- Failures or successes and how to improve.

Children can become invaluable resource as partners in development. Unfortunately, many parents, teachers and others in authority fail to encourage this personal development of children in their care. By failing to exercise their rights in decision-making, in schools they stand the risk of becoming adults who are afraid of taking personal decisions.

6.6.7 Learning to self-evaluate

Learning to self evaluate was our pre-occupation for the fourth day. The details are:

The co-operative groups were to be used as forums through which classmates observed each child's contribution and behaviour during the learning process. The following format on self-evaluation was used. Teachers could find out or ask the following questions:

- What good things did your classmates observe in you today?
- What good things did you fail to do?

(MORGAN KING & ROBINSON, 1984; VAN PELT, 1992) opine that once the child was aware of such "good things", he regarded some of his actions as unworthy, and tended to exclude these from his self-concepts with a desire to improve upon and repeat good things, which have been observed by classmates. Care had to be taken as cautioned by SUTHERLAND (1988) to protect individuals. Sometimes clarifications on "good things" had to be given since immaturity of the young can lead to wrong judgement. But care had to be taken not to be seen as underrating their abilities. Some of the "good things" discussed included:

- Being helpful
- Asked or participated actively during lessons

- Did homework
- Went early to school (punctuality)
- Co-operated well with other classmates
- Lessened absenteeism
- Improved cleanliness (smartness).

Self-evaluation helped children to think critically of the next step of action to take in class. Their pupils formulated questions for end of term evaluation of the teachers. See below for examples:

- What things impressed you during the term?
- What things did not impress you during the term?
- What are your suggestions for next term?

6.6.8 Awareness of rights and responsibilities

The last day of this phase dealt with awareness of rights and responsibilities of the child. The details are as follows:

NYERERE (1979) had pointed out that people would not take up power and responsibility as soon as it is offered to them. They have to be educated in the democratic process. THOMPSON (1994) further concludes that the best way to exercise power responsibly is through the experience of exercising it.

Most critics argue that creating awareness in children with regard to their rights may promote misbehaviour. Children under study were to be exposed to their rights as documented in the United Nations convention on the rights of a child. This was to be done through class discussions during their Social Studies lessons. Children were to be made to discover that each right had responsibilities that went along with it. They were to be guided to discuss more of their responsibilities as seen from these two:

(i) Which responsibilities go with the right to education? The following were deduced:

- Work hard at school
- Avoid absenteeism

- Go to school early.

(ii) Which responsibilities go with the right to recreation (play)? The following were deduced:

- Plan time to play
- Choose good friends.

Several rights were discussed and the class survey revealed that they enjoyed most the right to speak freely and voice their own opinions. It must be borne in mind that its implementation was not easy in actual classes since it comes against the background of the traditional concepts of the child. It was therefore critical to review the background teachers and pupils are coming from and to rationalise them in the light of the UN Rights and Convention of the Child. The following will be highlighted here.

- An elderly person does not make mistakes so his instructions ought to be taken seriously.
- Children are not expected to argue with or criticize elders.
- Children are not expected to dominate a discussion in the presence of elders.
- Children are not expected to contribute or reply to an elderly person's instructions.

(See chapter two: “The Ghanaian Traditional Philosophy of the Child and Implications for Teaching” for details).

Our cultural norms on the other hand allow a child to argue or criticise his peers because this is the wisest thing to do but an argument with an adult is seen as a sign of disrespect. This is the background from which our teachers and pupils are coming. It is critical to prepare the pupils to be able to take their rightful roles in the future culture of the society, which is becoming increasingly global. Therefore the searchlight had to be turned on their own mental sets that are products of these traditional inhibitions. The aim was not to set them loose to oppose traditional structures but to subject beliefs, conventions, practices and norms of their societies to globally accepted practices and standards. The pupils later expressed the following views as benefits they gained from this systematic exposure to their rights and responsibilities:

- We are able to argue and defend our views
- We are able to ask freely

- It built our confidence
- We were able to contribute to discussions
- We were able to share our problems
- We were able to challenge bullies and other people that oppress us.

Majority of females expressed the following:

- It removed shyness
- We got ideas from peers.

With these objectives settled the interventions meant for transfer to the children was completed. The next phase was to direct my attention to the head teacher.

6.7 TRAINING SESSIONS WITH THE HEAD TEACHER

Since the intervention was meant to be school based and the head teacher was to provide the professional support to sustain the gains of the intervention. He participated in all the activities from the onset. However it is critical for a supervisor to have a "super vision" to be able to "super see" the activities of the teachers and provide the critical professional support for the maintenance of competence and efficiency.

In the first place he was assessed using an instrument, "Assessing yourself as an Evaluator". This assessment brought to light his areas of needs and the session with him was used to address these professional needs. I therefore had a session with him for a one-week period. During this period he received reinforcement of the training already undertaken. We had the opportunity to observe the teachers together and compare our observations. He was taken through among other skills the following:

- Collaborative and consultation Strategies
- Counselling procedures for teachers
- Organising effective parent-teacher consultations
- Evaluating teacher competence and effectiveness
- Preparing and executing school-based professional support and training.

In Summary the intervention phase lasted for 38 school days. It started on the 15th of November 1999 and ended on the 31st of January 2000. Below is the break down for the months:

- November 1999 –10 days.
- December 1999 –11 days
- January 2000 – 17 days

The breakdown summary for the various intervention activities is:

- Feedback sessions on data on learning pre-requisites of children – 5 days
- Discussion of observed trends and development of "Selected Criteria for Collaborative Teacher Evaluation" – 5 days
- Explanation and definition of selected criteria – 3 days
- Training Session -10 days
- Discussing strategies for implementing other objectives 5 days
- Session with Head-teacher –5days.

It interprets as almost 7 ½school weeks, which is about ½of the entire school term. An evaluation system was put in place to evaluate and monitor the impact of intervention on the teaching and learning endeavour to last through the entire academic year.

In a form of a summary I hereby conceptualise the various stages of the intervention into a model that departs from the traditional top-bottom approach to a bottom-up approach, which empowers the teachers. I contend that when teachers are trusted to identify and discuss their own problems and reflect on educational practices, things happen that can propel curriculum out ward to transcend school and classroom boundaries.

6.8 A MODEL OF INTERVENTION

1. Situational analysis: This involves analysing or assessing the entire ecology of the child to ascertain what works and what does not. It is a critical, comprehensive and objective evaluation of all the conditions and circumstances under which the child learns. The findings then become the bases for further decision making about interventions or remediation strategies.

2. Eliciting the support of the significant other in the child's life: This can come from both directions. Either the teacher or a significant other in the child's life indicates or solicits for help to solve identified problems or where the initiative comes from outside in the form of a researcher the findings of the research can be fed back to the teacher so that the realisation of the problem is recognised. A lot of skill is needed in the presentation of the feedback if the teacher is not going to feel "condemned and isolated" and therefore become non co-operative. The couching of the wording of your feedback should be such that you elicit the support of the teacher. This is critical because without the active and positive participation of the teacher no active intervention can take place.

The don'ts are:

- Don't shift blame
- Don't point accusing fingers and
- Don't condemn.

Instead of saying the "teacher lacks class control and has no established routine", say "the class gets noisy when five pupils rush to the teacher to show their work to him". Then ask a probing question, "in a situation like this what options are opened to us...etc?"

3. Prognosis of existing conditions: You must be able to predict skilfully what the state of affairs will be if the prevailing conditions remain. These should be related to how they impact the achievement of stated objectives for the child, the teacher, the demands of the curriculum and expectations of all stakeholders.

4. Prognosis of conditions with intervention: On the other hand you should be able to carefully present the benefits the possible interventions will bring to the teaching-learning engagement. These benefits should be strong enough to warrant serious

consideration. They should be convincing and justify the effort and sacrifice that it will demand from the teachers.

5. Collaborative identification and formulation of alternative strategies: It is critical not to be seen to be imposing ideas from "thin air" or performing some magic to produce new ideas. Hence teachers will be solely dependent on you and will not realise their own strengths and capabilities in dealing with the prevailing conditions. Through brainstorming, using probing and leading questions you can gradually formulate alternative strategies with the active participation of the teacher. In this way the teacher does not feel totally "empty", his confidence level is boosted, and he gains a better insight into the why's of the alternatives. It must be borne in mind that when people take part in decision making they feel bound to ensure its implementation and the "we feeling" or a sense of belongingness created will be the motivation that will sustain the teacher through the difficult stages of the implementation when you the facilitator is not physically present.

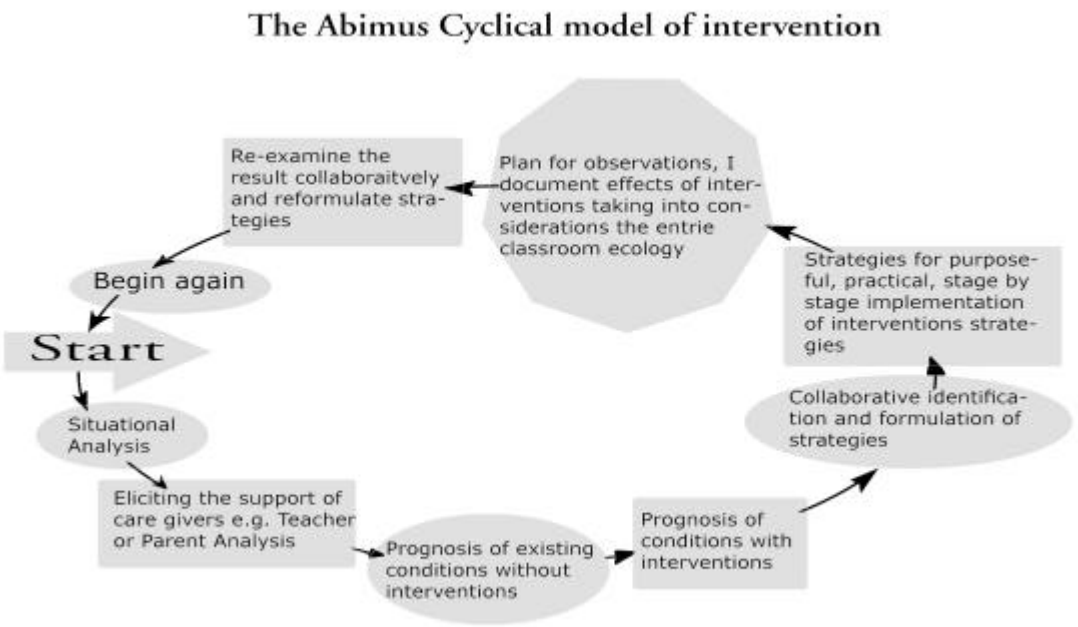
6. Strategize for a purposeful and practical stage-by-stage implementation: It is very important for the intervention process to be systematic. You must collaboratively plan with the teachers the various phases of the intervention and the rationale for each phase must be clear to the teachers. This will elicit their support and participation in the different aspects of the intervention process.

7. Plan for observation and documentation of the effects of the intervention: In other words plan together how the intervention will be monitored. For one to be able to indicate that intervention strategies have had an impact on teaching and learning, there must be documentary proof. This can only be obtained through systematic observation and monitoring. These processes need to be documented. The form of documentation needs to be agreed upon by facilitator and teachers. Whether it will be by electronic means or manual the consent of all those involved needs to be sought.

8. Collaboratively re-examine the results and re-formulate strategies: Results and outcomes of the intervention processes need to be re-examined and evaluated in the light of stated objectives and reaction of pupils or generally their impact on the teaching-learning encounter. Those that are not meeting the identified needs have to be modified or abandoned as the case may be.

9. Take the process through all the stages again: Having assessed the strategies and having reformulated it is important to go through the entire process once again. Thus, intervention should not be seen as a one-stop solution but even new ideas must be re-evaluated in the light of current performances and be assessed. It therefore becomes a continuous dynamic process of diagnosing, predicting and treatment. The diagram below shows this above described model of intervention in a pictorial form:

fig. 6.15:



6.9 IMPACT OF INTERVENTIONS

It is said that a life, which is not examined, is not worth living. Thus, having carried out the intervention for almost ½of the term there was the need to assess to see the impact it has had on teaching and learning. The researcher himself first carried this out and then teachers were made to fill a questionnaire once every two weeks indicating

their successes and difficulties. These were sent to the head teacher who also made a report once a month on every teacher and gave them the necessary professional support they demanded. This process of review went through the entire academic year. The summary of the impact as assessed by the researcher, teachers and the head teacher as well as feedback from children has been given below.

6.9.1 The creation of a good classroom environment

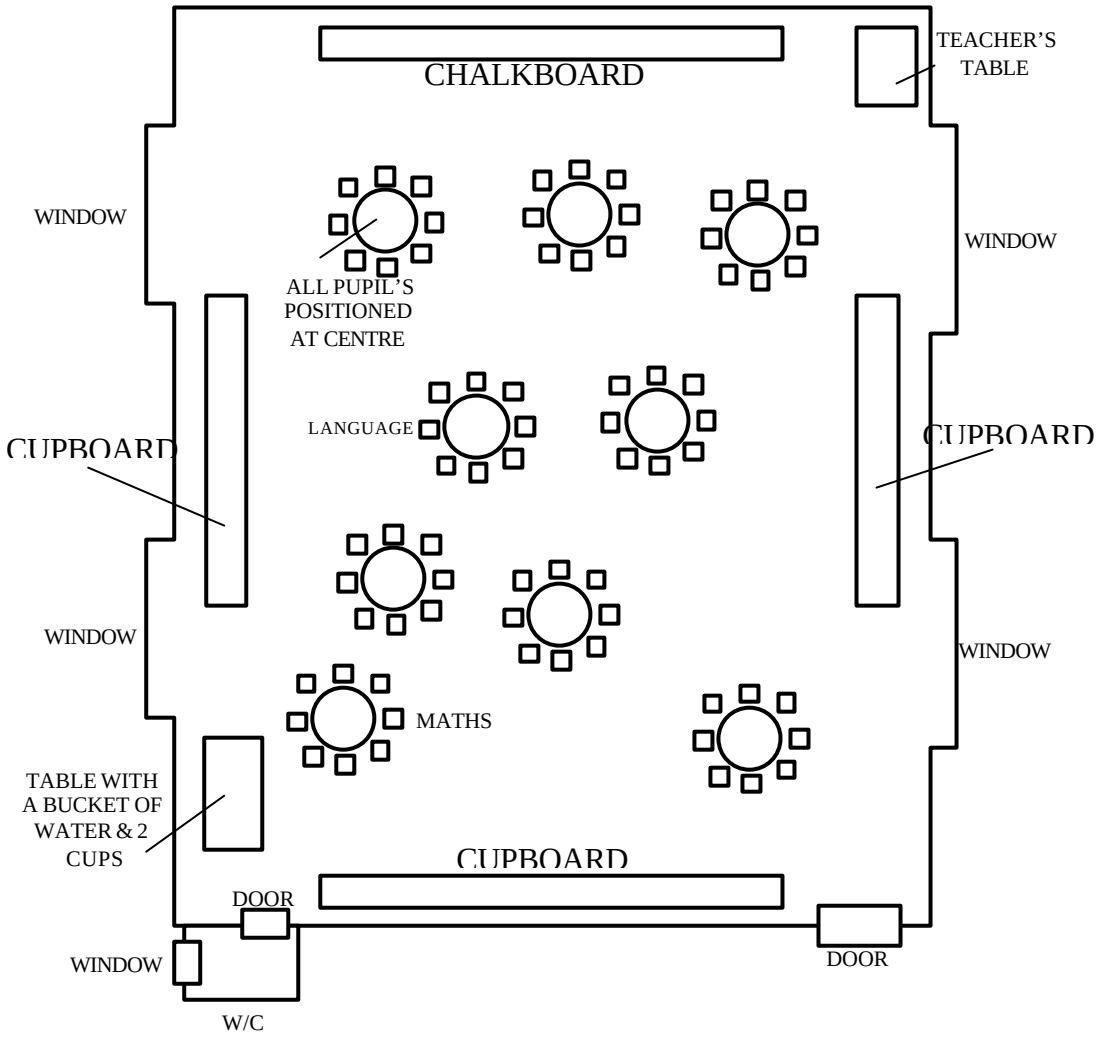
As time went on barriers to interaction were broken and personal opinions were respected, which also increased the participation of pupils in the morning circle, lessons and other activities of the co-operative groups. The co-operative groups served as catalysts for more effective participation as group leaders encouraged their members to contribute. Encouraging girls to play leadership roles balanced participation of the sexes and motivated other girls to work even harder. This impact is critical in a culture where traditionally the participation of girls in school is predominantly secondary to that of boys. Children were able to develop and follow simple guidelines in-groups to assist in their roles as leaders. A new sense of togetherness as a big family emerged as all parties participated in identifying the problems that were affecting progress in the class and finding common solutions to them. Young as they were, it was astonishing to see the degree to which the pupils perceived their own problems and the best ways of handling them.

The re-organisation of the classroom seating arrangement added a lot to enhancing interaction among pupils as well as improving the ability of the teacher to control the class better. With the pupils now sitting in circles the group discussions went better since group members could see each other's face. When they had to listen to the teacher they formed a semi-circle to ensure that nobody had his back to the teacher. The independent learning centres also assisted the pupils to engage in activities, which were of interest to them. They were sometimes seen working on various tasks during break periods and immediately after school hours. Teachers were assisted to create free times during which pupils had supervised exploratory sessions. Below is a classroom diagrammatic representation at one point in the intervention process.

fig. 6.16:

SEATING ARRANGEMENT IN THE CLASSROOM

DURING THE INTERVENTION PROCESS



6.9.2 Building self-esteem

The self-esteem of children was boosted as they saw themselves playing significant roles in the day-to-day teaching and learning activities. Also by taken their suggestions from the morning circle and implementing them in the course of teaching made pupils feel esteemed and appreciated. There was a new release of enthusiasm and a strong desire to perform to agreed standards.

6.9.3 Improving interpersonal relationships

The team spirit that developed went beyond the classrooms. Pupils could be observed trying to help their group members after school to complete their work. It is reported that some even visited others in their homes to help them finish their homework. Teachers also observed that some whose parents had cars were seen coming to school with other team members who did not have personal transportation. Thus, the emphasis had shifted from individuals to group ownership and achievement. One teacher remarked that he saw one pupil seriously encouraging one of their team members who were always late to school and causing low scores for the group on punctuality. Later on the father of this pupil bought an alarm clock to be given to the boy. His punctuality to school improved. Also because children could see some of their suggestions for activities in the class being implemented their interest in school grew. Absenteeism dropped and morale was high.

6.9.4 Improving the girl child performance and image

Since girls played leadership roles and everybody's opinion was respected it promoted the creation of a sense of equality among the sexes and erased the erroneous traditional notion that the "place of the girl is in the kitchen." Boys appreciated girls' contribution to their own learning. They observed them as they took leadership roles; saw their suggestions implemented and even performing better than them in some subjects. Some groups had to rely on the strength of some girls to score higher marks. Some boys had to be helped by some girls to understand some tasks.

6.9.5 Improving quality of teaching

Because the teacher's work came under critical review by the recipients (the pupils) they became more sensitive to the process of imparting knowledge. They strived to improve their work and their classroom practice. This constant interactive feedback was stronger and more powerful to initiate change in teachers than what the lecture of a "so-called expert" could have done. Since children were helped to be critical and analytical in their learning process, teachers worked hard to prepare their lessons to a standard that would create fewer criticisms.

6.9.6 Reducing burden of teachers

As was described in the case study of one of the intervention classes as well as the case study in chapter two it was clear that the teachers were exhausted in their attempt to achieve their objectives in class. But my observation was that the task of controlling the class and making decisions in the course of teaching to achieve the stated goals became easier as they trusted the children and allowed them to participate in the decisions that directly affect them. The teachers as well as head teachers confirmed this observation. By involving the pupils, teachers found more interesting ways of doing things in class thus introducing variety and eschewing boredom. In such situations burn out cases among teachers can be greatly reduced.

6.9.7 Teaching leadership qualities

One of the major problems of most African countries is leadership crisis. Thus, learning to be a leader is critical for the survival of a society. And the schools provide the best forums for such training. As the group leaders were helped to acquire their roles as leaders and they in turn helped to train their groups they were learning skills that will be eternally beneficial to them as individuals as well as the society as a whole. Most critical was the shifting of roles where the leaders sometimes had to become ordinary members of the group to be led. These activities increased their responsibility level as well as making them accountable to the group.

6.9.8 Building genuine relationships

Teachers built genuine relationship with their pupils. This is critical since it determines to a large extent the quality of pupil's educational experience. It is a known fact that it is difficult to teach and communicate well with pupils if you are not on good terms with them. I contend that children cannot be productive when they feel threatened, anxious or uncertain a conclusion also supported by FEEMEY, CHRISTEN & MORAVCIK (1987). Teachers sought

opportunities to interact with their pupils to enrich this relationship. It can be said that in most cases they reached a level of joining their conversation, without raising suspicions among the pupils. This according to PUKKINEN (1996) improves the teachers emotional intelligence which is very much needed in child development and learning.

Introducing pupils to their rights and responsibilities was critical in breaking down the mental barriers traditional concepts and practices have created. Pupils began to question a lot of things they see in the school and in the society. They began to realise that sharing their opinion on issues, being listen to, being protected from harmful influences including abuse and exploitation, participating fully in family life, cultural and social lives are not favours from adults but their non-negotiable rights. These realisations lead gradually to the disappearance of the ever-present cane, which was almost a part of the classroom furniture. Teachers could no longer support the basis of the use of the cane to inflict pain on the children as a means of controlling misbehaviour. Thus, the creation of awareness of the child's rights or responsibilities became the yardstick against which both teachers and children could measure their behaviour.

6.9.10 Self-evaluation

Training children to self evaluate developed some measure of critical thinking in the pupils. They were able to reflect on their own behaviour or performance and make an attempt to explain. This was an invaluable skill that was inculcated in the pupils. Pupils had been given a good start on problem solving skills, which led to interesting, healthy and very useful suggestions for solving some classroom teaching-learning issues. This self-evaluation skill helped the children not to readily criticise others and blame them for their problems but to look at themselves first to see what contribution they might have made to the problem at stake. No matter how rudimentary these were as a result of their age, there was nonetheless enough evidence to show that the tendency to look outside ones self only to solve problems had greatly reduced.

6.9.11 Trusting teachers

Involving teachers in identifying and planning interventions for their classes introduces dimensions conceived in ways imagined or seen only by classroom practitioners. Thus, they

have the potential to identify problems, or illuminate instructional areas, that normally do not strike educational researchers from the outside.

Feedback from teachers indicated that they found it beneficial and very rewarding to collaborate with peers. Having teachers brainstorm together a dilemma that is common to their practise expanded their horizon. The freedom to select something they can identify with, leads to respecting what teachers know. Being recognized and respected can lead to feelings of efficacy and empowerment (FISCHER,1998a). Teachers seldom have a chance to talk about their own teaching. They discovered a lot of expertise among themselves, increased their professional esteem and improved performance. I contend that there is a huge thirst for more collaboration, recognition, and discussion among teachers a view also held by FISCHER (1998a).

Involving teachers and encouraging them to reflect on their own practice and that of their peers lead to a better understanding about what good teaching is, which practice works, and how children learn as well as increasing teachers sense of efficiency and professional development. Thus, school based intervention or professional development is given direction and impetus as well as creating a forum for reviewing reforms in the school system. Through this approach to interventions teachers became creators of new practices and school improvement and these were based on critical analyses, reflection, and dialogue with colleagues. Teachers expressed that the methods learnt, activities engaged in, brainstorming sessions undertaken, and group discussions held, liberated them to express new ideas and consider new ways of carrying out their work.

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND SUGGESTIONS

7.0 SUMMARY

This dissertation sought to identify the variance among the learning pre-requisites that Ghanaian class one children enter the school with against the background of an inflexible syllabus coupled with a predominant use of undifferentiated teaching methodology. In this regard a pre-diagnostic instrument put together by the researcher was used to assess 120 and 158 class one pupils in a pilot and main study respectively. A broad variety of skill areas were assessed with a focus on functional items, drawing, English and number work in a very practical way.

Purposive and simple random sampling techniques were adopted in the selection of the sample from rural, urban, private and public schools. The data were analysed by calculating the item difficulty using (p), qualitative analyses and chi² test were also used. The data showed a wide variance among the pre-requisite skills that the children enter school with. Based on these assessment results intervention with teachers were carried out in three class one classrooms but one was reported in detail. The feedback from the interventions was very positive and encouraging.

7.1 MAJOR FINDINGS OF THE STUDY

The major findings of the study are as follows:

- School failure in Ghana is as a result of a complex inter-play of factors such as years of certain uninformed policies of successive governments, the situation of the teacher, curriculum and textbook usage, instructional language policy, length of school year use of instructional time and political instability among others.
- Classroom methodologies are predominantly teacher-dominated, undifferentiated and do not support adequately the learning of weaker pupils.
- Traditional practices and philosophies about the child have an influence on the teaching-learning encounter.

- There are statistical significant differences among the sample of the study in areas such as locality or area, language usage during the interview, pre-school experience, age, and private versus public schools.
- Sex and social class are not strong determinants of performance among the sample.
- Ability to use English as a facility for expression plays a major role in the performance of the pupils.
- Pupils from private schools perform better than their counterparts in the public schools.
- Pupils from the urban centres perform better than their rural counterparts.
- Teachers are capable of initiating changes in their teaching methodologies.
- Head teachers can supervise school-based in-service education and training.

7.2 CONCLUSIONS

The majority of teachers teach in an undifferentiated manner that does not meet the needs of children with lower than expected learning pre-requisites. Coupled with that there are identifiable weaknesses in the competence of delivery and mastery of both subject matter and other pedagogical skills. With a large class size, without the support of diagnostic tools to identify the abilities of children in order to tailor the teaching to cater for individual differences, teaching is unattractive, tedious and an unwieldy task. Learning in such an environment will be demotivational and attainment of institutional goals will be greatly undermined.

Thus, Ghanaian children who possess higher English language ability, having pre-school experience, attending an urban school and being in a private school have a higher chance of school success.

It is clear from the above analyses that a rural child has a higher tendency to use lower level English, higher chances of not having pre-school experience, and more likely to perform lower. Thus pre-school experience, as well as ability to use English are strong determinants of performance in Ghanaian schools. These determinants of school success tilt in favour of the urban child to the disadvantage of the rural child. Thus, a real dichotomy in the chances of the Ghanaian children at school success is drawn.

If statistical significant differences exist among these factors namely, locality or area, language usage during the interview, pre-school experience, age, and private versus public

schools, then a serious look needs to be taken at them in the overall planning and policy formulation.

It is interesting to observe that sex was not a factor in determining success or otherwise in school. There is therefore no basis for any mental sets, practices or conventions that covertly and overtly discriminate against the girl-child in her bid to be educated. I therefore re-echo my stand point that parents, public institutions, policy makers, traditional leaders, NGO's and other stakeholders in education should redouble their efforts to ensure that real and imaginary barriers to the education of the girl-child are removed beyond reach.

The demographic distribution of poverty in the country follows similar pattern. 95,6% of the sample was from one out of the three regions, which saw an increase in poverty index in the 1990's. The majority of the population is denied a fair share of the national wealth. Instead of the educational system becoming a vehicle of correction, which are supposed to fuel the development of human resources, it rather charts the same pattern of the poverty dynamics. A breakthrough in the cycle of poverty is therefore far from been realized. Education will then become a tool for the production and reproduction of an elite majority and the realization of the right of every child to quality education will remain a far-fetched dream.

In conclusion, a real dichotomy in the chances of Ghanaian children at school success is drawn. No wonder the research team that reviewed the basic sector of Ghanaian education in 1995 titled their report "The Tale of Two Ghana's: A View from the Classrooms." This dichotomy has serious implications for educational policy, planning and practice in Ghana.

7.3 SUGGESTIONS

Based on the findings of this research, I wish to present the following suggestions:

7.3.1 For Policy

- There is the need for a differentiated curriculum for the rural and urban centres. It is clear that the children from the rural areas are disadvantaged through no fault of theirs. Therefore by forcing both groups of people to meet the same requirements and compete at the same pace is unfair and discriminatory.
- On grounds of parity of esteem one cannot argue for content differences but there can be a variation in terms of the length of time one spends in school. Educational policy should direct children from rural settings, which are noted to be very deprived to spent one or two

years longer in school. Which means that they will be covering the same syllabus but at a slower pace. This provision exist so some categories of handicapping and can be extended to cover this group.

- Conscious efforts should be made to have models and points of reference in the textbooks to the rural setting so that children from these areas can identify themselves with the textbooks.
- If kindergarten education or pre-school experience is a strong determinant for school success then it is an unhealthy practise to leave this sector of education delivery solely in the hands of the private sector. The MOE should enact a policy that will bring the pre-school sector into the public domain and extend these facilities as widely as possible to cover a greater percentage of the populace with particular attention focussing on the rural areas.
- There is the urgent need for the Ministry to explore the possibility of setting up centres for accelerated English learning especially in the rural settings where there is a total lack of a supporting environment for learning the language.
- The Ministry needs to re-subject the entire instructional language policy to a countrywide research and the results should be thoroughly debated in the public domain before promulgating any law or legislature in this area. For it is clear that children do not learn sufficient English by grade three to make it possible for them to comprehend entire instructions in the language by the fourth grade. Unfortunately they do not also learn and gain enough competence in reading and writing the local language to warrant a transfer from L1 to L2. Thus, the Ghanaian school system is embarking on an impossible experiment since the children by grade three do not have literacy in the L1 to transfer. How could one transfer from nothing to something? This impossible experiment is the bane of the chaotic state of educational delivery in the country.
- Classroom work needs to be supplemented with systematic programs from the local Frequency Modulation (FM) Radio stations as well as national ones. These will have to be planned and relate closely to the school syllabuses to ensure that children are encouraged to listen. The programs should be regulated in such a way that teachers could refer children to them and also to integrate them into their teaching and learning encounter. The television stations should also be brought along in this drive.
- In communities where exposure to English is minimal Accelerated Centers for English learning should be established and equipped to facilitate the learning of the language. Their activities should be structured and integrated into the school system such that

attendance to the centers should be mandatory for all children and performance on assigned work from the centers should be part and parcel of their continuous assessment. Models of teaching English as a Foreign Language should be adapted. A unit in these centers should cater for accelerated learning in the local languages with specialist in the prevalent language or languages of the area as the case may be working in the same manner as their English counterparts.

- Reduce drastically the deficiencies, inefficiencies, and tardiness and strengthen supervision.
- Increasing engaged time and on-task behavior.
- Other sources of funding in addition to existing ones should be explored. For instance a state of emergency in relation to the dying schools need to be declared. Appeals will then have to be made to the general public and cooperate concerns for donations in cash and kind. Based on a nationally approved emergency plan the resources are distributed with special task forces to resuscitate the dying schools by providing or constructing buildings, providing other facilities, teaching learning materials, reasonable living accommodation for teachers, etc.

7.3.2 For Teachers

- Teachers should make an effort to build a genuine relationship with pupils. This relationship when built unconditionally impacts the quality of their educational experience. It is evident that teaching and communicating well with children is difficult if you are not on good terms with your children. Children cannot be productive when they feel threatened, anxious or uncertain (FEEMY & MORAVCIK, 1987).
  A teacher should seek opportunities to interact with pupils at all costs and to enrich this relationship he must reach a level of joining their conversation, without raising suspicions among the pupils. This can improve the teachers' emotional intelligence, which is very much needed in child development and learning. (PUKKINNEU, 1996).
- The teacher should introduce children to their rights. This maybe through group discussions or any method deemed fit by the teacher but I highly recommend the 'morning circle'. The benefits to be derived from children becoming aware their rights cannot be over emphasized. It helps both the teacher and the pupil to improve upon their responsibilities especially when in the discussions each right is tied to its responsibilities.

The Ghanaian constitution can be used with other materials from UN bodies. Thus, civil education can begin very early in the child's life.

- The Ghanaian classroom experience, which makes no secret of large class sizes will benefit a great deal from the formation of co-operative groups. The teacher should facilitate in the in the class. These groups' help in building leadership qualities, encourage interactions and interpersonal relationships and more capable peers are helped to assist the less capable peers thus reducing the burden on the teacher. (THARP & GALLIMORE, 1988). They can also be used to foster promotion of the participation of the girl child by encouraging her to lead groups.
- To increase the self-esteem among children and to break the dominant role of teachers in lessons, sessions with pupils should be organized to explore and encourage various ways children can be involved in their own learning. It is also critical to help pupils realize the importance of suggesting, expressing their opinions and views. Children get encouraged when their ideas are considered and implemented (HEWES & SCOTCHNER, 1993).
- Self-evaluation is a critical ingredient for successful living. For it is said that a life that is not examined is not worth living. Therefore teachers should train their pupils to evaluate themselves at least each day. They must be encouraged to focus on good things. The teacher should also allow pupils to evaluate his teaching process at the end of the term possibly through a questionnaire. Criticisms (SERPELL & MWAPE, 1996) should be allowed and this may help a teacher for a better direction and understanding of his pupils and his teaching process. In this process assist children to learn to criticize positively.
- Teachers need to go beyond just being classroom teachers to becoming teacher-counsellors. This will help them to identify the needs of the homes where children are coming from (HAWES & STEPHENS, 1990; SERPELL, 1993). This knowledge gives the teacher a better understanding of his children and places him in a better position to help the children.
- Research methods as a course of study is not taught as a course of study in the initial teacher training colleges for basic school teachers. Though they are made to write a long essay, which demands some field studies, most of them lack the principles and practise of initiating, conducting and concluding research. But there is no denial of the fact that these skills are critical for every teacher. The Ministry of Education, Ghana Education Service and the Institute of Education, University of Cape Coast should re-formulate plans to enable teachers in training in these colleges to have courses of study in research methodology. And also in the in-service training of the teacher skills in conducting and

reporting research should be stressed. Research should no longer be seen as the preserve of some academicians who live in an 'ivory tower.' This may help teachers to deal with the classroom problems they encounter scientifically and obtain reliable results for improvement in teaching and learning.

7.3.3 For Educational Planers

Improving educational practice is an essential practice at all levels of the educational ladder, but more essentially at the basic or foundational stages of the educational enterprise. I recognize the fact that various bodies, national, international, governmental, and non-governmental are striving to improve quality in the educational system more especially at the primary level. This has led to the injection of huge sums of money into various areas with the view to impact on quality of learning in our school. Therefore I do not view my contribution as 'the' solution, but rather as a significant contribution to the global effort to arrest the downward trend and high levels of school failure and waste in the educational system.

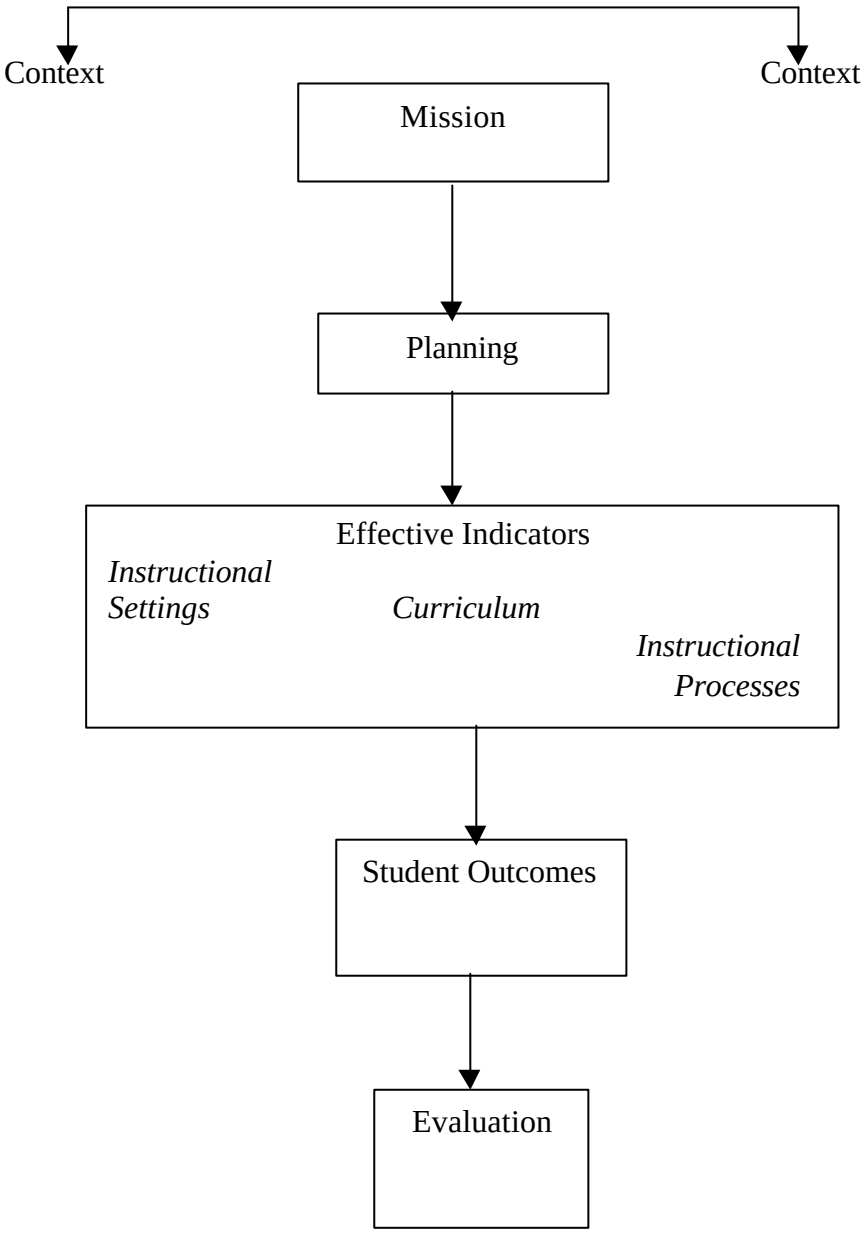
I do not presume that effective practices are static. Instead, they are dynamic, changing in response to new innovations and new environmental demands. I therefore do not expect teachers to continue using all of the intervention strategies developed in collaboration with them in the same way over and over again if even the ecology no longer makes it or them anymore effective. I have thus empasized that as educators, our goal must be to constantly search out, test and utilize effective strategies and procedures.

I agree with CEGELKA & BERDINE (1995) that quality educational programmes are those in which the teachers, administrators and related staff continually evaluate the efficacy of the practices they use. Careful monitoring of educational outcomes provides information upon which to consider changing educational practices, and or adopting new practices and innovations. The key question to guide us as educators is always ' Are we achieving the outcomes targeted?'

The Model for Programme Quality, developed by the Carlifornia Task Force on Programme Effectiveness, is what I will recommend to Ghanaian educators, since it ensures a continuous cycle of evaluation. The model is presented in the figure below:

Fig.: 7.3.1:

A CONCEPTUAL MODEL FOR QUALITY SPECIAL EDUCATION



Source: Adapted from CEGELKA & BERDINE (1995)

CEGELKA, TRAUPMANN & GRISAFE (1988) indicate that this model views effective education not as something to be accomplished but rather as a continuous state of achieving. It focuses on the continuous evaluation of student outcome, e.g. the extent to which pupils are acquiring the targeted knowledge and skills. It is unlike a univariate ‘ one-shot’ model of evaluation such as using standardized achievement test or the end of primary cycle CRT in Ghana that provide infrequent, generalalized indices of pupil performance at a single point in time. The

programme quality model on the other hand provides for frequent, criterion-specific and curriculum specific indices of effectiveness.

It is my contention that by analysing education from this view point and always asking “how effective has this been?” policy makers, educational administrators and teachers can identify the most effective strategies for assisting all children, including those who may experience low academic achievement due to learning handicaps or other challenges.

7.3.4 For Future Research

It is recommended that future researches could focus on the following:

- Using factor analyses to reduce the variables of this pre-diagnostic instrument to identify the factors that show a strong loading and use it as a basis to construct a culturally relevant diagnostic instrument for Ghanaian school entrants that is economical in terms of time.
- Re-examine the possibility of using drawing as a diagnostic tool for assessing the abilities children possess.
- Assess the conditions present in the rural areas of Ghana that can be harnessed by curriculum developers, textbook writers and teachers to support teaching and learning of children from the rural setting.
- Examine the six independent variables in terms of how they interact with children in the higher classes in Ghanaian schools.

It is clear from the above analyses that a rural child has a higher tendency to use lower level English, higher chances of not having pre-school experience, and more likely to perform lower. Thus pre-school experience, as well as ability to use English, are strong determinants of performance in Ghanaian schools. These determinants of school success tilt in favour of the urban child to the disadvantage of the rural child.

REFERENCES

Adams, R., & Biddle, B. (1970). Realities of teaching: Explorations with video tape. New York: Holt.

Akyeampong, A.K. (1997). Continuous Assessment in Post-Secondary Teacher Training in Ghana: A Case Study Evaluation. Unpublished Ph.D. Thesis, University of Nottingham.UK.

Alhajri, A. (1981). Effects of seat position on school performance of Kuwaiti students. Unpublished doctoral dissertation, University of Missouri.

Ames, L. B. (1979). The Gesell Institute's child from one to six: Evaluating the behavior of the preschool child. New York : Harper & Row.

Anamuah, J., Koomson, A.K., & Godwyll, E.F. (1996). GNAT Commissioned Study on FCUBE Policy Document: Basic Education Sector Improvement Programme. Accra: Ghana national Association of Teachers

Anderson, L., Brubaker, N., Alleman-Brooks, J., & Duffy, G. (1985). A qualitative study of seatwork in first-grade classrooms. Elementary School Journal, 86, 123-140.

Applebee, A. N. (1978). The child's concept of story : Ages two to seventeen. Chicago : University of Chicago Press.

Aristotle, I. (1931). De Anima. Book III, 7. In W. D.Ross, (Ed.). The works of Aristotle. Oxford: Claredon Press. Vol.iii.

Ashton, P. T., & Webb, R. B. (1986). Making a difference: Teachers' sense of efficacy and student achievement. New York : Longman.

Bader, V. (Ed.). (1997). Citizenship and exclusion. New York : St. Martin's Press,

Bartlett , A. C. (1995). Male authors, female readers : Representation and subjectivity in Middle English devotional literature. Ithaca : Cornell University Press.

Bates, E., & Benigni, L. (1979). The emergence of symbols:Cognition and communication in infancy. New York : Academic Press.

Bender, L. (1940). The drawing of man in chronic encephalitis in children. Journal of Nervous and Mental disability. 40, 277-286.

Berger, K. S., &. Thompson, R. A. (1996). The developing person through childhood. NY : Worth Publishers.

Bering, K., Kretschmann, R., & Dobrindt, Y. (1999). Prozessdiagnose mathematische Kompetenzen. Horneburg: Persen.

Blankenship, C. (1985). Using curriculum-based assessment data to make instructional decisions. Exceptional Children, 52, 233-238.

Block, J. H. (Ed.). (1971). Mastery learning: Theory and practice. New York: Holt, Rinehart, & Winston.

Bloom, B. (1965). Learning for mastery (UCLA-CSEIP) Evaluation comment. 1 (2). 1-12

Borg, W., Kelley, M., Langer, P., & Gall, M. (1970). The mini-course: A Micro teaching Approach to Teacher Education. Beverly Hills, Calif.: Macmillan Educational Services.

Bossert, S. (1981). Understanding sex differences in children's experiences. Elementary School Journal, 81, 255-26.

Britton, J. N. (1973, January). Teaching writing. Paper prepared for the S.S.R.C.Research Seminar on Language and Learning. Edinburgh: Scotish Council for Research in Education.

Britton, J. N., Burgess, T., Martin, N., McLeod, A., & Rosen, H. (1975).The development of writing abilities. London: Macmillan Educational for the Schools Council.

Brophy, J., Evertson, C., Anderson, L., Baum, M., & Crawford, J. (1981). Student characteristics and teaching. New York: Longman.

Brophy, R., & Kher, N. (1986). Teacher socialization as a mechanism for developing student motivation to learn. In R. Fedman (Ed.). Social psychology applied to education. Cambridge: Cambridge University Press.

Brown, J. D., &. Palas, F. J. (1970). Basic mathematical concepts. Lexington: Mass., D. C. Heath.

Burton, A. W. (1984). Age-related changes in the abilities of children to phase or integrate individual response units into a coordinated motor skill. Microfilm.

Burton, L. W. (1990). The first three years of life. (New and rev. ed.). New York: Prentice Hall Press.

Carron, G., & Bordia, A. (Eds.). (1985). Issues in planning and implementing national literacy programmes. Paris : Unesco.

Chukovsky, K. (1963). From two to five. Berkeley and Los Angeles: University of California Press.

Channon, G. (1970). Homework. New York: Outerbridge and Dienstfred.

Carew, J., & Lightfoot, S. (1979). Beyond bias. Cambridge, MA: Harvard University Press.

Carpenter, T. P., Moser, J. M., & Romberg T. A. (Eds.). (1982). Addition and subtraction : A cognitive perspective. Hillsdale, N.J: L. Erlbaum Associates.

Carter, K. (1990). Teacher's knowledge and learning to teach. In R. Houston (Ed.). Handbook of Research on Teacher Education. New York: Macmillan.

Cegelga, P.T. & Berdinne, W. H. (1995). Effective Instruction for Students with Learning Difficulties., Boston: Allyn and Bacon.

Cegelka, P. T., Traupmann, J., & Grisafe, I. (1988). Promising programs in special education needs, instruction and adaptations. Teaching Exceptional Children, 20, 48-50.

Centre for Research into Improving Quality Primary Education in Ghana. (1993). Research Report. Accra: USAID publication p.2.

Centre for Research into Improving Quality Primary Education in Ghana. (1995). Research Report. Accra: USAID publication.

Centre for Research into Improving Quality Primary Education in Ghana. (1995). Phase Two. Report. Accra: USAID publication.

Cohen, L. G., & Spruill, J. A. (1990). A practical guide to curriculum-based assessment for special educators. Springfield, IL: Charles C. Thomas.

Channing, L (1974). How to improve your reading skills. Greenfield, MA: Bete Company, Inc.

Clay, M. M. (1979). The early detection of reading difficulties. Heinemann: London.

Cooper, H., & Good, T. (1983). Pygmalion grows up: Studies in the expectation communication process. New York: Longman.

Cuban, L. (1984). How teachers taught: Constancy and change in American classrooms 1890-1980. New York: Longman.

Damon, W. (Ed.). (1998). Handbook of child psychology. 5th ed . New York : J. Wiley.

Denham, C., & Lieberman, A. (Eds.). (1980). Time to learn. Washington, DC: National Institute of Education.

Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. Exceptional Children, 52, 219-232.

DeVries R., & Zan, B. (November 1995). Constructing a constructivist classroom atmosphere. Young Children. 51, (1), 4-14.

Di Leo, J. H. (1973). Children's Drawing as Diagnostic Aids. New York: Brunner/Mazel Publishers Inc.

Dittoh, S., & Ankomah, A. B. (1997). Population pressure, land degradation and food coping strategies in the Frafra area of the Upper East region, Ghana. A Research Report to Union for Africa Population Studies (UAPS), Dakar, Senegal.

Dittoh, S., Milla, D., & Alebikiya, M. (1998). Cotton production and food security in the Cheriponi area of Northern Region of Ghana. A Research Report to Action Aid, Ghana.

Djangmah, J. S. (1995). Educational reforms in Ghana: The dream and its implications. A memorandum to the Education Reform Review Committee.

Dunkin, M., & Biddle, B. (1978). The study of Teaching. New York: Holt, Rinehart and Winston.

Durkin, D. (1978-79). What classroom observations reveal about reading comprehension instruction. Reading Research Quarterly, 14, 481-533.

Emmer, E. (1967). The effect of teacher use of student ideas on student verbal initiation. Unpublished doctoral dissertation: University of Michigan.

Emmer, E. (1967). The effect of teacher use of student ideas on student verbal initiation. Unpublished doctoral dissertation, University of Michigan.

Eng, h. (1954). The psychology of children's drawings. (2nd ed.). London: Routledge and Kegan Paul.

Feemey, S. C., & Moravcik, E. (1987). Who am I in the eyes of children. Paper presented at ISSBD , Lussaka, Zambia

Feingold, A. (1988). Cognitive gender differences are disappearing. American Psychologist, 43, 95-103.

Fennema, E., & Peterson, P. (1985). Autonomous learning behavior: a possible explanation of gender-related differences in mathematics. In L. Wilkinson & C. Marrett (Eds.). Gender influences in classroom interaction. New York: Academic Press.

Fennema, E., & Peterson, P. (1987). Effective teaching for girls and boys: The same or different? In D. Berliner, & B. Rosenshine, (Eds.). Talks to teachers. New York: Random House.

Fischer, J. (1998a). Estuadando e Valorizondo as Boas Practicas Edducativas na Escola. Curitiba, Brazil: SEED/DESG/PROEM.

Fischer, J. (1998b). Painful memories and democratic education in Chile. Manuscript submitted to Democracy and education: magazine for teachers.

Fobih, D. K., Koomson, A. .K., & Godwyll, E. F. (1995, October). The case of Ghana. Formulating Educational Policy: Lessons and Experiences from Sub-Saharan

Africa-Six Case Studies and Reflections from the DAE Biennial Meetings. Tours, France: Association for the Development of African Education (A.D. A. E). (pp. 63-82).

Frieire, P. (1981). Education for critical consciousness. New York: Continuum.

Freedman, S., Jackson, J., & Boles, K. (1983). Teachers: An imperiled "profession." In L. Shulman & G. Sykes (Eds.), Handbook of teaching and policy. New York: Longman.

Fuchs, L. S., & Deno, S. L. (1991). Paradigmatic distinctions between instructionally relevant measurement models. Exceptional Children, 57, 488-500.

Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984). The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement and student awareness of learning. American educational Research Journal, 21, 449-460.

Gicklin, E. E., & Armstrong, D. L. (1978). Levels of instructional difficulty as related to on-task behavior, task completion, and comprehension. Journal of Learning Disabilities, 11, 32-39.

Gicklin, E. E. & Havertape, J. F. (1981). Curriculum-based assessment. In J. A. Tucker (Ed.). Non tested based assessment. Minneapolis: The National School Psychology Inservice Training Network, University of Minnesota.

Godwyll, E.F. (2002). Education at the crossroads: The Ghanaian dilemma and puzzle. Monograph

Godwyll, E.F. (2002). Looking into Ghanaian classrooms. Monograph

Godwyll, E.F. (2002). Diagnosing entry behaviours of primary one children in Ghana. Monograph

Godwyll, E. F., Eckhoff, K., Holm, S., & Gailing, R. (2000). Games for learning in school and at home. Accra: Adwinsa Publications Ghana limited.

Godwyll, E.F. & Essiaw. M. (1997). Problems of primary six female pupils in mathematics. An unpublished research work

Godwyll E.F., & Hefasona, A. (1997). Development and Standardisation of Screening Instrument as a Step in Early Identification of Children at Risk of Developing Learning Disabilities. An unpublished research work.

Godwyll E.F., & Mensah, D. (1997). An assessment of written expression in junior secondary chools. An unpublished research work.

Godwyll E.F., & Yelkpieri, D. (1997). An assessment of written expression fluency of junior secondary school. An unpubished research work.

Godwyll, E.F., & Yeboah, S. (1997). Teachers and pupils perception of the use of rewards and punishment in schools. Unpublished research work.

Good, T.L., & Brophy, J. E. (1974). Changing teacher and student behavior: an empirical investigation. Journal of Educational Psychology, 66, 390-405.

Good, T., Grouws, D., & Ebmeier, H. (1983). Active mathematics teaching: empirical research in elementary and secondary classrooms. New York: Longman.

Good,T.L., & Brophy, J.E. (1997). Looking into classrooms. 5th Edition. New York: HarperCollins Publishers Inc.

Good, T., & Findley, M. (1985). Sex role expectations and achievement. In J. Dusek (Ed.), Teacher expectations. Hillsdale, NJ: Erlbaum.

Goodlad, J. (Ed.) (1987. The ecology of school renewal: Eighy-sixth yearbook of the national society for the study of education. Chicago: The University of Chicago Press.

Goodnow, J. (1977). Children Drawing. Harvard University Press Cambridge. USA.

Gnezda, M., Therese, L., & Bolig, R. (1988). A national survey of public school testing of prekindergarten and kindergarten children. Paper prepared for the National Forum on the Future of Children and Families and the National Association of State Boards of Education.

Graden, J. L., Zins, J. E., & Curtis, M. J. (Eds.). (1988). Alternative educational delivery systems: Enhancing instructional options for all students. Washington, DC: National Association of School Psychologists.

Guerin, G. R., & Maier, A. S. (1983). Informal assessment in education. Palo Alto, CA: Mayfield Publishing.

Gulliford, R. (1985). Teaching children with learning difficulties. Windsor, Berkshire: Philadelphia : NFER-Nelson, 1985.

Hammill, D. D. (Ed.). (1987). Assessing the abilities and instructional needs of students : a practical guide for educators, psychologists, speech pathologists, and diagnosticians. Austin, Texas. : Pro-Ed.

Harris, A., & Pasigna, A. (1994). Curriculum-Based Assessment: Linking Curriculum, Assessment and Learning in Developing Education Systems. Draft research report. 10/07/94. Institute for International Research.

Hargis, C. H. (1987). Curriculum based assessment: a primer. Springfield, IL: Charles C. Thomas.

Harste, J. C. (1989). New policy guidelines for reading: Connecting research and practice. Urbana, Ill. National Council of Teachers of English : ERIC Clearinghouse on Reading and Communication Skills.

Hawes, H., & Schotchmer, C. (Eds.). (1993). Children for health. London, UK: The Child-To-Child Trust/ UNICEF.

Hawes, H., & Stephens, D. (1990). Questions of quality. Harlow, Essex. U.K: Longman.

Hawes, H. (1988). Child-Child.- Another path to learning. Humburg: UNESCO Institute for Education.

Hendricks, J. (1997). First steps towards reggio teaching. Columbus, OH: Merrill.

High/Scope. (1992). Child observation record. Ypsilanti, MI: High/Scope Press.

Hinson & Hughes (1982). Students classroom performance and the teaching learning process. New York: Holt.

Hudgins, B., & Ahlbrand, W. Jr. (1969). A study of classroom interaction and thinking. (Technical Report Series No.8). St. Ann, MO: Central Midwestern Regional Educational Laboratory.

Hyde, J., & Linn, M. (1986). The psychology of gender: advances through meta-analysis. Baltimore: The Johns Hopkins University Press.

Idol, L., Daolucci-Whitcomb, P., & Nevin, A. (1986). Collaboration. Rockville, MD. Aspen.

Idol, L., Nevis, A., & Paolucci-Whitcomb, P. (1986). Models of curriculum-based assessment. Rockville, MD: Aspen Publishers.

International Reading Association. (1986). Literacy development and pre-first grade: A joint statement of concerns about present practices in pre-first grade reading instruction and recommendations for improvement. Childhood Education, 62 (2), 110-111.

Jackson, P. (1968). Life in Classrooms. New York: Holt.

Jackson, P., & Lahaderne, H. (1967). Inequalities of teacher-pupil contacts. Psychology in the schools, 4, 204-208.

Johnson, D. W. (1970). The social Psychology of education. New York: Holt.

Johnson, D. W. (1991). Human relations and your career. (3rd ed.). Engle wood cliffs, NJ: Prentice-Hall.

Johnson, D. W. (1991). Reaching out : Interpersonal effectiveness and self actualization (6th ed.). Engle wood cliffs, NJ: Prentice-Hall.

Johnson, D. W., & Johnson, F. (1994) Joining together: Group theory and group skills. (5th ed.). Engle wood cliffs, NJ: Prentice-Hall.

Johnson, D. W., & Johnson, R. (1974). Instructional goal structure: Cooperative, competitive, or individualised. Review of Education Research, 44, 213-240.

Johnson, D. W., & Johnson R. (,1975). Leading together alone: cooperative competition and interaction. Edina, MN: Interaction Book company.

Johnson, D. W., & Johnson, R. (1979). Conflict in the classroom. Courtesy and Learning. Review of Educational Research, 49, 51-57.

Johnson, D. N., & Johnson, R. (1983). The socialization and achievement crises: Are cooperative learning experiences the solution. In L. Bickman (Ed.), Applied Social Psychology Annual, 4, 199-164, Berly Hills, CA: Sage.

Johnson, D. W., & Johnson, R. (1987a). Creative conflict. Edina, MN: Interaction Book Canpany.

Johnson, D. W., & Johnson, R. (1987b). Research shows the benefits of adult cooperation. Educational Leadership, 454 (3), 21-30.

Johnson, D. W., & John son, R. (1989a). Cooperation and competition: Theory and research. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1989b). Leading the cooperative school. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1992b). Teaching students to be peace-makers [Video]. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1992a). My mediation notebook. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. (1992b). Positive interdependence: The heart of cooperative learning [Video]. Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson R. (1994). Leading together alone: Cooperative competition and interaction. Edina, MN: Interaction Book company.

Johnson, D. W., Johnson, R., & Holubec, E. (1988). Barrier to Effective special education consultation. Remedial and special Education, 9 (6), 41-47 Behaviour Disorder, 6 , 92-100.

Johnson, D. W., Johnson, R., & Holubec, E. (1993). Co-operation in the Classroom. 6th edition, Edina MN: International Book Company.

Johnson, T. R., Moore, W. M., & Jeffries, J. E. (Eds.) (1978). Children are different : Developmental physiology 2d ed. Columbus, Ohio : Ross Laboratories.

Kagan, S. L. (1999). Cracking the readiness mystique. Young Children, 54 (5), 2-3.

Kagan, S. L., Moore, E., & Bredekamp, S. (Eds.). (1995). Reconsidering children's early development and learning: Towards common views and vocabulary. Report of the National Education Goals Panel, Goal 1 Technical Planning Group. Washington, DC: Government Printing Office.

Kameenui, E. J., & Simmons, D. C. (1990). Designing instructional strategies: the prevention of academic learning problems. Columbus, OH: Merill.

Kelly, G. A. (1955). The psychology of personal constructs. (2 vols.) New York: Norton & Co.

Kerr, R. (1974). An analysis of the fine motor performance of children aged five, seven, and nine years, and the relationship of this performance with skeletal age. Oregon. University. School of Health, Physical Education, and Recreation. Microform publications.

Kornmann, R. (1991). Veränderungen des Gegenstandsbezugs als Indikator kognitiver Entwicklung und Möglichkeiten ihrer förderungsbezogenen diagnostischen Erfassung. Heilpädagogische Forschung, 17, 4, 184-191.

Kornmann, R. (1981). Psychometric tests and the need to assess abilities in planning special educational programmes for the mentally retarded. In B. Cooper (Hrsg.), Assessing the Handicaps and Needs of Mentally Retarded Children (S. 107-116). London: Academic Press.

Kretschmann, R., Bering, K. & Dobrindt, Y (1998). Prozessdiagnose der Schiftsprach Kompetenz. Hornburg: Persen.

Lamme, L.L. (1979).Handwriting in early childhood curriculum. Young Children, 35 (1), 20-27.

.Leihardt, G. & Smith, D. (1985). Expertise in mathematics instruction: Subject-matter knowledge. Journal of Educational Psychology, 77, 247-271.

Leslie, B. (Ed.). (1994). Early learning experience in math. Nashville, Tenn: Incentive Publications.

Levin, H. M., & Lockheed, M. E. (Eds.). (1993). Effective schools in developing countries. Bristol, PA: Falmer

Maccoby, E. & Jacklin, L. (1974). The psychology of sex differences. Stanford, CA: Stanford University Press.

Maeroff, G. (1988). The empowerment of teachers. New York: Teachers College Press.

Manning, W. H. (1996**).** Clinical decision making in the diagnosis and treatment of fluency disorders. Albany, N.Y.: Delmar Publishers

Marston, D., & Magnusson, D. (1985). Implementing curriculum-based measurement in special and regular education settings. Exceptional Children, 52, 266-276.

Martin, R., & Keller, A. (1974). Teacher awareness of classroom didatic interactions. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Meisels, S. J. (January, 1987). Uses and abuses of developmental screening and school readiness testing. Young Children. 42 (2), 4-6, 68-73.

Meisels, S. J. (1992). Doing harm by doing good: Iatrogenic effects of early childhood enrolment and promotion policies. Early Childhood Research Quarterly. 7 (2), 155-17.

Meisels, S. J. (1999). Assessing readiness. In Robert C. Pianta & Martha J. Cox (Eds.), The transition to kindergarten. Baltimore, MD: Paul H. Brookes.

Ministry of Education. (1987). Policy Guidelines on the New Educational Reforms. Accra: Ministry of Education.

Ministry of Education. (March 1994). Towards Learning for All: Basic Education in Ghana to the Year 2000. Accra: Ministry of Education.

Ministry of Education (June 1995). A Tale of Two Ghana's: The View from the Classroom. A research report on Basic Education Sector Review. Accra: Ministry of Education.

Ministry of Education, Ghana. (1995a). Basic Education Sector Assessment School Review: Curriculum Instruction and Teachers. Report on Teacher Training Colleges. Accra: Ministry of Education.

Ministry of Education /USAID. (1995). National Criterion-Referenced Test (CRT) Summary of Results (1993- 1995). Accra: Ministry of Education.

Ministry of Finance, June (2001), Ghanaweb.com http://ghanaweb.com/GhanaHomePage/ghana/gh_econ.html

Ministry of Finance, March (2002), Ghanaweb.com http://ghanaweb.com/GhanaHomePage/ghana/gh_econ.html

Moon, J., & Schulman, L. (1995). Finding the connections: Linking assessment, instruction, and curriculum in elementary mathematics. Portsmouth, NH : Heinemann.

Morine-Dershimer, G. (1987). Can we talk? In Beliner, D. & Rosenshine, B. (Eds.). Talks to teachers. New York: Random House.

Morgan, T.C., King, A.R., & Robinon, M. N. (1984). Introduction to Psychology. Singapore: Mc Graw.

Morse, L., & Handley, H. (1985). Listening to adolescents: Gender differences in science classroom interaction. In L. Wilkinson & C. Marret (Eds.), Gender influence in classroom interaction. New York: Academic Press.

Motta, R., Vane, J. (1977). An investigation of teacher perceptions of sex-typed behaviors. Journal of Educational Research, 69, 363-358.

Mumba, P. (1996). Child-Child and Growth chart: The effects and Influence on the girl Girl Child education. Unpublished paper.

National Association of Early Childhood Specialists in State Departments of Education. (2000). Still! Unacceptable trends in kindergarten entry and placement. [Online]. Available: http://ericps.crc.uiuc.edu/naecs/position/trends2000.html [2000, May 15].

National Education Goals Panel. (1991). The Goal 1 Technical Planning Subgroup report on school readiness. Washington, DC: Author.

Neville, M. H., & Pugh, A. K. (1982). Towards independent reading. London : Heinemann Educational Books.

Nyerere, J. K. (1979, January), Interview with ALTAF Ganharm, The Guardian. (8^{th} edition).

Oates, J. (Ed.). (1979). Early cognitive development . New York : Wiley.

Pasigna, A. L. (1991). A post hoc analysis of Thailand's reduced instructional time project. Bloomington, IN: Author.

Pasigna, A. L. (1993, October). Swaziland's continuous assessment (CA) program: some questions and answers. Manzini, Swaziland: Ministry of Education and Arlington, VA: Institute for International Research.

Pelt Van, N, (1992). To Have and to Hold: A Guide to Successful Marriage. U. K: Stan Borough press.

Peterson, P., Fennema, E., Carpenter, T., & Loef, M. (1989). Teachers' pedagogical content beliefs in mathematics. Cognition and Instruction, 6, 1-40.

Petty, W. T., &. Jensen, J. M. (1989). Developing children's language. Boston : Allyn and Bacon.

Piaget, J. (1973). The origins of intelligence in children. New York: W. W. Norton.

Piaget, J. (1970). Piaget's theory. In P. Mussen (ed.), Carmichael's Manual of Child Psychology, 3^{rd} edition, Vol. 1. New York: Wiley.

Piaget, J. & Inhelder, B.(1971). Mental imagery in the Child. New York: Basic Books.

PISA. (2000). Deutsches PISA-Konsortium (ed.) (2001): PISA 2000. Basiskompetenzen von Schülerinnen und Schülern iminternationalen Vergleich. Opladen: Leske + Budrich.

Popham, W. J., & Baker, E. L. (1970). Establishing instructional goals. Englewood Cliffs, NJ: Prentice-Hall.

Pugh, A.K., & Ulijn, J.M. (Eds.). (1984). Reading for professional purposes : Studies and practices in native and foreign languages. London: Heinemann Educational Books.

Pukkinen, L. (1996). Risk and protective factors in personal development. Paper presented ISSB, Lusaka, Zambia.

Raines, S. C., & Canady, R. J. (1990). The whole language kindergarten. New York : Teachers College Press, Teachers College, Columbia University.

Report of Education Reform Review Committee. (1994). Accra: Ministry of Education. p.3.

Republic of Ghana. (1998). Poverty trends in Ghana in the 1990's. Accra: Ghana Statistical service.

Republic of Ghana. (1999). Poverty trends in Ghana in the 1990's. Accra: Ghana Statistical service.

Republic of Ghana. (2000). Public Expenditure review 1999- Improving Education through increased, efficient and effective utilization of resources. Accra: Ghana Statistical service.

Rhodes, L., & Shanklin, N. (1992). Literacy assessment in whole language Classrooms K-8. Portsmouth, NH: Heinemann.

Rinaldi, C . (1996). Malaguzzi and the teachers: Innovations in early education: The International Reggio Exchange, In P. Weissman, (Ed), (4), 1-7.

Rinehart, Winston., Jackson, P., & Lahaderne, H. (1967). Inequalities of teacher-pupil contacts. Psychology in the Schools, 4, 204-208.

Rist, R. (1970). Student social class and teacher expectations: the self–fulfilling prophecy in ghetto education. Harvard Educational Review, 40, 411-451.

Schiamberg, L. B. (1985). Human development 2nd ed. New York : Macmillan ; London : Collier Macmillan

Schubert, J.G. (December, 1993). Improving Educational Quality Project. Annual Report:Vol. 1: June-September. IIR, Juarez and Associates and the University of Pittsburg.

Scott, D. D. (1987, August). A study of a computerized diagnostic inventory of basic mathematics skills. Thesis (Ph.D.) Ohio University, Athens, Ohio, (School of Curriculum and Instruction)

Seminar on Inclusive Education in Agra, India. (1998). EENET website http://www.eenet.org.uk/about/intro.shtml 10 / 05/ 2001.

Schwartz, S. L., & Robinson, H. F. (1982). Designing Curriculum for Early Childhood. Boston: Allyn and Bacon.

Seewald, I. & Engel, P. (1979). In T. Good, & J. Brophy, (1991). Looking in Classrooms 5th ed. New York: HarperCollins Publishers Inc.

Serpell, R. (1993). The significance of schooling: Life journeys in an African society. Cambridge: Cambridge University Press

Serpell, R., & Mwape G. (1996). Participatory appropriation of health science and Technology. Paper presented at ISSBD, Lussaka - Zambia

Shepard, L.A., & Smith, M. L. (November, 1986). Synthesis of research on school readiness and kindergarten retention. Educational Leadership, 44 (3), 78-86

Shepard, L.A., & Smith, M. L. (Eds.). (1989). Flunking grades: Research and policies on retention. London: Falmer Press.

Shepard, L.A., & Smith, M. L. (1990). Synthesis of research on grade retention. Educational Leadership, 47 (8), 84-88.

Shepard, L.A. (1994). The challenges of assessing young children appropriately. Phi Delta Kappan, 76, 206-13.

Shepard, L., Taylor, G. A., & Kagan, S. L. (1996). Trends in early childhood assessment policies and practices. Report prepared for the National Education Goals Panel. Washington, DC: National Education Goals Panel.

Shepard, L., Kagan, S. L., & Wurtz, E. (Eds.). (1998). Principles and recommendations for early childhood assessments. Washington, DC: National Education Goals Panel.

Shinn, M. R. (1988). Development of curriculum-based measurement: Assessing special children. New York: Guilford Press.

Shinn, M. R., & Good, R. H. (1992). CBA: An assessment of its current status and prognosis for the future. In J. kraner (Ed.), Curriculum-based assessment: Examining old problems, exploring new solutions. Lincoln, NE: Buros Institute of Mental Measurement, University of Nebraska.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. Harvard Educational Review, 51, 1-22.

Sieber, R. (1979). Classmates as workmates: Informal peer activity in the elementary school. Anthropology and Education Quarterley, 10, 207-235.

Simmons, B. (1980). Sex role expectations of classroom teachers. Education, 100 (3), 249-253.

Slavin, R.E. (1994). Using students team learning 2nd ed. Baltimore, MD: John Hopkins University Centre for Organization of Schools.

Spencer, P. L., & Brydegaard, M. (1952). Building mathematical concepts in the elementary school. New York, Holt.

Stephen, R.E., Slavin, R. E. (1995). The Co-operative Elementary School: Effects on Students's Achievement, Attitides and Social Relations. American Educational Research Journal, 32, 2,321-325.

Sulzby, E. (1990). Assessment of writing and children's language while writing. In L. M. Morrow & J. K. Smith (Eds.), Englewood Cliffs, NJ: Prentice Hall.

Sundberg, N. D. (1967). The practice of psychological testing in clinical services in the United States. In B. Lubin & E. E. Levitt (Eds.), The Clinical Psychologist, Chicago: Aldine Publiishing Company. Pp. 155-162.

Tharp, R., & Gallimore, R. (1988). Rousing Minds of Life. USA: Cambridge.

Tchombe, T. (1996) Crisis of learning outcomes as a function of crisis in learning processes among adolescents: The shift from teachability to learnability. Paper presented at ISSB, Lusaka, Zambia.

Therp, R., & Wetzel, R. (1969). Behaviour modification in the natural environment. New York: Academic Press.

Thompson, A. R. (1994). Education and Development in Africa. London, U.K: MacMillan.

Thorndike, R. (1973). Reading comprehension education in fifteen countries; an empirical study. New York: Wiley.

Thorburn, M. J., & Marfo, K. (1986), Practical approaches to childhood disability in developing countries. Tampa, Florida: Global Age Publishing.

Tough, J. (1977). Mathematics and learning: A guide to fostering mathematical skills in nursery and infant schools. London : Ward Lock ; Cardiff : Drake Educational Associates.

UNESCO, (1994). The Salamanca statement and framework for action on special needs education: Access and quality. Salamanca, Spain, 7-10 June 1994. Salamanca, Spain: UNESCO and the Ministry of Education and Science, Spain.

Vygotsky, L.S. (1978). Mind in society: The development of higher psychological processes. In M. Cole V. John-Steiner S. Scribuer & E. Sonberman (Eds. & Trans.), Cambridge MA: Havard University Press.

Warren, J. (1992). 1-2-3 reading & writing: Pre-reading and pre-writing oppurtunities for working with young children. Everett, Washington: Warren Pub. House.

Weeks, Z. R., & Ewer-Jones, B. (1991). Assessment of perpetual motor and fine motor functioning. In B. A. Bracken (Ed.), The psychoeducational assessment of preschool children (2nd Ed.). (pp. 259-283). Boston: Allyn and Bacon.

Weiner, L. M. (1972). Basic mathematical concepts. Tarrytown-on-Hudson, N.Y., Bogden & Quigley.

West Africa Examination Council Report. (1997). Chief Examiners Report. Accra: West Africa Examination Council.

Wilkinson, I., & Marrett, C. (Eds.). (1985). Gender influences in classroom interaction. New York: Academic Press.

Wilder, R. L. (1968). Evolution of mathematical concepts; an elementary study. New York: Wiley.

Wolf, D. P., & Neugebauer, B. (Eds.). (1996). More than numbers; mathematical thinking in the early years. Redmond, WA : Child Care Information Exchange.

World Bank. (1996). Basic Education Sector Improvement Program, Staff Appraisal Report. Republic of Ghana, Population and Human Resources Division, West Central Africa Department, Africa Region. Washington D.C: World Bank.

World Bank. (1999) cited in UNICEF Report on the situation of Children and women in Ghana 2000. UNICEF.

Woulls, B., Loertscher, D., & Shirey D. (1977). Evaluation techniques for school library/media programs: A workshop outline. Pittsburgh, PA: University of Pittsburgh, Graduate School of Library and Information Sciences.

Wyne, M. D., & O'Connor, P. D. (1979). Exceptional children : A developmental view. Lexington, Mass.: Heath.

Yeboah, V. Deputy Minister of Education. (1990). Address on policy guidelines on education in Ghana. Accra: Ministry of Education.

Yakubu, J. M. (June, 1993). Executive summary of research on the availability, source and utilisation of materials in six primary schools in Ghana. Cape Coast: CRIQPEG.

APPENDIX 1

PRE-DIAGNOSTIC INSTRUMENT FOR ASSESSING THE LEARNING PRE -REQUISITES OF PRIMARY SCHOOL ENTRANTS IN GHANA

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This is a diagnostic Instrument designed for children of an average age of six or entrants into primary class one. It is aimed at finding out the learning prerequisites that children enter the school with. The Instrument covers selected basic school related abilities that are critical for beginning school. The items cover broadly drawing, mathematics and language abilities in an integrated form. They have been constructed in simple language thus making it user friendly. They have also been made as practical as possible to engage the child in activities. It has also been divided into four parts and it is expected that each section takes roughly 30 minutes to complete, thus it takes about a total of two hours to complete the entire instrument. It is not expected that each child will be taking through the whole instrument at a go but rather through each section at a time. Foe example if there are five children you are working on take all the five children through one section and then call the first child back to begin the next section and take the others through this section until you call the first child once more for the third and the other section in the same manner. There can be variations in this approach based on the best judgement of the Assessor. But the principle is that a child should not sit through at a go to the extent that his/her attention suffers which will interfere with his/her best possible performance. It is hoped that great care would be exercised in its usage to observe the instructions given, to ensure that maximal results are achieved.

INSTRUCTIONS: *Ensure that you establish a good rapport with the child. Let the child relax and say to the pupil I am going to ask you some questions. Please do your best to answer all questions to the best of your ability. The questions can be asked in English or the local language unless otherwise stated. Introduce yourself by mentioning your name, profession and indicate that you are very interested in the way children learn and you are writing a paper on children as old as they are to find out all that they know and can do already to be able to help them learn better in school. Say further to the child that this is not a test so you should be relaxed and when a question is not clear please should feel free the say it.*

***NOTE**: (You may explain this again in the local Language, if necessary Please indicate the percentage of English or Local Language used for each of the sections.)*

a. Name of Pupil .....

b. School .....

c. Age .....

d. Date .....

e. Sex (a) Male (b) female

f. Class .....

g. Number of minutes used to complete the instrument.....

h. Performance level .....

i. Name of Researcher .....

j. Pre-school Experience. a. Yes ..... b. No .....

k. Percentage English.....

l. Percentage local language.....

PART ONE

SECTION A: INTRODUCTION

1. Greet the pupil: Say: Good morning /afternoon etc.
   a. Good morning/ afternoon
   b. Morning/ Afternoon
   c. any other please state

2. How are you today?
   a. I am fine /Alright /Okay thank you /
   b. Fine/Alright/ Okay

3. What is your name?
   a. able to give in full
   b. partially given
   c. not able
4. If child gives only the first name ask for the surname by saying, what is your surname or family name?
   .....

5. How old are you?
   a. able
   b. not able

6. When is your birthday?
   a. able to give
   b. not able

7. Do you have brothers and sisters?
   a) Yes ..... b) No .....

8. How many brothers do you have?.....

9. What are their names?
.....
.....
.....
.....
.....
.....
.....
10. How many of them are older than you?.....

11. Mention their names.
.....
.....
.....

12. How many sisters do you have?.....

13. What are their names?
.....
.....
.....

14. How many of them are older than you?.....

15. Mention their names.
.....
.....
.....
.....
.....

16. What are the names of your parents?
    a) Father .....
    b) Mother .....

17. What are their occupations?
    a) Father .....
    b) Father's social class
    c) Mother
    d) Mother's social class

18. Do you have a pet at home?
    a) Yes b) No

19. If yes what type of pet do you have? .....

20. a) What is the name of your pet? .....
    b) If no name your favourite. .....

SECTION B: ABILITY TO DRAW

21. Can you draw your favourite animal or pet?
    a) Yes ..... b) No .....

22. If yes please draw. (Child draws) *Give a sheet of paper to the child to draw on which should be attached to the child's answers to this instrument.*

OBSERVATION SCHEDULE

CATEGORISATION OF DRAWING	YES	NO
a) Did he/she draw the intended animal?		
b) Did he/she name the animal correctly?		
c) Is the animal well differentiated		
d) Has the child got the perception of Head and feet directionality		
e) What abilities are evident from the drawing? i) making circles		
ii) scribbling		
Iii) concept of two eyes		
iv) concept of four legs		
v) list the others.....		

23. If no is there anything you will like to draw?
    a) Yes ..... b) No.....

24. What is it? .....

25. Please draw. (Child draws)

OBSERVATION SCHEDULE

CATEGORISATION OF DRAWING	YES	NO
a) Did he/she draw the intended object?		
b) Orderly arrangement		
c) Is the object well differentiated?		
d) Has the child got the perception of top and down directionality?		
e) What abilities are evident from the child's drawing?		
i) Symmetrical		
ii) scribbling		
Iii) making straight lines		
iv) proportionality		
v) geometric figures: a) square b) triangle c) rectangle d) circles e) any other		
Vi) Graphic symbols a) Multiple lines b) L-shaped lines c) Zigzag lines d) Wavy lines e) Curved lines f) Cursive g) Spiral h) Circular forms I) Point		

26. Please write your name on the top part of the sheet. *If the child is unable to write the name, then write it out but only at the backside of the paper.*
    a) Able to write name .....
    b) Not able to write name .....

27. Can you draw a human being? (It can be a drawing of yourself or your friend).
    a) Yes ..... b) No .....

28. If yes please draw. (Child draws).

Provide the child with a sheet of paper. Instruct the child to write the name on the top part of the sheet after the drawing. If not able, write it at the backside of the paper. Note if the child was unable to write the name in Q.26 then there is no need to repeat this instruction. Proceed to write the child's name at the back of the sheet and attach it to this main instrument.

OBSERVATION SCHEDULE

CATEGORISATION OF DRAWING	YES	NO
a. Able to draw		
b. Not able to draw		
c) Is the human being well differentiated		
d) Has the child got the perception of Head and feet directionality		
e) What abilities are evident from the child's drawing		
i) making circles		
ii) scribbling		
iii) concept of two eyes		
iv) concept of two legs		
v) Any other list them		
f) geometric figures: a) square b) triangle c) rectangle d) circles e) any other		
g) Graphic symbols a) Multiple lines b) L-shaped lines c) Zigzag lines d) Wavy lines e) Curved lines f) Cursive g) Spiral h) Circular forms i) Point		

29. OBSERVATION SCHEDULE (FOR INTERVIEWER)

OBSERVATIONS	CHILD'S RESPONSE	COMMENT
a) Which hand does the child write with?		
b) Which hand does the child draw with?		
c) What difficulties does the child encounter? (Describe)		

After the child has finished drawing, say, a friend of mine has also drawn for me a picture of a child (note use the picture of the boy for males and that of the girl for females see appendix 1a &1b). I will show it to you and then ask you some questions about it. Present to the child the drawn picture and ask the following questions. (Interviewer should note the parts of the body the child mentions on the observation schedule below).

30. Please describe to me all that you see.

OBSERVATION SCHEDULE

BODY PARTS	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COMMENT
a) Head						
b) Eyes						
c) Ears						
d) Nose						
e) Mouth						
f) Hands						
g) Fingers						
h) Legs						
i) Feet						
j) Toes						

31. i) How many legs has a human being?
    a) Able
    b) Not able
ii) How many hands has a human being?
    a) Able
    b) Not able
iii) How many fingers do you have on one hand?
    a) Able
    b) Not able
iv) How many fingers do you have on both hands?
    a) Able
    b) Not able
v) How many ears?
    a) Able
    b) Not able

vi) How many eyes?
a) Able
b) Not able
vii) How many toes do you have on one foot?
a) Able
b) Not able
viii) How many toes do you have on your two feet?
a) Able
b) Not able
ix) How many fingers and toes do you have altogether?
a) Able
b) Not able

32. *Still using the picture of the human-being used in Q.30 ask the following questions:*
i) 'Show me the head of the human being.
a) Able
b) Not able
i) Show me the Eyes.
a) Able
b) Not able

ii) Show me the Ears
a) Able
b) Not able
iii) Show me the Nose
a) Able
b) Not able
iv) Show me the Mouth
a) Able
b) Not able
v) Show me the Hand
a) Able
b) Not able
vi) Show me the Fingers
a) Able
b) Not able
vii) Show me the Legs
a) Able
b) Not able
viii) Show me the Feet
a) Able
b) Not able
ix) Show me the Toes
a) Able
b) Not able

33 Can you once again draw a child?
a) Yes ..... b) No .....

34. If yes please draw. (Child draws).

Provide the child with another sheet of paper and indicate on it write 'picture 2'. Please remember to indicate the child's name on it and attach to main instrument.

OBSERVATION SCHEDULE

CATEGORISATION OF DRAWING	YES	NO
a) What did he/she intend to draw		
b) Is the human being well differentiated		
c) Has the child got the perception of Head and feet directionality		
d) What abilities are evident from the child's drawing		
i) making circles		
ii) scribbling		
iii) concept of two eyes		
iv) concept of two legs		
v) list them		
e) geometric figures: a) square b) triangle c) rectangle d) circles e) any other		
f) Graphic symbols i) Multiple lines ii) L-shaped lines iii) Zigzag lines iv) Wavy lines v) curved lines vi) Cursive vii) Spiral viii) Circular forms ix) Point		

PART TWO

SECTION C: FUNCTIONAL ITEMS

Welcome the child back by saying you are welcome back. I will like us to continue with our conversation.

35. What is the name of your school?
.....

36. What game do you like best?
.....

37. Why do you like this?
    game? .....

38. With whom do you like playing?
.....

SECTION D: NUMBER CONCEPT

39. Say to the Child, I have here a dice game I will like to play with you. Which colour do you like? I will take the other. Take turns to throw the dice with the child and count with the play piece. Take turns to play the dice and count as you play. The rules governing this game are very flexible. The interviewer should observe the following:

OBSERVATION SCHEDULE

OBSERVA-TIONS	YES	NO	SCORE	COMMENT
a. Does the child recognise number?				
b. Does the child correctly transfer symbols on the dice to actual number concepts?				
c. The child counts by each circle.				
d. The child counts by jumping.				
e The child counts aloud.				
f. The child counts silently				
g. In which Language does child begin to count?				

SECTION E: CONCEPT OF SYMBOLS

Provide the child with a sheet of paper and ensure that the child's name is written on it. Say to the child. I will like you to draw some symbols so pay attention to the instructions I give.

40. Please draw the following if you can. I will mention them one after the other and if you cannot draw any of them just tell me.
    a) Draw a line from the top of the sheet to the bottom.
        i) Able
        ii) Not able
    b) Draw a circle
        i) Able
        ii) Not able
    c) Draw a cross
        i) Able
        ii) Not able

d) Draw a triangle
   i) Able
   ii) Not able
e) Draw a square
   i) Able
   ii) Not able
f) Draw two dots
   i) Able
   ii) Not able

41. If the child cannot or is unable to draw the various symbols then point to the figures (see appendix 1c) one after the other and ask him/her to mention the names. Note if child is able to do Q.40 skip Q. 41- 46. If able to draw some figures but not all of them proceed only with those figures he/she was unable to draw. Use the observation schedule below to record the child's responses:

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

42. If the child is unable to do Q.41 proceed with this question. Provide the child with a sheet Of paper. Show abstractly in the air what the symbols look like and ask him/her to draw.

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

Note, this should be done one after the other and as slowly as possible to ensure that the child can appropriately follow. If the child was able to draw some figures in Q.41 then proceed only with those he/she was unable to do.

43. If the child is unable to do Q.42 proceed with this Question. Also proceed with this question if the child was unable to do all of the activities requested in Q.42, but only with those items that he/she was unable to do. *Draw the symbols on a paper one after the other and in each case ask the child to draw the symbol you have drawn after you.*

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

44. Proceed with this question when the child is unable to do Q.43 or proceed with the items he/she was unable to do in Q.43. *Put a tracing paper over the symbols and ask the child to trace them one after the other.*

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

45. If the child is unable to do all of the above test for visual identification.
    a) Provide the child with samples of symbols drawn on cards and ask him/her to sort out indicating which ones are similar or different
    b) Put all the various symbols together and ask him/her to sort out.

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

46. In the last phase of this variation when the child encounters difficulties or is unable to do Q.45, provide him/her with the symbols cut out in a puzzle form and ask him/her to fit the various parts of the puzzle together.

OBSERVATION SCHEDULE

FIGURES	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. A line						
b. A circle						
c. A Square						
d. A cross						
c. A triangle						
d. Two dots						

SECTION F: PICTURE IDENTIFICATION

47 Lay before the child the sheet of paper with pictures (see appendix 1d) and say to the child, here are some pictures, look at them carefully and tell me in each case what it is.

OBSERVATION SCHEDULE

OBJECTS	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. Ball						
b. Dog						
c. Cock/Fowl						
d. Sun						
e. Shoe						
f. Table						
g. Rain						
h. Tree						
i.Umbrella						
j. Pot						
k. Nails						
l. Orange						
m. Car						
n. Fish						

SECTION G: PRE -READING SKILLS/ CONCEPT ABOUT PRINT

Hold the book in such a way that the child can see the cover page and the back at the same time. And say to the child, I want to read to you this short story (see appendix 1e).

48. i) Show me from which part of the book I should begin to read from?
    a) front part
    b) back part

    ii) Say *to the child now, we begin and I want you to help me a little.* What do you think is this word. Point to the following words:
    a) Football i. able ii. not able
    b) Plays i. able ii. not able
    c) Kofi i able ii. not able

    iii) *Turn to page 2/3 and ask* where do I begin to read, with the text or picture?
    a) text
    b) picture

49. a) Show me where I have to exactly begin to read.
    i. Left top corner
    ii Any other position please indicate
    b) Where do I go from there?
    i.) Left to write movement
    ii) Any other please indicate .....
    c) And when I come to the end of the line where do I continue?
    i) Next line
    ii) Any other please indicate .....

d) *Turn to page 4/5.* What do you see wrong with the words on page 4?
i) points to aaaaa
ii) any other please indicate .....
e) Where can I start to read?
a Left page
b Right page
f) Try to follow with your finger as I read
Read naturally but with short pauses
Is the child able to follow word for word with his/her finger?
i) Yes
ii) No
Turn to page 6/7. First read the text and then ask the following questions
g) From the picture show me the bottom of the hill.
i). able
ii) not able
h) Show me the word hilltop.
i). able
ii) not able

50.a. Is there anything wrong with the printed text here?
i) Yes ii) No.
b. If yes what exactly is it?
i. Mixing lower and upper cases
ii. Any other please indicate

Turn to page 8 and ask the following questions
c) What do you find wrong with the writing?
i. No spacing between words
ii. Any other please indicate.....
.....
.....
.....

PART THREE

SECTION H: FUNCTIONAL ITEMS

Say to the child. I am happy that you have come back for us to continue with our discussion.

51. Do you like coming to school?
    a) Yes ..... b) No .....

52. If yes why? (Give reasons)
    a. Positive
    b. Negative

53. If no why? (Give reasons)
    a. Positive
    b. Negative

52. How do you find school today?
    a) Positive
    b) Negative

55. How do you come to school?
    a. Walking alone
    b. Walking with sibling or accompanied by sibling or parent
    c. With public transport
    d. With private car

56. Is your house far or near from school?
    a. Far
    b. Near
    c. Any other please state

57. What is your teacher's name?
    a. Full name
    b. Partial name
    c. Not able

58. What class are you in?
    a. Able
    b. Not able

SECTION I: CONCEPT ABOUT TIME

59. a) Ask *the child to tell you how he or she spends the day stating the time element. e.g. wake up at 6 o'clock'*
    i). Able with time element
    ii). Routine without time element
    iii). Not able

    b) Place *before the child pictures showing examples of activities on how a typical day is spent (see appendix 1f) and ask the child to arrange them in an orderly manner.*

    i) Full response
    ii) Partial response
    iii) No response

60. a) *Show him/her the pictures (see appendix 1g.) and ask, at what time do you do this, pointing to a picture and so on. (Pictures on Life Span)*
    i) Full response
    ii) Partial response
    iii) No response

    b) If the child encounters difficulties place the pictures before him/her and ask him/her to arrange them according to his/her activities in the day. Starting from the earliest to the latest.
    i) Full response
    ii) Partial response
    iii) No response

61. What is today's date?
    a. able
    b. not able

62. Which day is today?
    a. able
    b. Not able

63. Which other days do we have in the week? (Please mention them) Note let the child give the names in both the local language and then in English.

OBSERVATION SCHEDULE

NAME OF WEEK	a RES. IN LOCAL LANG.		b RES. IN ENGLISH	
a. Monday	i) able	ii) not able	i) able	ii) not able
b. Tuesday	i) able	ii) not able	i) able	ii) not able
c. Wednesday	i) able	ii) not able	i) able	ii) not able
d. Thursday	i) able	ii) not able	i) able	ii) not ale
e. Friday	i) able	ii) not able	i) able	ii) not able
f. Saturday	i) able	ii) not able	i) able	ii) not able
g. Sunday	i) able	ii) not able	i) able	ii) not able

64. Which days do you not go to school?
    a). able
    b). not able

65. Which day begins the school week?
    a). able
    b). not able

66. How many days do we have in the week?
    a). able
    b). not able

67. In which month are we?
    a). able
    b). not able

68. How many months do we have in a year?
    a). able
    b). not able

69. Please mention the month of the year you know of
    a. 1 - 3
    b). 4 - 6
    c). 7 - 9
    d). 10-12
    e). None

70. Do you know how to read the time from the clock?
    a) Yes ..... b) No.....

71. What is the time now?
    a). able
    b). not able

72. When does school begin?
    a). able
    b). not able

73. When do you close from school?
    a). able
    b). not able

74. When do you sleep?
    a). able
    b). not able

75. When do you wake up?
    a). able
    b). not able

SECTION J : EXPERIENCE WITH HEIGHT

Using the blocks provided build a tower of a maximum of 4 blocks and two other shorter ones of 3 and two pieces each such that all the three will be of different heights. Give a maximum of 12 blocks to the child. Demonstrate to the child how you build yours.
76. Ask the child to build his/ hers just the way you have built yours.

OBSERVATION SCHEDULE

QUES-TIONS	CHILD'S RES.	RIGHT	WRONG	NO RES.	SCORE	COM-MENT
a. Which is the highest						
b. Which is the lowest?						
c. Try to make all of equal height						
d. How does the child build?						
e. Which strategy does the child adopt to achieve equal heights						
f. Does the child adopt the same no. as you did in each tower?						
g. How many towers does the child build?						
h. Are they of different heights?						

SECTION K : EXPERIENCE WITH MONEY

77. Have you already gone to the market alone to buy something?
    a). Yes..... b). No.....

78. Do you often go to buy things?.....

79. Are you given money to come to school ?
    a). Yes..... b). No.....

80. How much are you given? .....

81. What do you do with the money ?
    a). Food
    b). Drinks
    c). Sweets
    d). Any other please state.....

Place before the child some currency, they could be coins s e.g. c100, 6 c10 coins, 6 c20 coins, 3 c50coins and ask the following questions:

82. Which of them is more? .....

83. With which can one buy more things?.....

84. How many c10 coins make one c50?.....

85. Give me as much c50 that make c100.....

SECTION L : BASIC ADDITION AND SUBTRACTION

86. *Play a game of hide and seek where e.g. pebbles are hidden in the palms and children seek to find how many one has in a palm at any time of the palms are presented. First show the child the number of coins or pebbles you have altogether and then hide some in one palm and show the other palm. The child is supposed to indicate how many there are in the closed palm. E.g. you show the child 3 coins or pebbles. You hide 2 in the closed palm and show 1 in the other palm. The child is expected to indicate the no. of pebbles in the closed palm. The variation in this game will proceed as follows:*

OBSERVATION SCHEDULE

NO. OF COINS	CLOSED HAND	OPEN HAND	CHILD'S RES.	RIGHT	WRONG	COM-MENT
3 (a) i.	2	1				
ii.	3	0				
iii	1	2				
iv	0	3				
5 (b) i.	3	2				
ii.	4	1				
iii.	2	3				
iv	0	5				
v	1	4				
vi	5	0				
7 (c) i	1	6				
ii	4	3				
iii	5	2				
iv	7	0				
v	6	1				
vi	0	7				
vii	3	4				
viii	2	5				
10 (d)i	5	5				
ii	10	0				
iii	4	6				
iv	0	10				

SECTION M : ENGLISH LANGUAGE STAND/ABILITY

In this section the child is supposed to exhibit his/her grasp over the English Language. Thus it is expected that the interaction will be carried out in English. Say to the child I have here something for you to play with. Show the puppets. I want us to play together with the puppets so take one and I will show you how we are going to play together. When the child makes a mistake correct him/her and observe whether the child learns to correct himself/herself with time. Demonstrate to the child how the puppets are to be used in the play then proceed as follows: *If the child is able to perform any of the activities make an (x) mark by it, if not (circle) it unless otherwise stated. Let the two puppets greet each other.*

87. a) I can only speak English do you understand me?
i). Yes ..... ii). No .....
b) What is your name? .
i). able
ii). not able
c) Where do you live?
i). able
ii). not able
d). Where do you come from? .....
i). able
ii). not able
e). What is the name of your school?.....
i). able
ii). not able
f). comments
i). positive
ii). negative

88. Say to the other puppet I want to know whether you can do the following:
a). Lie down
i). Able
ii). Not able
b). Laugh
i). Able
ii). Not able
c). Dance
i). Able
ii). Not able
d). Fly
i). Able
ii). Not able
e). Hit the table
i). Able
ii). Not able
f). Stretch your hand
i). Able
ii). Not able
g). Comments
i). Positive
ii). Negative

Note: When the child's puppet cannot do any of the above activities show him/her what to do and indicate in your comments.

89. Say to the child my puppet will perform certain actions and your puppet will have to tell me what mine did. Let your puppet do the following: (for each activity ask 'what am I doing?')
a). Sleep
i). Able
ii). Not able
b). Sing
i). Able

ii). Not able
c). Read
i). Able
ii). Not able
d). Cry
i). Able
ii). Not able
e). Cough
i). Able
ii). Not able
f). Count
i). Able
ii). Not able
g). Fall down
i). Able
ii). Not able
h). Comments
i). Positive
ii). Negative

90. Let your puppet say to the child's puppet, now it is your turn can you do the following:
a). Dance and sing
i). Able
ii). Not able
b). Sleep after you have jumped
i). Able
ii). Not able
c). What do you do when somebody hits you?
i). Able
ii). Not able
d). Comments
i). Positive
ii). Negative

91. Let your puppet say to the child's puppet, now I want to know whether you remember what we did when we started. When necessary repeat the activities and ask 'what did I do,' after each activity. Encourage the child's puppet to form full sentences when answering
a). slept
i). Able
ii). Not able
b). danced
i). Able
ii). Not able
c). flew
i). Able
ii). Not able
d). fell down
i). Able
ii). Not able

e). laid down
i). Able
ii). Not able
f). coughed
i). Able
ii). Not able
g). counted
i). Able
ii). Not able
h). Comments
i). Positive
ii). Negative

92. Provide a box and tell the child's puppet to hide
a). in
i). Able
ii). Not able
b). behind
i). Able
ii). Not able
c). under and
i). Able
ii). Not able
d). beside the box.
i). Able
ii). Not able
e). Comments
i). Positive
ii). Negative

93. Let your puppet hide at the following places and ask the child 'where am I' Encourage the child to say 'You are.....' and add the position of your puppet.
a). on
i). Able
ii). Not able
b). in front of the box
i). Able
ii). Not able
c). between two boxes
i). Able
ii). Not able
d). inside the box
i). Able
ii). Not able
e). under the box
i). Able
ii). Not able
f). Comments
i). Positive
ii). Negative

PART FOUR

SECTION N : FUNCTIONAL ITEMS

Welcome the child back by mentioning his/her name and say; this is the last part of our discussion and I want you to do your best as you have done in the other three sessions. We will continue with our conversation and activities so relax and please tell me any time you think a question is not clear or you are not sure of what is required of you. Say further to the child; I will like you to tell me a little more about your home.

94. Which of the following types of accommodation do you have ?
a. Bungalow
b. Family house
c. Flat
d. Shared apartment
e. Other please specify

95. Do you have a radio at home ?
a. Yes ..... b. No .....

96. If yes do you listen to it ?
a. Yes ..... b. No .....

97. If yes, which programmes do you listen to ?

98. Do you have a television at home ?
a. Yes..... b. No .....

99. If yes do you watch it ?
a. Yes ..... b. NO ....

100. If yes which programmes do you watch ?
a) rest
b) entertainment
c) educative
d) children's programme
e) any other please state

101. Why do you watch these programmes ?
a) rest
b) entertainment
c) educative
d) children's programme
e) any other please state

SECTION O : SIMPLE PROPORTION

Place before the child pictures of Pairs of footwear e.g.
1 pair, 3 pairs and 6 pairs one after the other (see appendix 1 h). .
Assuming your friends came to visit you at home and
removed their footwear and placed them before the entrance
door how many children will be visiting in each of the following case.

102. Number of footwear
   a) 2 . i) able ..... ii) not able
   b) 6. i) able..... ii) not able
   c) 12 i) able ..... iii) not able

Place before the child pictures of feet that protrude from under a bed sheet or blanket (see appendix 1i) one after the other and ask the child how many children will be lying under the bed sheet or blanket.

103. Number of feet
   a) 2 i) able ..... ii) not able
   b) 4 .i) able..... ii) not able
   c) 10 i) able ..... ii) not able

SECTION P : COMPARING TIME

Please circle the response of the child and make a tick (✓) against the letter if the response is correct and a cross (x) against the letter if the response is wrong. Apply this technique for section P, Q, R & S

.

104. Which of these last longer?
   a) 1 minute or 1 hour
   b) 1 day or 5 hours
   c) 1 minute or 1 second
   d) 1 minute or 10 seconds
   e) 1 day or 1 week
   f) 1 day or 1 year

SECTION Q : COMPARISON WITH LENGTH / MASS

105. Which is longer ?
a) 1 cm. Or 1m.
b) 1 km. Or 5 km
c) 1 cm. Or 1mm.
d) 1km. Or 100m.
e) 50cm. Or 1m.

106. Which is longer?
   a) A ladle or a table spoon
   b) A piece of chalk or a new pencil
   c) A piece of chalk pencil or ruler?

107. Which is lighter?
a) A book or a pencil
b) A bicycle or a car
   c) A piece of chalk, paper or a book

SECTION R : EXPERIENCE WITH WEIGHT / DURATION

108. Which is heavier ?
   a) A tuber of yam or a stone of an equal size
   b) 10 groundnuts or 1 corncob
   c) A crayon, a chair or a school cupboard

109. Which of these actions last longer?
   a). Cleaning your teeth or taking your bath
   b) Reading a letter or writing a letter
   c) One hour in school or travelling to (mention the name of a known big town in the child's region or district).
   d) Opening a window or eating your food.

SECTION S : COMPARISON WITH SPEED / AREA

110. Which of these is faster?
   a) A dog or a human being
   b) A car or a bicycle
   c) A motor bicycle or an aeroplane

111. Which of these is slower?
   a) A human -being or a car
   b) A bicycle or an aeroplane
   c) A dog or a mouse
   d) A cat or a goat

112. Which is broader ?
   a) A table or a chair ?
   b) The classroom or a football field ?
   c) A classroom, football field or a chalkboard?

113. Which is shorter ?
   a) A tree or a flower ?
   b) A child or a grown-up ?
   c) A tree, grass or flower?

SECTION T: IDENTIFICATION OF NUMERALS AND THE LETTERS OF THE ALPHABET

Say to the child. I have here cards with numerals, letters of the alphabet, punctuation marks, geometric figures and other symbols. I want you to sort them out according to the instructions I give.

OBSERVATION SCHEDULE

OBSER-VATIONS	CHILD'S RES.	ABLE	NOT ABLE	NO RES.	SCORE	COM-MENT
114 Sort out all numerals						
115.Arrange them in serial order or which number comes first and which comes after						
116. Sort out all letters of the alphabet						
117. Mention the names of letters of alphabet you know of.						
118.Arrange the letters of the alphabets in a serial order						
119. Take away all the letters and ask the child to write any of the letters he /she knows						
120. Write as many numerals as you know						

SECTION. U : STORY RECONSTRUCTION

121. Say to the child I am a Ghanaian and speak (indicate the local language you speak). But I also speak good English. Do you want us to converse in (mention the local Language you speak which is familiar to the child) or you want us to communicate in English.

Underline the language the child chooses.

122. I want to know from you again which Language you speak better? English or your local Language? Or do you speak another Language? Please name it.

123. Which Language do you speak at home with the following?
   a) with your mother .....
   b) with your father .....
   c) with your brothers and sisters.....
   d) any other person who stays with you at home .....

124. Here are three sets of stories in pictures namely the a) Ladder, b)the Balloon and the c) Cake. (See appendices 1j, 1k & 1L). For each of the sets proceed as follows: Note, allow the child to choose the Language he/she can best express himself/ herself in.

   a) Place the pictures one after the other before the child and in each case let the child say what he/she sees or thinks is happening.
   b) Ask the child to arrange the pictures that it makes sense in terms of logical sequence.
   c) Ask the child to retell the story as he/she sees it

(A) OBSERVATION SCHEDULE

OBSERVATIONS	YES	NO	COMMENT
a. Is the child able to interpret the pictures appropriately?			
b. Is the child able to arrange the picture logically?			
c. Is the child able to retell story?			
d. What percentage - 100%			
- 75%			
- 50%			
- 25%			
- 0%			

(B) OBSERVATION SCHEDULE

OBSERVATIONS	YES	NO	COMMENT
a. Is the child able to interpret the pictures appropriately?			
b. Is the child able to arrange the picture logically?			
c. Is the child able to retell story?			
d. What percentage - 100%			
- 75%			
- 50			
- 25%			
- 0%			

(C) OBSERVATION SCHEDULE

OBSERVATIONS	YES	NO	COMMENT
a. Is the child able to interpret the pictures appropriately?			
b. Is the child able to arrange the picture logically?			
c. Is the child able to retell story?			
d. What percentage - 100%			
- 75%			
- 50%			
- 25%			
- 0%			

SECTION. V : IDENTIFICATION OF BASIC COLOURS

125. *Place before the child objects e.g. cards with different colours and proceed as follows:*

i) Please sort out the cards into different colours

ii) Point to a colour and ask, which colour is this?

iii) Mention a colour and let the child identify by showing or pointing out.

OBSERVATION SCHEDULE

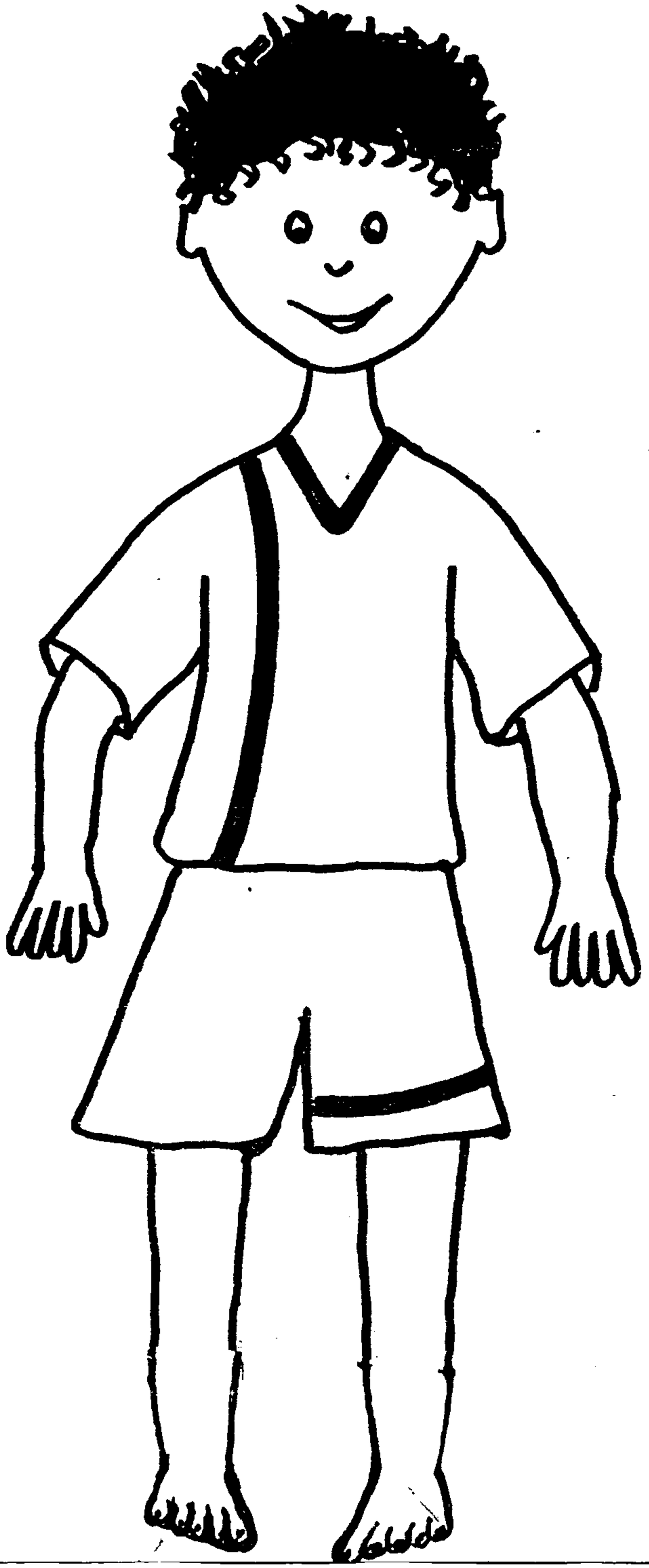
OBSERVATIONS	YES	NO	COMMENT
a)Sorted out without help			
b)Sorted out with help			
c)Naming the colours			
d)Identification after naming			
e)Not able to			

SECTION W : IMITATION OF RHYTHM

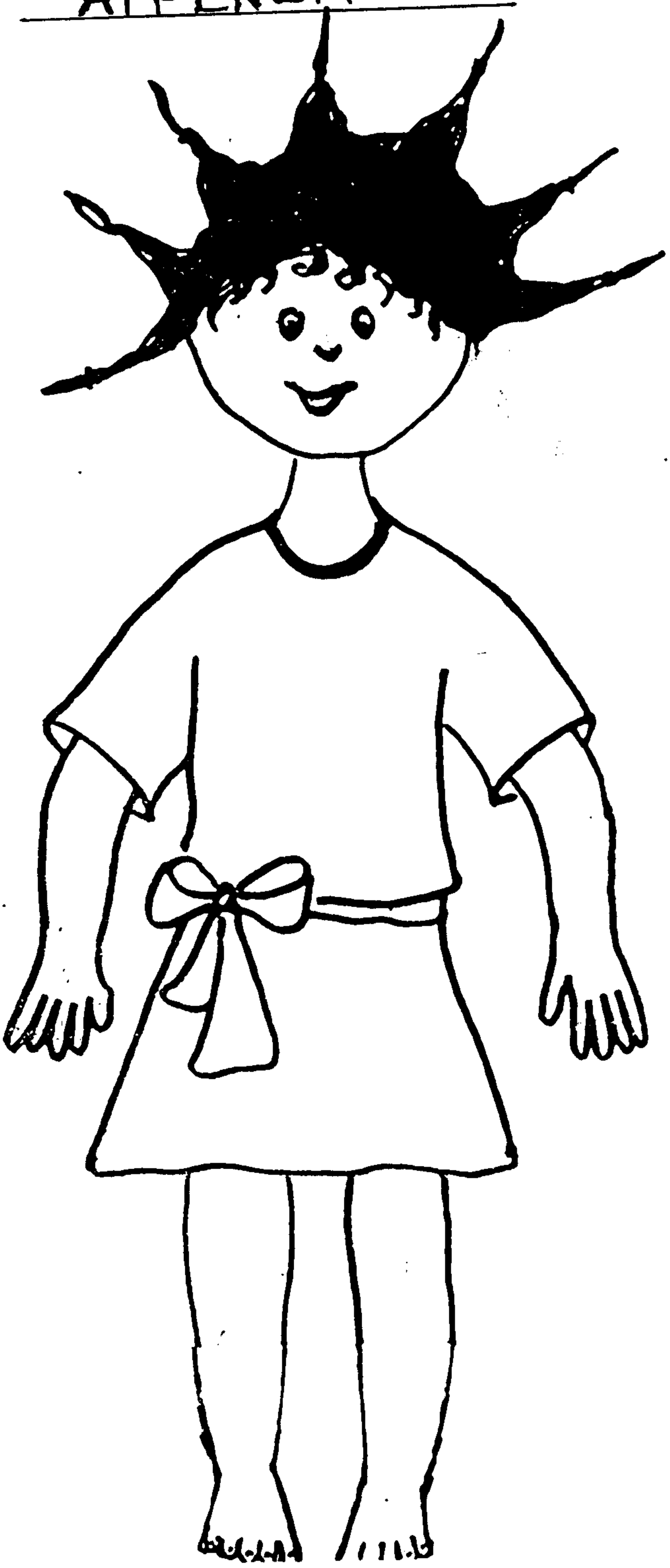
126. Say to the child I am going to play some drums for you. Please listen and watch carefully and then imitate what I do. Consult the Assessor's manual for the variations.

a. one beat at a constant pace
b. double beat at a varying pace
c. triple beat at a varying pace
d. quadruple beat at a varying pace

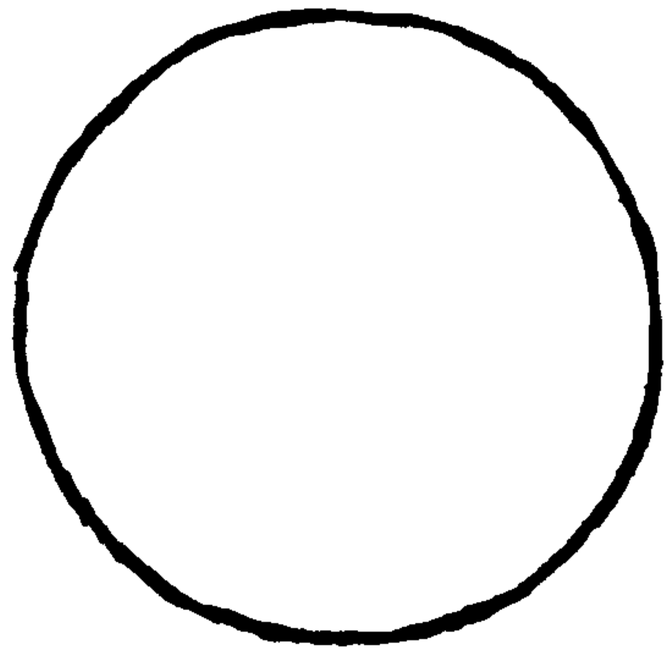
APPENDIX 1a

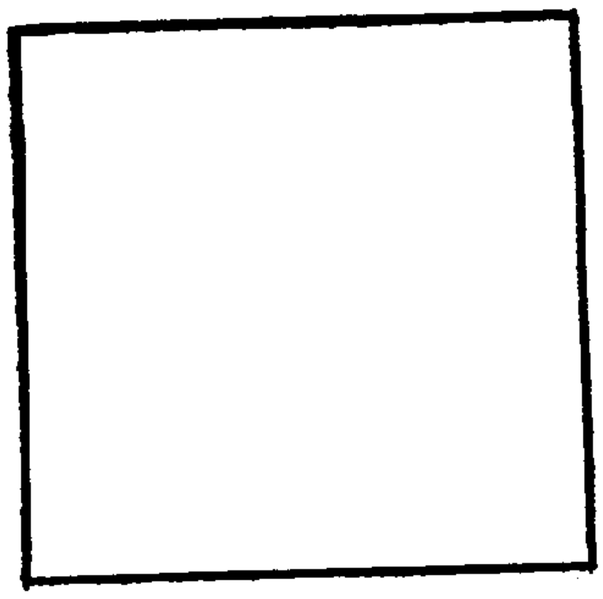


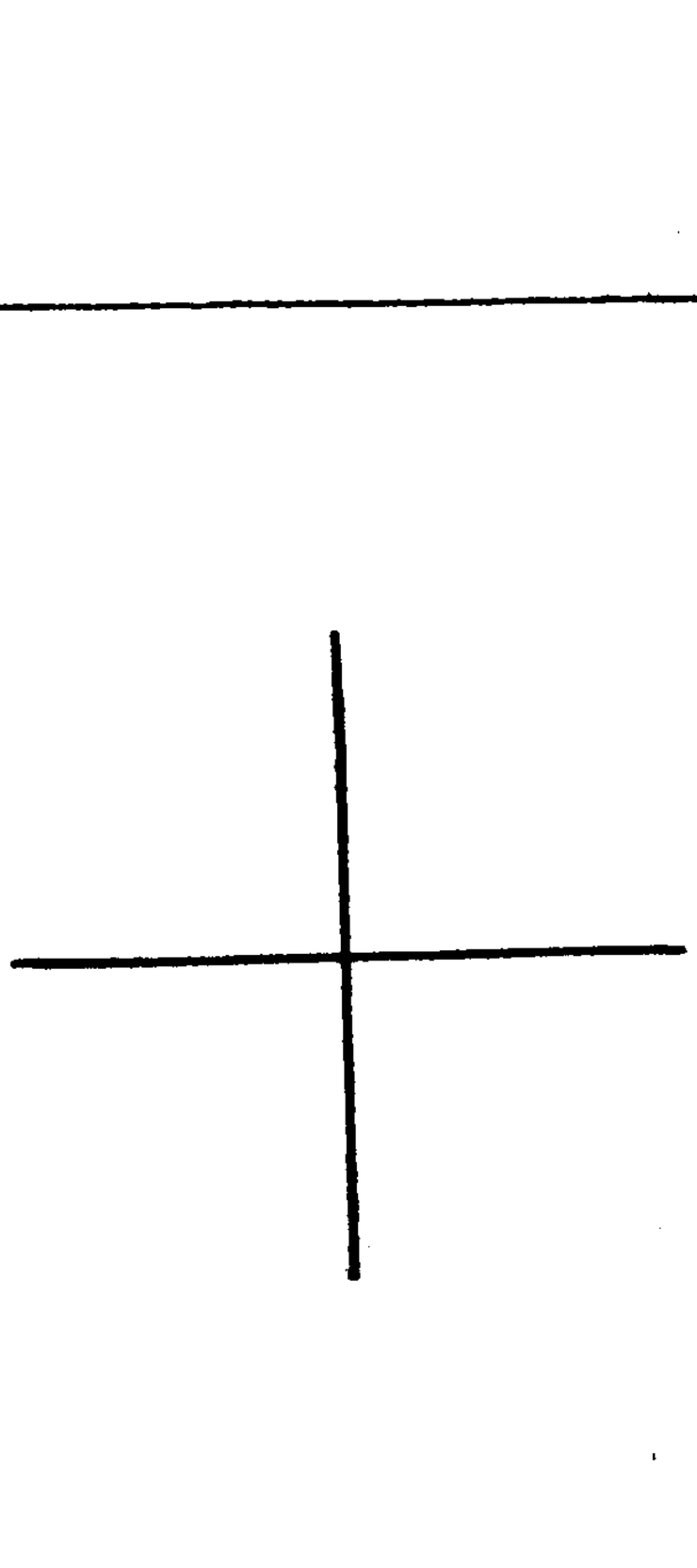
APPENDIX 1b

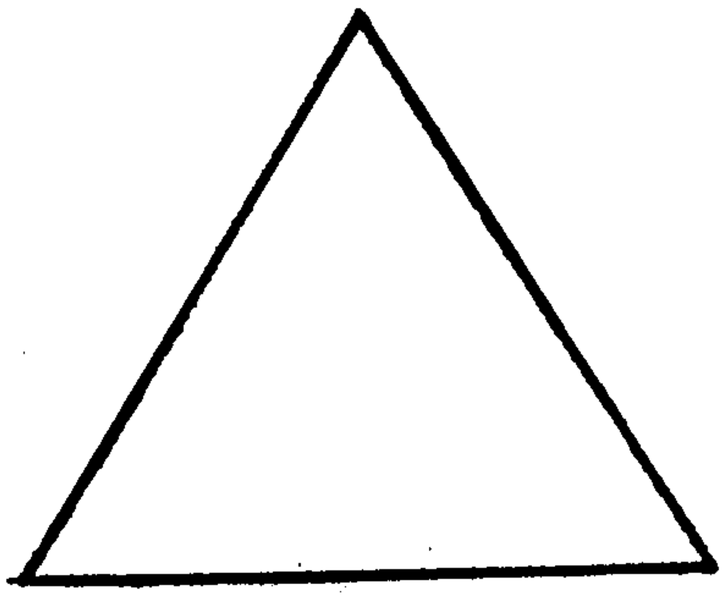


APPENDIX 1c



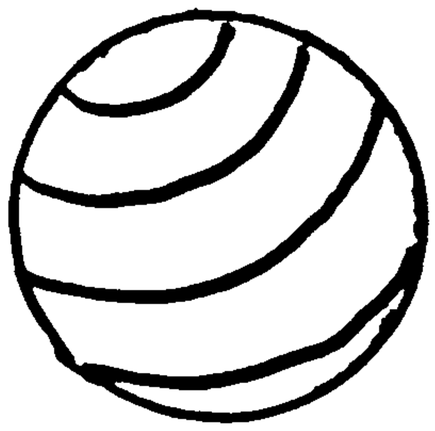


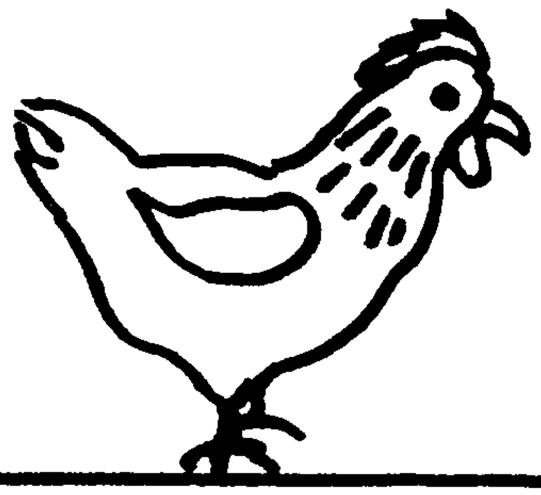


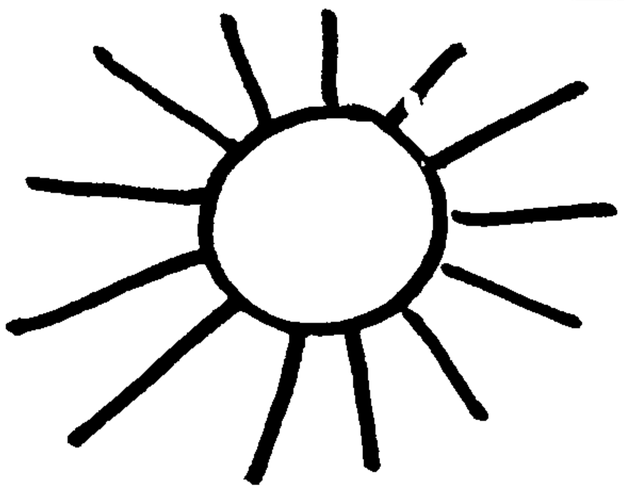


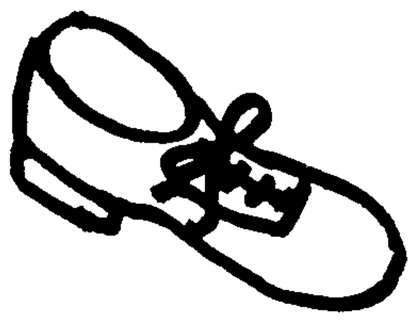
(i)

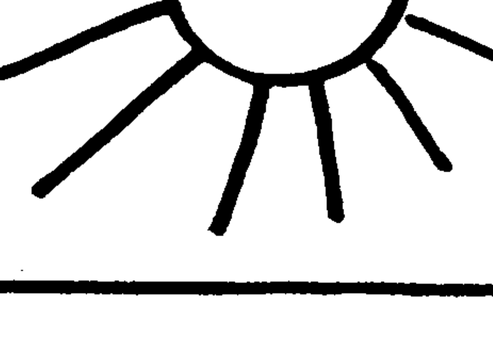
APPENDIX 1 d











APPENDIX 1e

1

Kofi plays football.

2

That is a

big football,

says Kofi.

(ii)

APPENDIX Ie

3

4

He kicks the stone with full force.

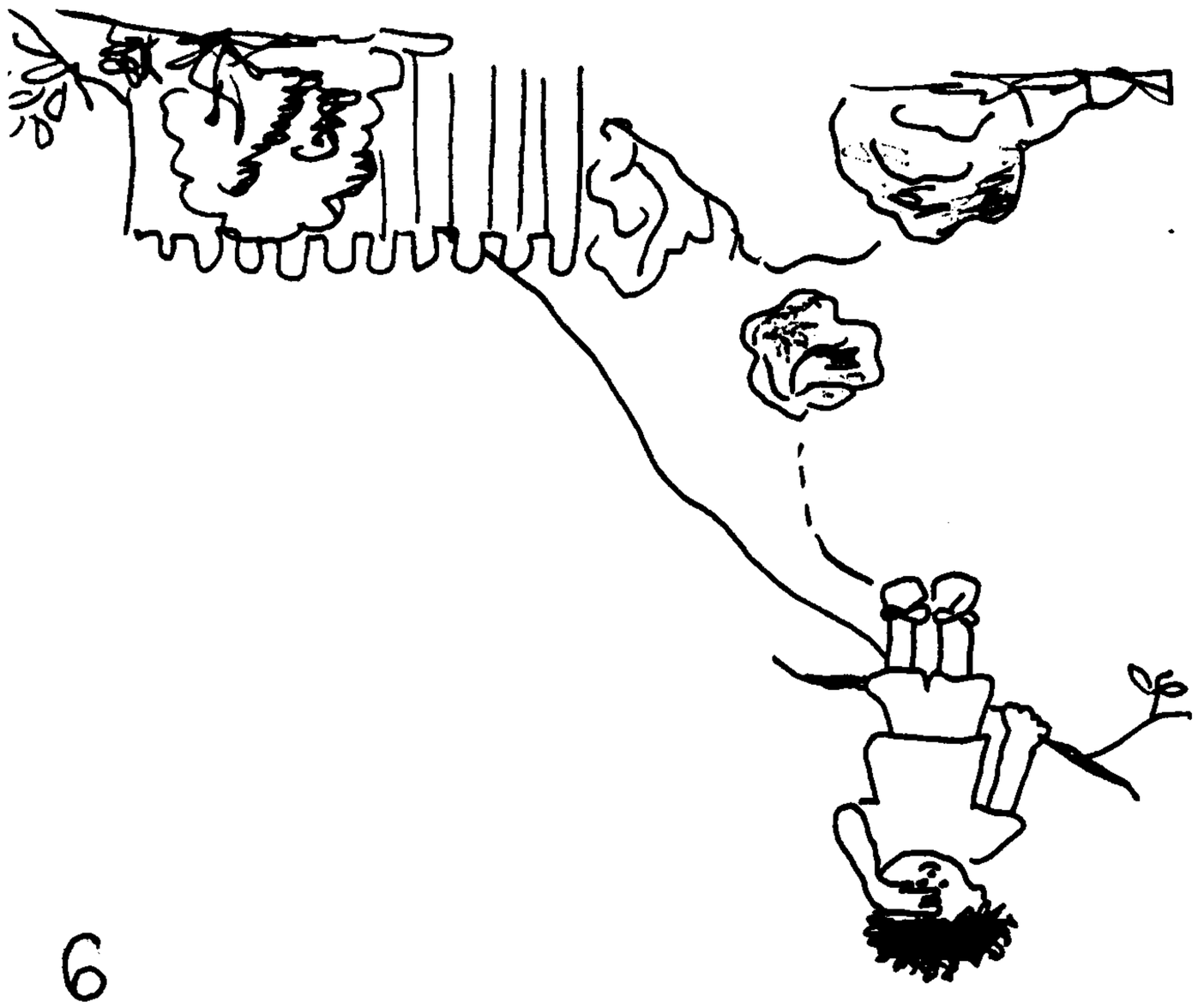
aaaaaaaaaaaaaaaaa

(iii)

APPENDIX 1e

5

See how
the stone flies.



6

APPENDIX Ie

7

KoFI sTaNDs aT

tHe hILtOp aNd

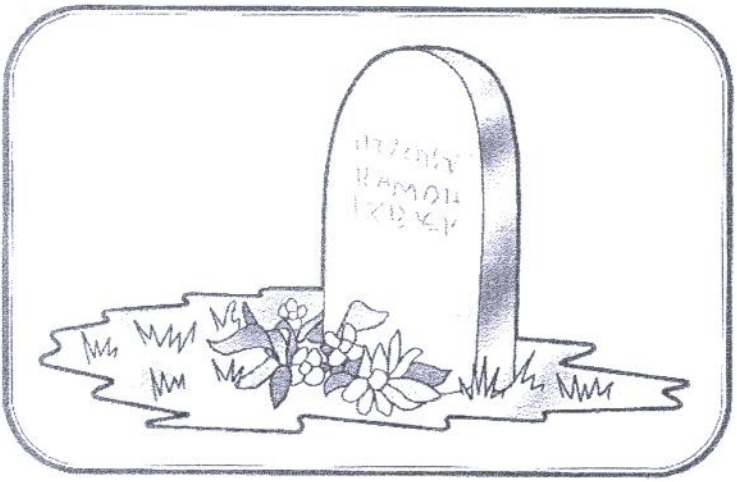
waTcHEs.

8

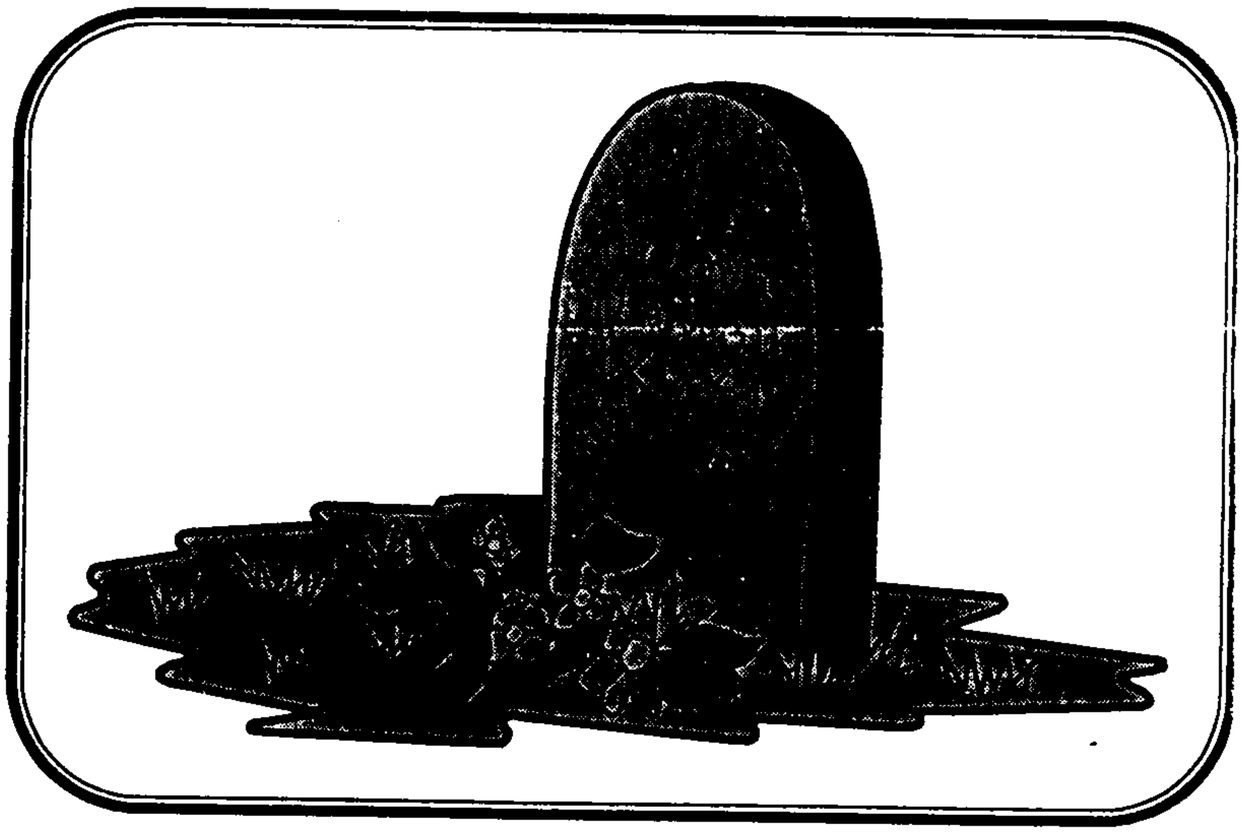
Ihopethe

thestonedoes

nothitanybody.

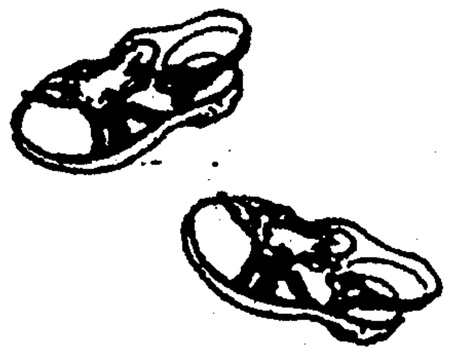


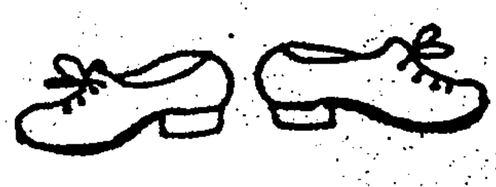
APPENDIX 19

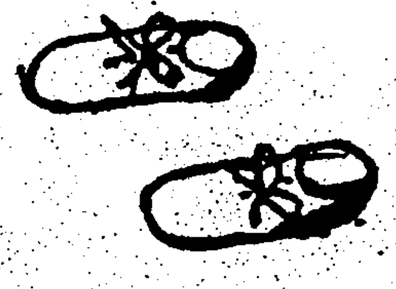


APPENDIX 1h

a)

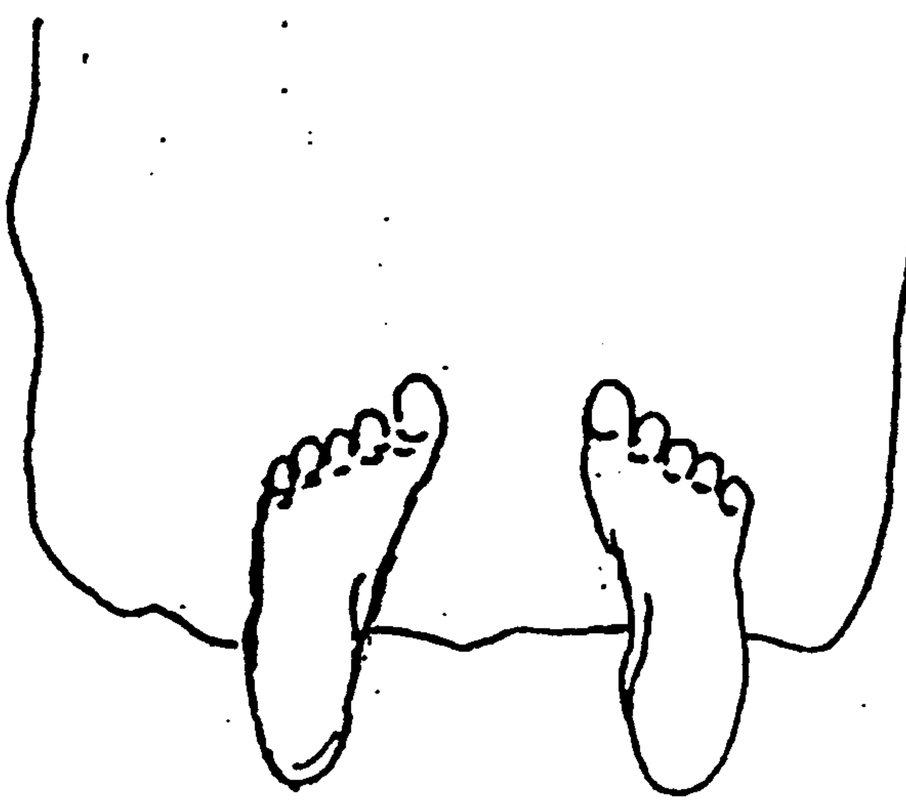






APPENDIX II

a)



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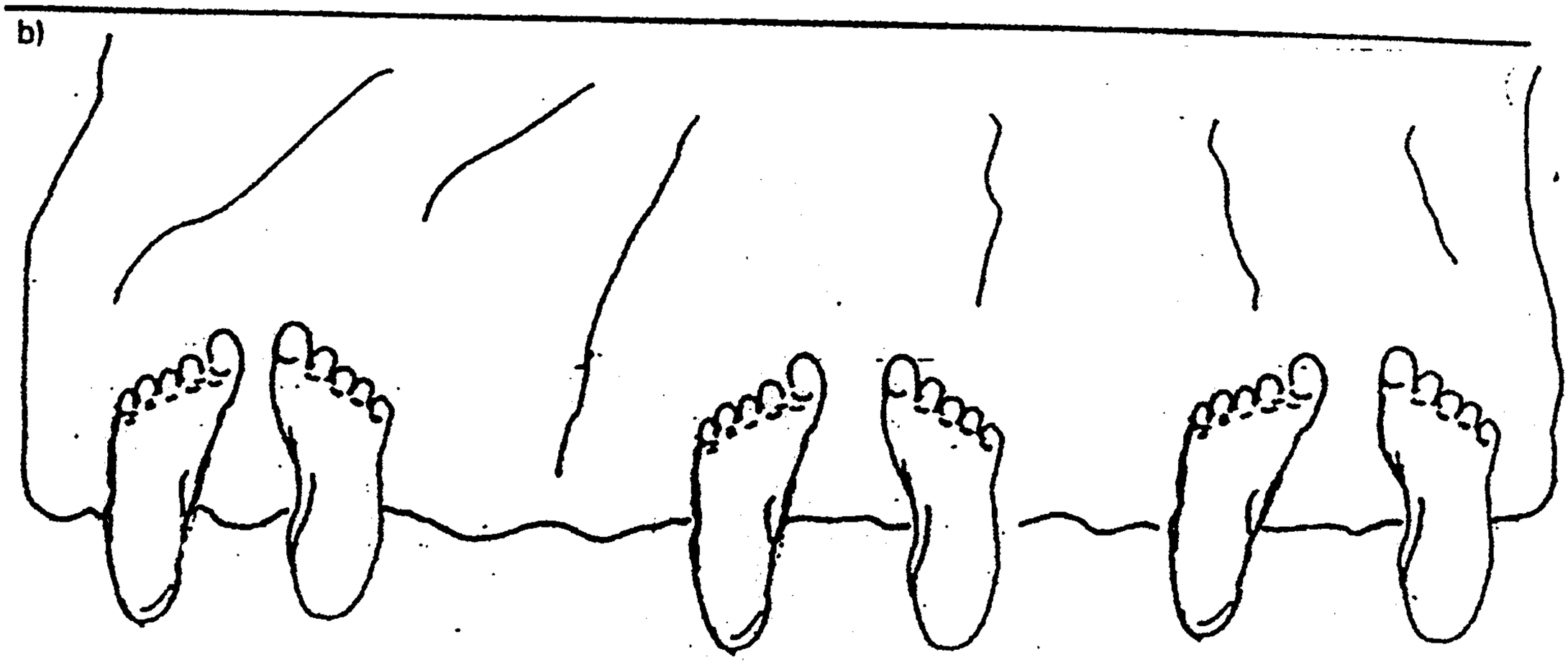

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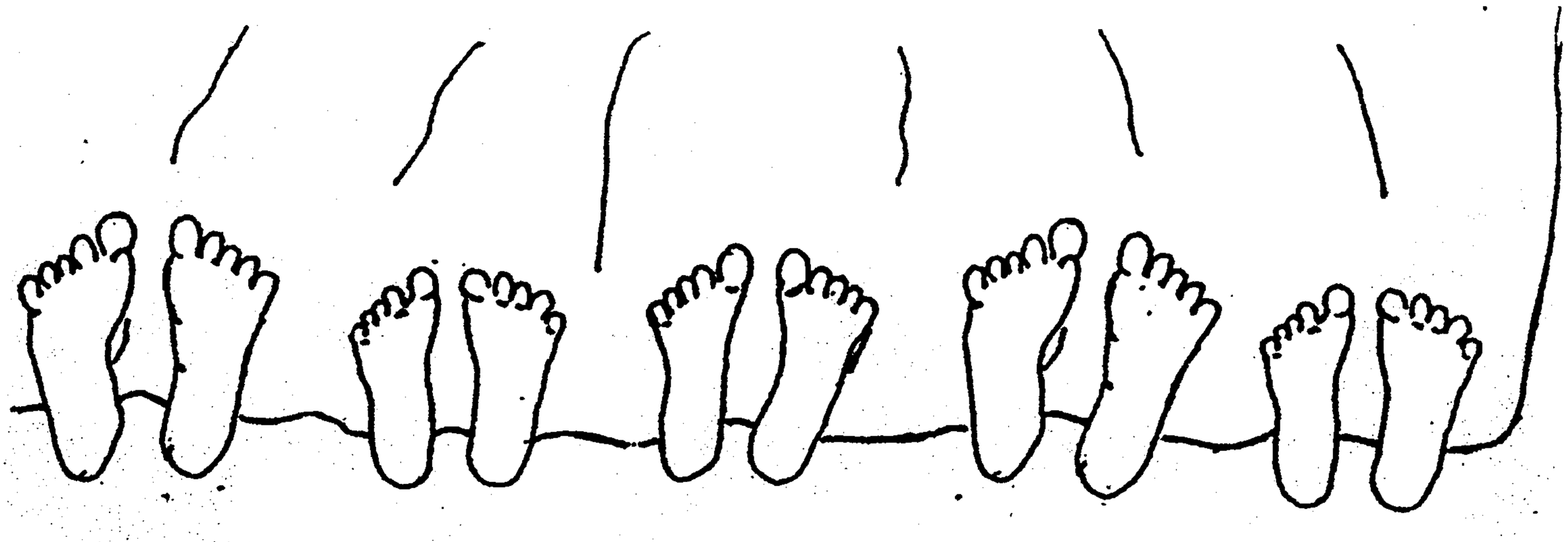
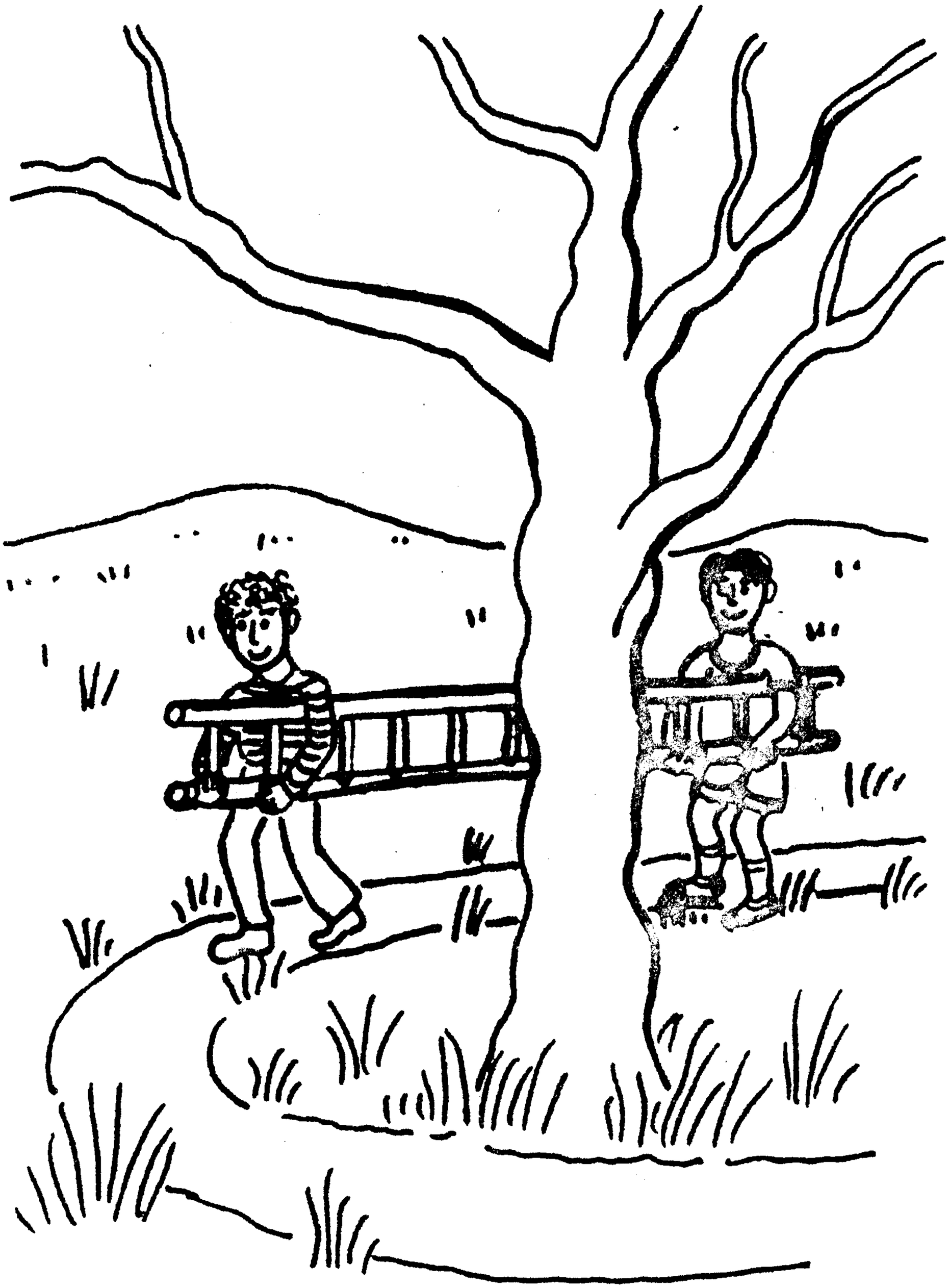


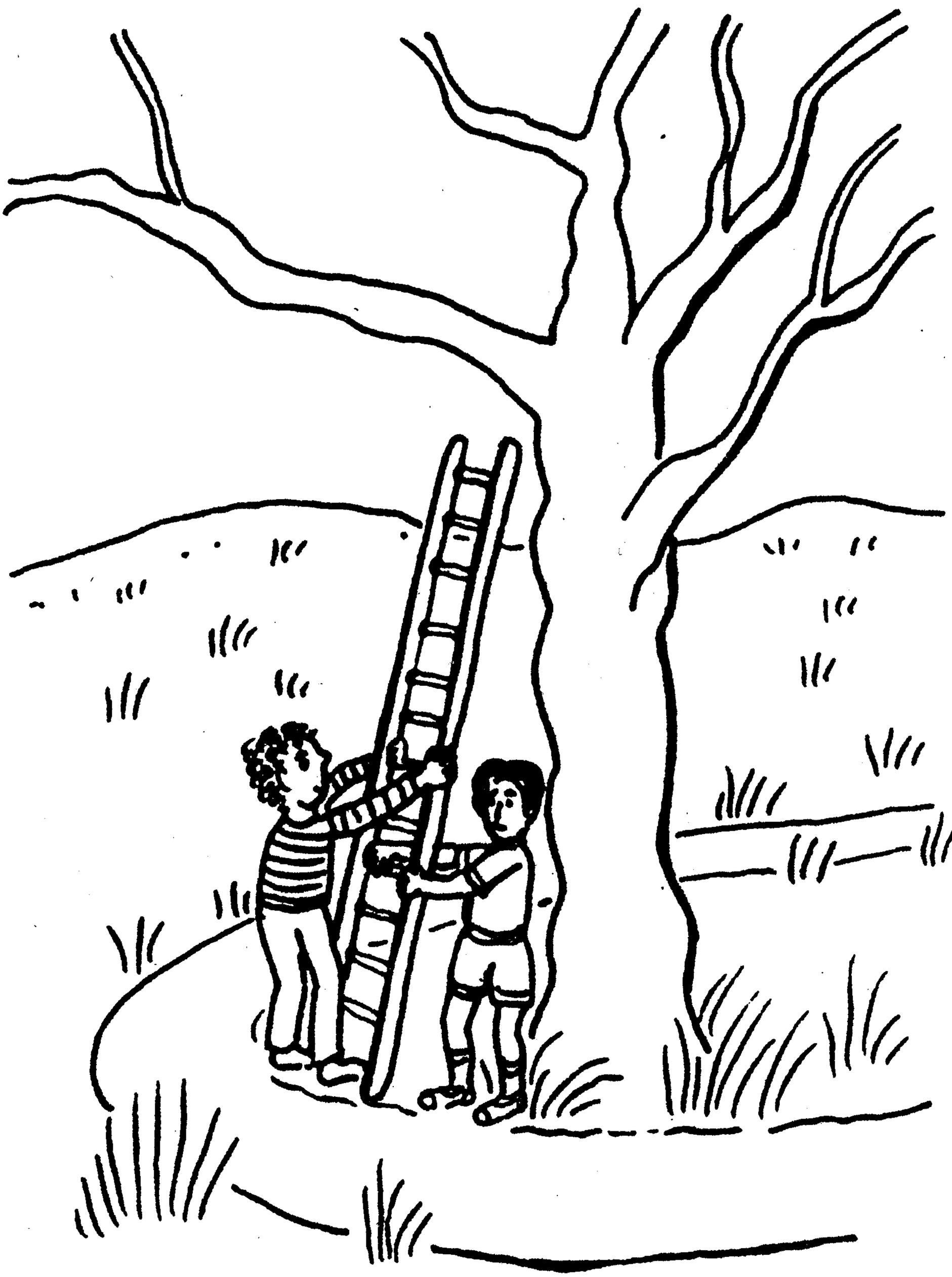
(j)

APPENDIX 1j



APPENDIX 1j

(ii)



(iii)

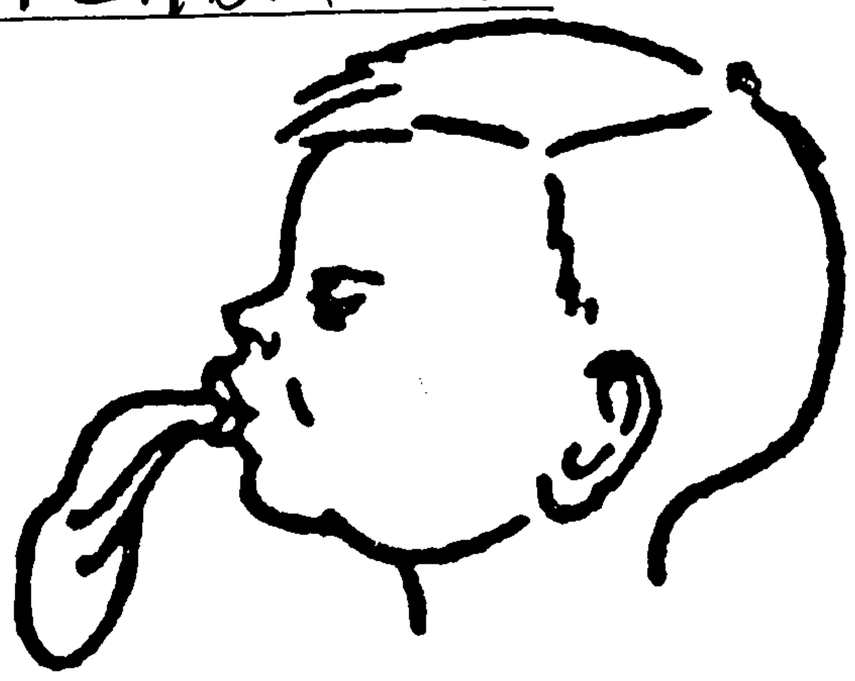
APPENDIX 1j

(iv)

APPENDIX 1j

APPENDIX 1K

(i)



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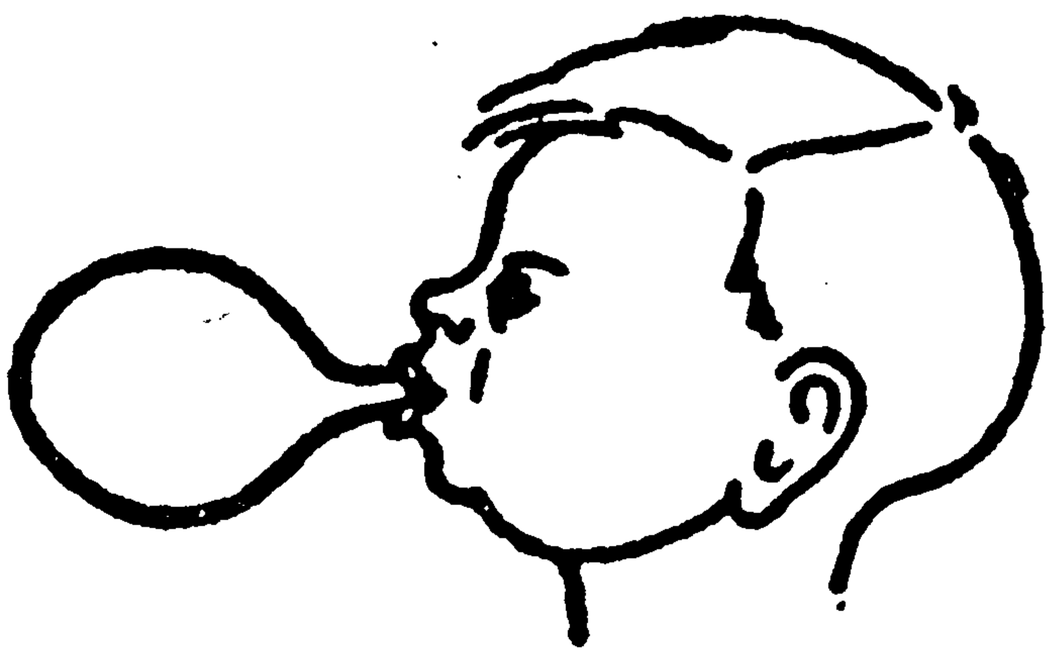

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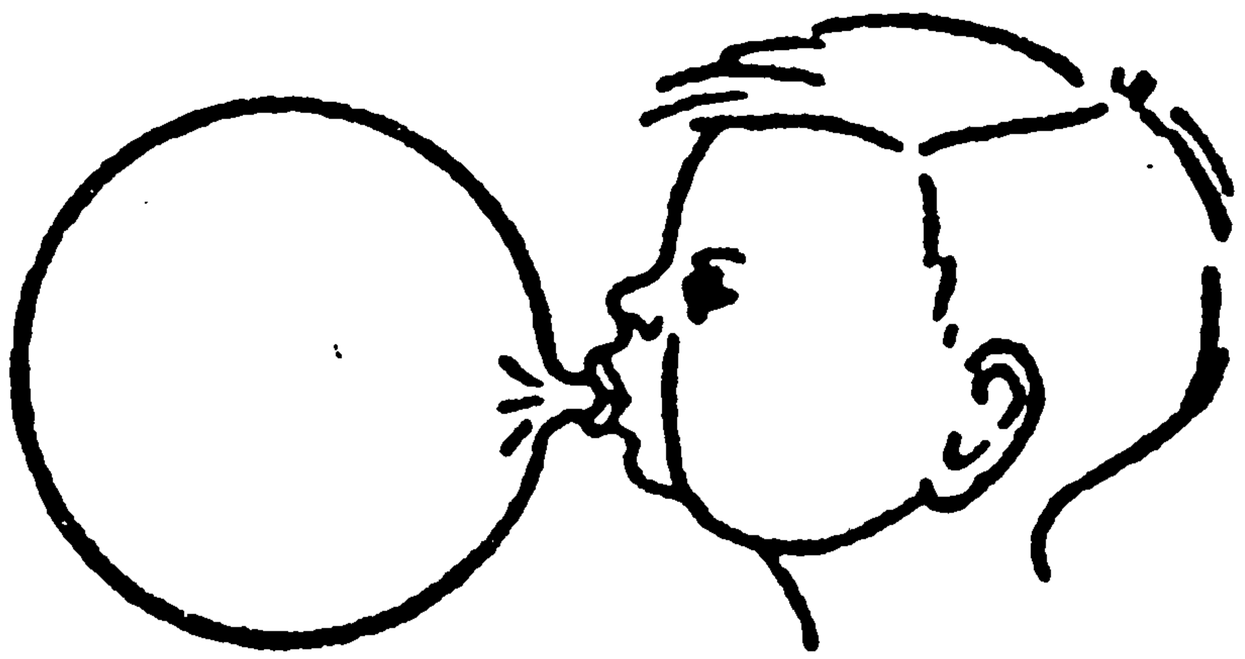

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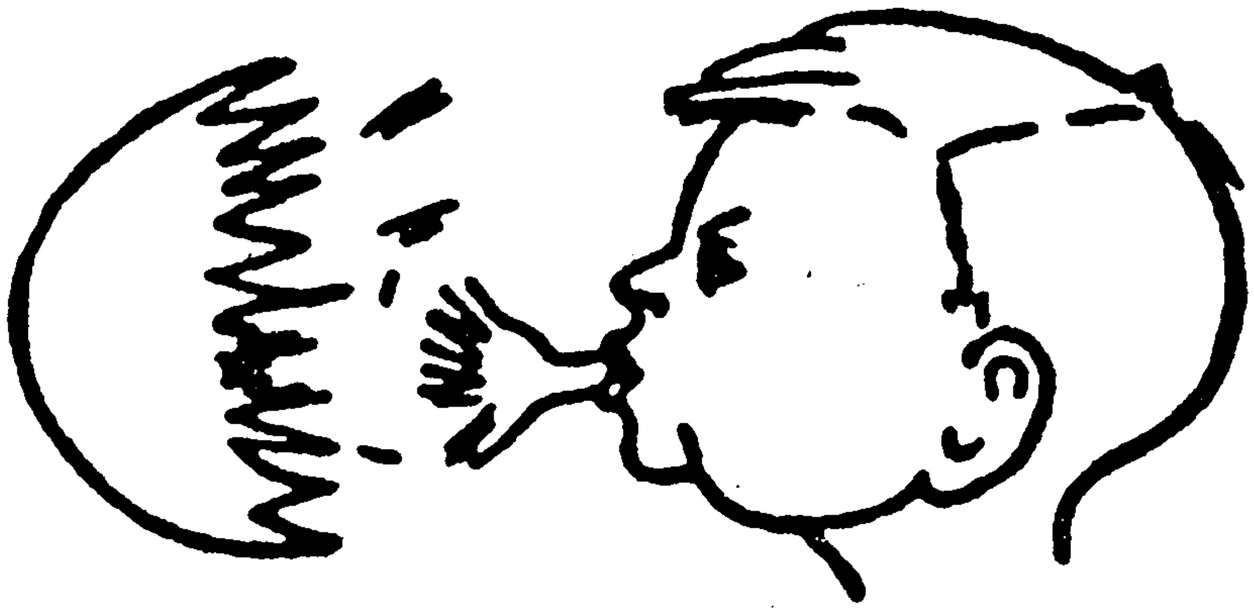
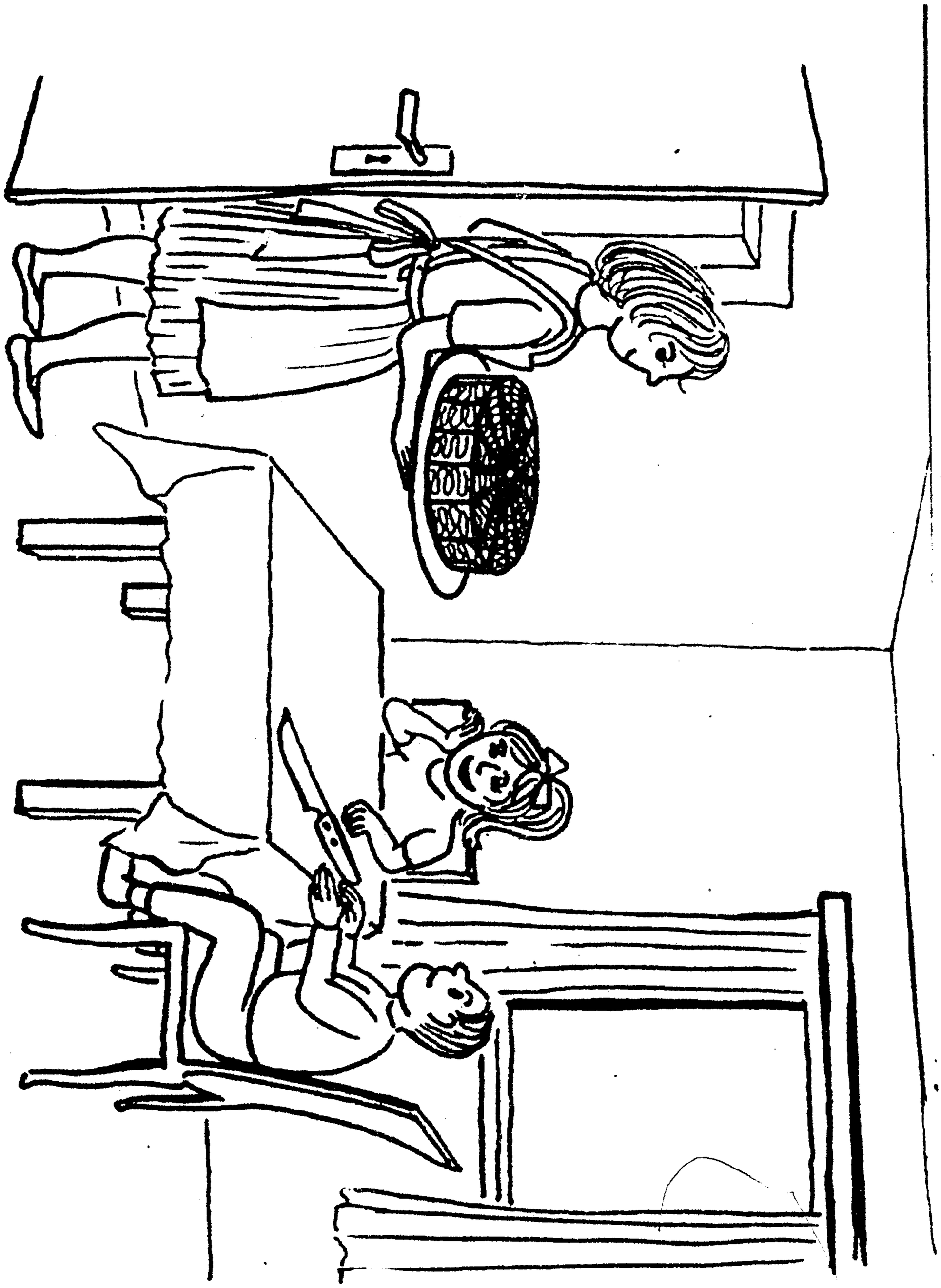
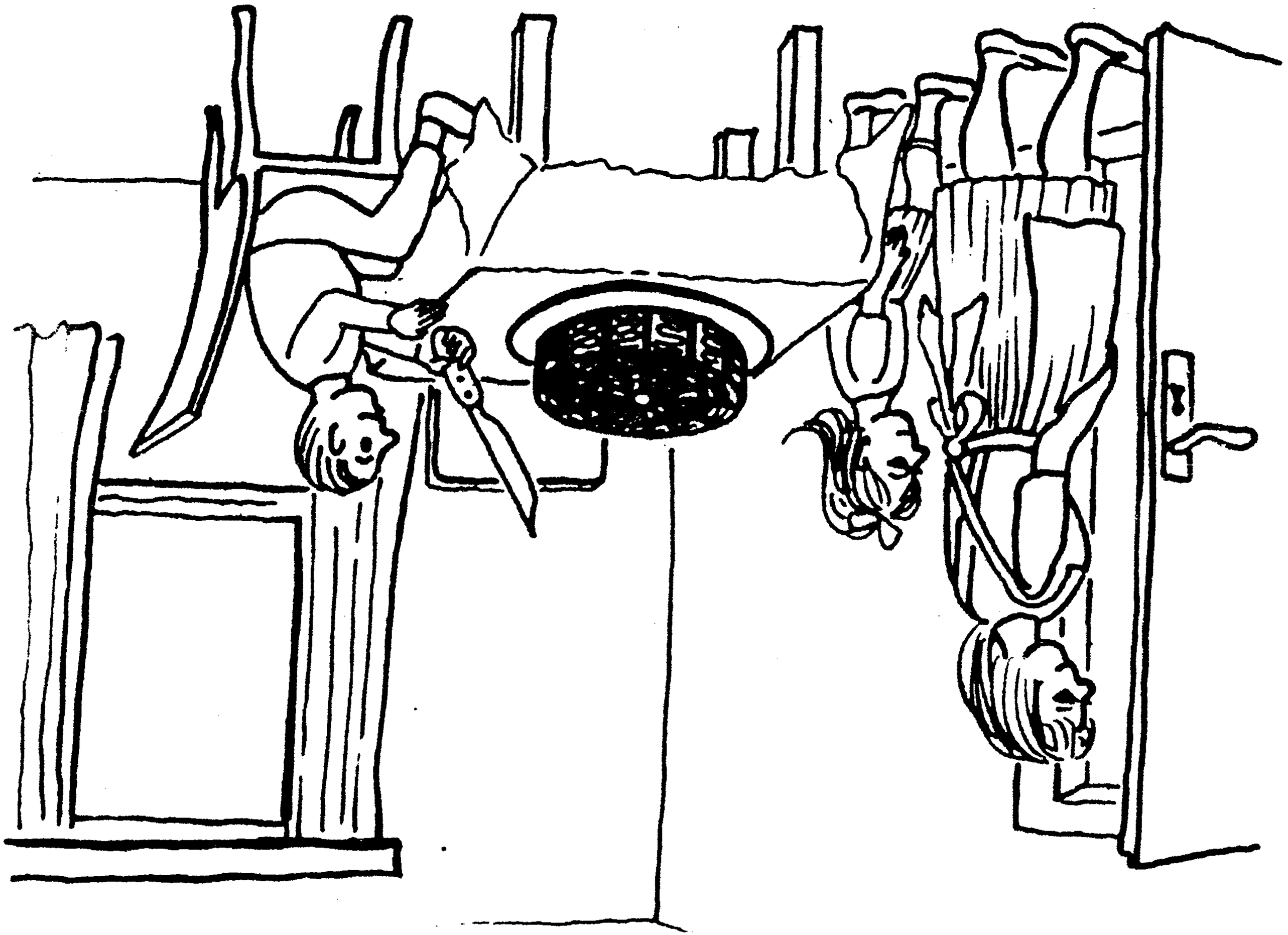


APPENDIX 16

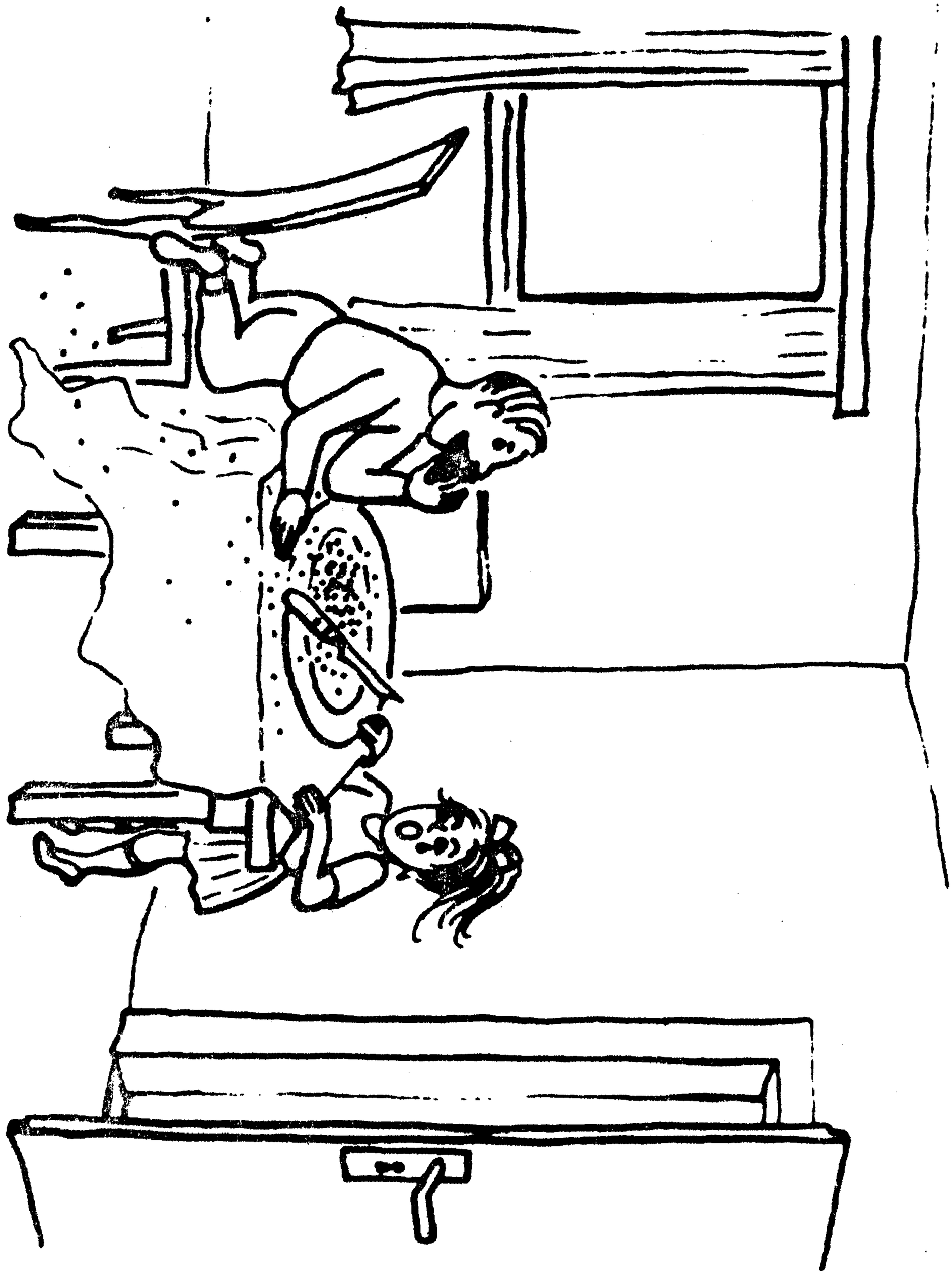
(i)





(iv)

APPENDIX IL



APPENDIX 2

ABIMUS PERFORMANCE RATING SCHEDULE FOR TEACHERS

FOCUS: This instrument has been designed to assist the researcher identity the teaching styles of Ghanaian primary one teachers with the view to assessing the inherent weaknesses and strengths to enable the researcher plan relevant intervention approaches.

SCORING: A five point scale is used in which 4 is outstanding, 3 is satisfactory, 2 needs improvement, 1 is unsatisfactory and 0 is absence of competency.

A. PRELIMINARY DATA

1. School:
2. Activity:
3. Assessor/observer:
4. Date:
5. Time:
6. Place:

B. BASIC COMPETENCIES	**4**	**3**	**2**	**1**	**0**
The teaching performance indicates the following:					
7. Knowledge of subject area.	-	-	-	-	-
8. Interest and enthusiasm for the pupil.	-	-	-	-	-
9. knowledge of current developments in the area.	-	-	-	-	-
10. Genuine concern for the welfare of pupil.	-	-	-	-	-
11. Understanding of students.	-	-	-	-	-
12. Others (please list)					
----- ---- ---- ----- ----------	-	-	-	-	-
----- ---- ---- ---- ----------	-	-	-	-	-
----- ---- ----- ---- ----------	-	-	-	-	-

13. Observers remarks

B. INSTRUCTIONAL SKILLS AND TECHNIQUES	**4**	**3**	**2**	**1**	**0**
Teacher performance and /or pupil behaviour are indicative of effective:					
14. Planning for instruction.	-	-	-	-	-
15. Organisation of learning activity.	-	-	-	-	-

16. Adapting lesson to meet individual needs and levels.	-	-	-	-	-
17. Captivating and relevant introduction.	**4**	**3**	**2**	**1**	**0**
18. Linkage of introduction to topic.	-	-	-	-	-
19. Ability to motivate pupils.	-	-	-	-	-
20. Ability to sustain interest of pupil.	-	-	-	-	-
21. Use of varied methodologies.	-	-	-	-	-
22. Questioning skills.	-	-	-	-	-
23. Pupil participation in lessons.	-	-	-	-	-
24. Assignment making skills.	-	-	-	-	-
25. Techniques for assessment.	-	-	-	-	-
26. Provisions and utilisation of instructional materials.	-	-	-	-	-
27. Tolerance for pupil's point of view.	-	-	-	-	-
28. Poise and confidence by the teacher.	-	-	-	-	-
29. Others (please list)					
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-

30. Observer remarks:

C. CLASSROOM MANAGEMENT SKILLS	**4**	**3**	**2**	**1**	**0**
Teacher performance, pupil behaviours and observed instructional setting reflect effective:					
31. Pupil control.	-	-	-	-	-
32. Maintenance of an attractive instructional setting.	-	-	-	-	-
33. Appropriate group work.	-	-	-	-	-

34. Individual attention.	-	-	-	-	-
35. Others (please list)	**4**	**3**	**2**	**1**	**0**
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-

36. Observer remarks

D. PERSONAL CHARACTERISTICS

Teacher behaviour typically reflects:	**4**	**3**	**2**	**1**	**0**
37. Ability to relate to pupils.	-	-	-	-	-
38. Maturity of Professional judgement.	-	-	-	-	-
39. Mature sense of humour.	-	-	-	-	-
40. Interest and commitment to education.	-	-	-	-	-
41. Willingness to accept criticism.	-	-	-	-	-
42. Receptiveness to new ideas.	-	-	-	-	-
43. Willingness to work co-operatively with others.	-	-	-	-	-
44. Effective and acceptable communication skills.	-	-	-	-	-
45. Punctuality and dependability.	-	-	-	-	-
46. Appropriate leadership capabilities.	-	-	-	-	-
47. Others (please list)					
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-
----------	-	-	-	-	-

48. Observer remarks

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49. Summary of Major Strengths

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50. Areas of Improvement

APPENDIX 3

ABIMUS SELECTED TARGETS FOR TEACHERS CLASSROOM ACHIEVEMENT

FOCUS: This instrument has been designed to assist the researcher evaluate the performance of teachers on these collaboratively selected targets in the implementation phase, of the research.

SCORING: A five point scale with 5 as outstanding, 4 as good, 3 as satisfactory and 1 as unsatisfactory is adapted.

A. PRELIMINARY DATA.

1. School;	4. Date:
2. Activity Observed:	5. Time:
3. Assessor Observer:	6. Place:

B. PERSONAL TRAITS	5	4	3	2	1
7. a. Knowledge of pupils -	-	-	-	-	-
b. Individuality	-	-	-	-	-
c. Interests	-	-	-	-	-
d. Needs	-	-	-	-	-
8. Knowledge of subject	5	4	3	2	1
9. Knowledge of instructional techniques	5	4	3	2	1
10. Preparation for lesson	5	4	3	2	1
C. BEHAVIOUR CHARACTERISTICS	**5**	**4**	**3**	**2**	**1**
a. Sense of humour	-	-	-	-	-
b. Creativity	-	-	-	-	-
c. Resourcefulness	-	-	-	-	-
d. Initiative	-	-	-	-	-
e. Creativity	-	-	-	-	-
f. Sensitivity	-	-	-	-	-
g. Warmth	-	-	-	-	-
h. Caring	-	-	-	-	-
i. Empathy	-	-	-	-	-
j. Tactfulness	-	-	-	-	-
k. Enthusiasm	-	-	-	-	-
l. Self-confidence	-	-	-	-	-
m. Grooming	-	-	-	-	-

D. ORGANISATION OF LEARNING SEQUENCE	**5**	**4**	**3**	**2**	**1**
21. Objectives are appropriate for the lesson	-	-	-	-	-
22. Objectives are:					
a. Behavioural	-	-	-	-	-
b. Observable	-	-	-	-	-
c. Measurable	-	-	-	-	-
d. Specific	-	-	-	-	-
e. Achievable	-	-	-	-	-
23. Lesson planned to achieve selected objectives.	-	-	-	-	-
24. Teacher has realistic expectations levels for pupils.	-	-	-	-	-
25. Lesson accommodates individual differences in learners.	-	-	-	-	-
26. Provides lesson plans.	-	-	-	-	-
27. Establishes means to assess pupil performance.	-	-	-	-	-
28. Creates appropriate sealing.	-	-	-	-	-
29. Plans assignments.	-	-	-	-	-
E. TEACHING BEHAVIOUR	**5**	**4**	**3**	**2**	**1**
30.					
a. Communicate effectively with pupils.	-	-	-	-	-
b. Adapts instructional approaches appropriate for pupils.	-	-	-	-	-
c. Demonstrates interest in pupils.	-	-	-	-	-
d. Shows enthusiasm for teaching:					
i. the subject	-	-	-	-	-
ii. the pupils.	-	-	-	-	-
e. Utilizes time effectively.	-	-	-	-	-
f. utilizes questioning techniques.	-	-	-	-	-
g. Treats students fairly and objectively.	-	-	-	-	-
h. Motivates pupils.	-	-	-	-	-
i. Uses non-verbal communication effectively.	-	-	-	-	-
j. Performs in a task oriented manners.	-	-	-	-	-
m. Encourages independent thinking by pupils.	-	-	-	-	-

F. PROFESSIONAL DEVELOPMENT	**5**	**4**	**3**	**2**	**1**
31. Displays knowledge of current developments in the area of instruction.	-	-	-	-	-
32. Accepts constructive criticism.	-	-	-	-	-
33. Fulfils the expectations of the profession.	-	-	-	-	-
34. Meets the expectations of the school.	-	-	-	-	-
35. Accommodates the suggestions of colleagues and superiors.	-	-	-	-	-
36. Is committed to professional growth and self-improvement.	-	-	-	-	-
37. Achieve targeted objectives and means for improvement.	-	-	-	-	-
38. Participates in staff meetings and work groups.	-	-	-	-	-
39. Reads relevant articles, journals.	-	-	-	-	-
G. OUTCOMES/PRODUCTS	**5**	**4**	**3**	**2**	**1**
40. Utilises informal, teacher made measures of student achievement in instruction.	-	-	-	-	-
41. Assesses the congruence between subject objectives and pupil's achievement.	-	-	-	-	-
42. Uses s pupil's evaluations in teaching.	-	-	-	-	-
43. Utilizes the results of follow-up studies in the instructional process.	-	-	-	-	-
44. Evaluates the performance of pupils within the context of class related activities and performances.	-	-	-	-	-
F. ATTENDANT BEHAVIOUR	**5**	**4**	**3**	**2**	**1**
45. Advises and counsels pupils.	-	-	-	-	-
46. Maintains good interpersonal relations with staff.	-	-	-	-	-
47. Implements self-evaluation techniques.	-	-	-	-	-
48. Attends school regularly.	-	-	-	-	-
49. Displays punctuality.	-	-	-	-	-
50. Maintains acceptable grading (marking) practices.	-	-	-	-	-
51. Maintains attendance standards for pupils.	-	-	-	-	-
G. CRITICAL INCIDENTS	**5**	**4**	**3**	**2**	**1**
52. Assists colleagues in the management of school problems.	-	-	-	-	-
53. Demonstrates good judgement in handling school relate incidents and events.	-	-	-	-	-
54. Minimizes the frequency and nature of confrontations with pupils, patrons, colleagues, superiors etc.	-	-	-	-	-

H. RECORD OF WORK	**5**	**4**	**3**	**2**	**1**
55. Maintenance of classroom displays.	-	-	-	-	-
56. Maintenance of teacher records.	-	-	-	-	-
57. Maintenance of school records.	-	-	-	-	-
58. Quality and punctuality of reports.	-	-	-	-	-
59. Nature and quality of the class-related work of pupils.	-	-	-	-	-
60. Quality of plans, unit and daily lessons.	-	-	-	-	-
61. Preparation of instructional materials.	-	-	-	-	-
62. Quality of instructional materials.	-	-	-	-	-
63. Evidence of communication to patents, pupils, staff and administration.	-	-	-	-	-
64. Samples of pupils work.	-	-	-	-	-

I. PROVIDING FAVOURABLE PSYCHOLOGICAL ENVIRONMENT FOR LEARNING	**5**	**4**	**3**	**2**	**1**
65. Involve pupils, under teacher guidance, in planning and conducting class activities.	-	-	-	-	-
66. Balances pupil-teacher participation.	-	-	-	-	-
67. Provides a healthful and attractive physical environment.	-	-	-	-	-
68. Stimulates pupils to show pride in quality performance.	-	-	-	-	-
69. Is sensitive and response to psychological needs of pupils.	-	-	-	-	-

J. EVALUATING PROGRESS OF PUPILS	**5**	**4**	**3**	**2**	**1**
70. Emphasises the application of knowledge to new situations.	-	-	-	-	-
71. Measures achievement in all areas of instruction.	-	-	-	-	-
72. Helps each pupils develop ability to evaluate own progress.	-	-	-	-	-
74. Includes test scores in appraising growth and needs of pupils.	-	-	-	-	-
75. Evaluates in terms of individual differences.	-	-	-	-	-
76. Communicates with parents regarding pupils' progress.	-	-	-	-	-

K. PROFESSIONAL ETHICS, ATTRIBUTES, GROWTH, AND RESPONSIBILITIES	**5**	**4**	**3**	**2**	**1**
77. Safeguards the health and safety of pupils.	-	-	-	-	-
78. Maintains positive discipline and control in working with pupils.	-	-	-	-	-
79. Maintains a sense of humour.	-	-	-	-	-
80. Manifests enthusiasm.	-	-	-	-	-
81. Uses demonstrations, dramatisations , and other classroom activities.	-	-	-	-	-
83. Conducts field trips in conjunction with course objectives.	-	-	-	-	-
84. Draws upon resource presumes and school-related youth organisations.	-	-	-	-	-
85. Uses individual and group project in and out of school.	-	-	-	-	-
86. Uses physical school environment to support learning activities.	-	-	-	-	-
87. Uses initiative in providing instructional materials.	-	-	-	-	-

APPENDIX 4

DESCRIBING YOURSELF AS AN EVALUATOR OF TEACHERS

FOCUS:
This questionnaire has been designed to allow you to describe yourself as an evaluator of teachers. Your responses will yield a clear picture of the key areas that you will need to be assisted in to become an effective teacher evaluator. Among the goals of this study is to make a strong case for school-based in-service and training programmes. And for this to be effective the role of the head teacher is critical. These competencies are important for a superior to be able to assist his teachers in the promotion of their professional competence. Your frank and honest responses would be greatly appreciated and all your answers will treated confidentially.

SCORING: A five point scale will be used and please use the following scales to describe yourself on the attributes listed. Circle the letter that represents the point you select on each continuum.

How would you describe your-

1. Knowledge of the technical aspects of teaching?	1	2	3	4	5
	(I know little - I know a great deal)				
2. Capacity of demonstrates or models needed changes in teacher performance?	1	2	3	4	5
	(Low - High)				
3. Amount of experience as a teacher in the classroom?	1	2	3	4	5
	(None – Extensive)				
4. Recency of experience as a teacher in the classroom?	1	2	3	4	5
	(Not recent – Recent)				
5. Repertoire of suggestions for good teaching.	1	2	3	4	5
	(Limited – Extensive)				
6. Persuasiveness of the rationale you use to defend your suggestions?	1	2	3	4	5
	(Not persuasive – Persuasive)				
7. Knowledge of subject matter taught by teachers you evaluate?	1	2	3	4	5
	(Limited – Extensive)				
8. Strength of your expectation for yourself.	1	2	3	4	5
	(Demand little - Demand a great deal)				

9. Experience as supervisor of teachers
1: 0 to1 year
2: 2 to 4 years
3: 5 to 7 years
4: 8 to 10 years
5: 11 or more years

10. General expectations of teachers? 1 2 3 4 5
(Not able to improve - Able to improve)

11. Expectations regarding teachers' motivations? 1 2 3 4 5
(Willing to improve - Not willing to improve)

12. Ability to encourage risk-taking in teachers? 1 2 3 4 5
(Low – High)

13. Willingness to take risks yourself? 1 2 3 4 5
(I don't take risks - I take risks)

14. Working relationship to teachers? 1 2 3 4 5
(Adversary – Helper)

How would you describe your interpersonal manner in terms of your-

15. Level of teacher trust? 1 2 3 4 5
(Low-High)

16. Interpersonal manner? 1 2 3 4 5
(Threatening-Not threatening)

17. Temperament? 1 2 3 4 5
(Impatient-Patient)

18. Flexibility? 1 2 3 4 5
(Rigid-Flexible)

19. Attitude regarding the purpose of
Teacher evaluation? 1 2 3 4 5
(Teacher accountability-Teacher growth)

20. Confidence that this purpose will
be achieved? 1 2 3 4 5
(Lack confidence-Very confident)

21. Training in teacher evaluation? 1 2 3 4 5

(None-Extensive)

22. Listening skills? 1 2 3 4 5
(Ineffective-Very effective)

23. Ability to convey your messages to teachers clearly? 1 2 3 4 5
(Unclear-Very clear)

24. Ability to give teachers positive feedback? 1 2 3 4 5
(Ineffective-Very effective)

25. Ability to give teachers negative feedback? 1 2 3 4 5
(Ineffective-Very effective)

26. Ability to mix positive and negative feedback? 1 2 3 4 5
(Relatively ineffective at mixing)

27. Are there other dimensions of you as an evaluator of teachers that you think are related to your success (or lack of success) in the role? If so, please specify.

APPENDIX 5

CLASSROOM OBSERVATION SCHEDULE FOR SELECTED CLASSROOMS

SCHOOL .....
CLASS .....
DATE .....
START TIME .....
END TIME.....
NUMBER OF PUPILS IN CLASS .....
AVERAGE AGE .....
INSTRUCTIONS: TICK ***YES*** OR ***NO*** OR WRITE ANSWERS AS DIRECTED ON EACH ITEM

A. ADMISSION TO CLASS

1. Describe how children are admitted into the class
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.....
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2. Are the children evaluated to identify any learning difficulties they may have?
   a. Yes ..... b. No .....

3. If yes what diagnostic techniques or procedures are used?
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4. How often are the children re-evaluated?
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5. What provisions are made to resolve any significant differences between expectancy and performance data?

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B. PHYSICAL CLASSROOM ARRANGEMENT

6. Describe the classroom arrangement

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7. Are there any posters or charts on the walls?

a. Yes ..... b. No .....

8. If yes briefly describe

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9. Are there any small group work areas (e.g. interest areas, etc.)?

a. Yes ..... b. No .....

10. Are there any individualized instructional areas for tutorials or paired learning?

a. Yes ..... b. No .....

11. Is there any multipurpose room in the school where children have the opportunity to learn on their own?

a. Yes ..... b. No .....

C. INSTRUCTIONAL APPROACHES

12. Is individual attention given in the lesson(s) observed?
a. Yes ..... c. No .....

13. If yes give a typical description
.....
.....
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.....
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.....

14. Does the teacher use dramatization, demonstrations and other classroom activities to foster learning in children?
a. Yes ..... b. No .....

15. If yes, list the various techniques you observed and supply the other responses.

a. Techniques	b. Subject	c. Appropriate	d. Not Appropriate	e. Comment
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.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	
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.....	.....	.....	.....	
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.....	.....	.....	.....	.....

16. What instructional techniques are utilized to foster creative and critical thinking? (Name and describe)
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17. Are children organized for small group work?
a. Yes..... b. No.....

18. If yes give an instance
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.....

19. Are children provided with opportunities to assume responsibility in planning, carrying out and evaluating their own related or extended learning activity?

a. Yes ..... b. No .....

20. If yes describe briefly

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.....
.....
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21. Are provisions made for children to develop positive attitudes towards work and use of leisure time?

a. Yes ..... b. No .....

22. If yes describe briefly

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23. Is the lesson adapted to individual needs and for low achievers?

a. Yes ..... b. No .....

24. If yes describe or give a typical instance.

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25. Are pupils mistakes corrected?

a. Yes ..... b. No .....

26.If yes how? (Describe)

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27. If no what happens when children make mistakes? (Describe)
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28. Are lessons presented systematically? (i.e. from simple to complex or from known to unknown)
a. Yes ..... b. No .....

29. Are appropriate introductions used to link previous knowledge to new knowledge?
a. Yes ..... b. No .....

30. Is formative evaluation done?
a. Yes ..... b. No .....

31. Describe the questioning skills of the teacher.
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32. Is a recap of the lesson given?
a. Yes ..... b. No .....

33. Is the recap appropriate and relate to the objectives of the lesson?
a. Yes ..... b. No .....

34. Is an exercise or an assignment given?
a. Yes ..... b. No .....

35. If yes is it appropriate to the lesson taught?
a. Yes ..... b. No .....----

36. If yes give a typical example.
.....
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.....
.....

37. Do children actively participate in lessons?
a. Yes ..... b. No .....

38. What would you consider to be the percentage of involvement by the following in lessons?

a. Pupils .....
b. Teacher .....
c. Active pupils .....
d. Withdrawn pupils .....

D. UTILIZATION OF INSTRUCTIONAL MATERIALS

39. What teaching-learning materials re observed in use by the teacher? (Name and describe how used).

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.....
.....

40. From what source do children read? (Please tick)

a. Chalkboard
b. Flash cards
c. Textbooks
d. Wall charts
e. Others specify

41. Does the teacher use teaching- learning materials efficiently and creatively?

a. Yes ..... b. No .....

42. If yes describe a typical instance.

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.....
.....

43. Does the teacher use the physical school environment to support learning activities?

a. Yes ..... b. No -.....

44. If yes describe a typical example.

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.....
.....

45. Do you consider the teacher's choice of instructional materials and resources as adequate and appropriate?

a. Yes ..... b. No .....

46. Give reasons for your response to question 45.
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.....

E. LANGUAGE PATTERN

47. What do you consider to be the language pattern in the class in the following situations?
a. When teacher speaks to class
.....
b. When pupil talks to teacher
.....
c. When pupil talks to pupil
.....
d. When teacher gives instructions for work
.....
e. When teacher disciplines
.....
f. Any other please specify
.....

48. Does the teacher use only English to teach?
a. Yes ..... b. No .....

49. Does the teacher use only vernacular to teach?
a. Yes ..... b. No .....

50. Does the teacher mix up English and vernacular?
a. Yes ..... b. No .....

51. If yes describe
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.....

52. Assign percentages to the following:
a. Proportion of lesson in English .....
b. Proportion of lesson in vernacular .....

F. ANECDOTAL RECORDING

Please record anecdotally the step-by-step process of the classroom interaction.

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