Synthesis Report ©

Transforming Learning Outcomes through a Learner Centred Pedagogy: Moving Toward a Ghanaian Activity Based Learning Concept and Framework





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Transforming Learning Outcomes through a Learner Centred Pedagogy: Moving Toward a Ghanaian Activity Based Learning Concept and Framework



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Abbreviations and Acronyms

ABL	Activity Based Learning
BECE	Basic Education Certificate Examination
BTL	Breakthrough to Literacy
CBE	Complimentary Basic Education
CDD	Center for Democratic Development
COE	College of Education
CRDD	Curriculum, Research and Development Division
DEO	District Education Office
DP	Development Partner
DTST	District Teacher Support Team
EQUALL	Education Quality for All
GEDP	Ghana Education Decentralisation Programme
GEO	Girls' Education Officer
GER	Gross Enrolment Ratio
GES	Ghana Education Service
GEU	Girls' Education Unit
GOG	Government of Ghana
IEQ	Improving Educational Quality
INSET	In-Service Teacher Training
JHS	Junior High School
JICA	Japan International Cooperation Agency
KG	Kindergarten School
LFL	Leadership for Learning
MOE	Ministry of Education
NALAP	National Literacy Acceleration Program
NCCA	National Council on Curriculum and Assessment
NCTE	National Council for Tertiary Education
NEA	National Education Assessment

ABBREVIATIONS AND ACRONYMS

NIB	National Inspectorate Board
NGO	Non-Governmental Organisation
NTC	National Teaching Council
ОСРТ	On-Campus Practice Teaching
PRESET	Pre-Service Teacher Training
QUIPS	Quality Improvement in Primary Schools
SBA	School Based Assessment
SEA	School Education Assessment
SFL	School for Life
SHS	Senior High School
TED	Teacher Education Division
TFA	Teachers for Africa
TIMSS	Trends in International Mathematics and Science Study
TLMP	Textbooks and Learning Materials Programme
TLMs	Teaching and Learning Materials
UCC	University of Cape Coast
USAID	United States Agency for International Development
UTDBE	Untrained Teachers' Diploma in Basic Education
WSDP	Whole School Development Programme

1. Abstract



It is vital that Ghana prioritises the improvement of quality of teaching, raising student learning and closing achievement gaps for all children

At grade 6, girls were 36% less likely to achieve proficiency than boys

Gaps persist between girls and boys achievement – particularly in the most deprived areas which receive the lowest per child expenditure on education - in the Northern region only 30% of BECE passes were attributable to girls in 2007 Despite tremendous success in improving access and enrolment, learning outcomes in Ghana remain well below expected levels. It is essential that Ghana now focuses on improving the quality of teaching, raising student learning and closing achievement gaps for all children, particularly those from the most deprived districts¹. This research aims to highlight exemplary practices in Activity Based Learning (ABL) which can be adopted from outside Ghana, as well as uncover what is working and not working in Ghana to set the foundation for developing a new national approach to ABL, which should have the potential to transform the education landscape in Ghana.

There has been significant progress in increasing access to schooling and decreasing repetition and drop-out rates in Ghana. For example, the number of kindergarten schools increased from 7,009 in 2004-05 to over 16,000 by 2009-10; while the Gross Enrolment Ratio (GER) at the primary level increased from 94.9 in 2008-09 to 96.4 in 2010-11 (Ministry of Education, 2011). Yet, achieving quality and equality in education for all students remains an unresolved issue (ESP Report, 2009, p.21), and whilst interest in teacher effectiveness is growing, policy guidance and practice remains limited.

Primary school children are reading well below expected levels (Research Triangle Institute, 2011). In the 2011 results of the National Education Assessment (NEA), only 35.3% of grade 6 pupils achieved proficiency in English, and only 16.1% achieved proficiency in mathematics². Gendered disparities also exist: girls were shown to outperform boys in English proficiency for grade 3 and 6, but at grade 3 girls were 16% less likely to achieve minimum competency than boys in maths. At grade 6, girls were 25% less likely to achieve minimum competency in maths and 36% less likely to achieve proficiency than boys. The NEA has also shown strong regional differences. In grade 3 and 6 students from Greater Accra significantly outperformed others in both Maths and English. The results indicate that approx. 5-10 times more students from Greater Accra achieved proficiency than those from lower-performing regions (see figure below).

Despite near gender parity in enrolment at lower levels, this is not reflected at secondary stages, particularly at Senior High School (SHS) where numbers of airls drop significantly. Boys out-perform girls across all regions in overall BECE³ results, often by large margins⁴. Throughout the system, issues of gender equity and inclusion in aspects such as class participation, achievement, and school experience remain problematic, particularly for the children from areas with the highest poverty and deprivation levels which continue to receive the lowest Per Child Expenditure (PCE)⁵ and show the greatest gaps in BECE



¹ Kraft, R. 2012. ABL for the Junior High School in Ghana. As part of the Girl's Education Programme of DFID ²NEA Report 2011

³ Basic Education Certificate Examination - as a norm referenced test these pass rates cannot be used to draw inferences about competency levels

 ⁴ Boissiere, M. 2004. Determinants of Primary Education Outcomes in Developing Countries World Bank
 ⁵ Ghana National Education Assessment 2011 Findings Report

results between girls and boys⁶. It is essential that the debate in Ghana should now focus on improving the quality of teaching, raising student learning and closing achievement gaps for all children, particularly those from the most deprived districts⁷.

This report presents findings from a study of Activity Based Learning (ABL) initiatives undertaken between December 2011 and August 2012, to fill in knowledge and data gaps about ABL as a mechanism for improving teaching, learning and achievement in Ghana. This report will provide a foundation for further research and policy, for policy makers and implementers such as the GES (and its relevant divisions e.g. Basic Education Division, Teacher Education Division and Girls' Education Unit), to see how learning outcomes are, or could be, transformed through a learner centred pedagogy based on ABL and to enable a move toward a Ghanaian ABL approach and framework.

ABL is an innovative student-centred model of teaching and learning that uses minimal teacher lecturing or direct transmission of factual knowledge (i.e. traditional rote learning approaches), and instead, encourages the use of multiple small group activities that engage students in discovery learning or problem solving, and promotes frequent questions and discussion from students – it's not just about what is learnt, but how and why (Leu and Price-Rom 2006, p. 19; Cuban, 1984, pp.3-4). Learners are guided by their teachers to make their own discoveries and offer their own negotiated solutions, through task based activities which excite them and allow them to progress at their own pace in a safe, inviting and stimulating environment.

Given the high proportion of small schools in Ghana⁸, multi-grade teaching is widespread, though despite this being enshrined in teacher deployment rules; it is not being fully implemented at present. Through the ABL approach, students from multiple grades and learning abilities can be taught in one room, by one teacher as they are empowered to learn and share with small groups of peers on a similar level to themselves - they do not get held back by slower learners, nor do they get left behind. Teaching and Learning Materials (TLMs) and curricula are developed at low cost, using the resources available (i.e. teachers develop their own posters, booklets etc.) and so even those schools in the most deprived areas can be enabled to deliver better, inclusive quality education.

Many ABL interventions aimed at improving the quality of teaching and learning in schools have already been introduced in Ghana; both at a national scale, such as NALAP and the JICA INSET programme, and at a more regionalised or district level, e.g. GES-MASHAV and School for Life (SfL). Many of these have developed excellent textbooks, syllabi, and TLMs (i.e. QUIPS, WSDP, EQUALL and IEQ), but these materials have not been fully shared or integrated into national teacher training at the Colleges of Education (CoEs). See Section 6 below for more detail.

Ghana continues to rely on a high number of un/under-trained teachers, many of whom achieved low scores in their BECE exams and who have little practical/hands-on classroom experience before being posted to their first school. It is to be expected that new teachers in this situation may be "ill-prepared" for the demands of teaching effectively in both a local language *and* English⁹, as well as in the multi-grade, under-resourced settings widely found in Ghana. Although many of the untrained GES teachers *already* in the system do have many years hands on experience, and there is evidence they have higher retention rates than their trained counterparts, the reality of teaching in Ghanaian classrooms is that: student outcomes remain low especially in rural areas, particularly in the North, where "rote" learning practices prevail¹⁰ and the quality of teaching pedagogy and behaviours needs to be improved.



Students from multiple grades and learning abilities can be taught in one room, by one teacher without affecting student progress.



TLMs and curricula are developed at low cost, so even the poorest schools can be enabled to deliver better, inclusive quality education

Student outcomes remain low in Ghana, especially in rural areas and the North where "rote" learning practices prevail

⁶ 2007 regional BECE results

⁷ Kraft, R. 2012. ABL for the Junior High School in Ghana. As part of the Girl's Education Programme of DFID

⁸Which cannot support individual classes and teachers for each grade.

⁹ In lower Primary School

¹⁰ Kraft, R. 2012. ABL and Teacher Training

In-service training in ABL provided by interventions such as NALAP, GES-MASHAV and SfL was highly rated by teachers, but this is not currently part of national GES INSET

A Ghanaian ABL based model is urgently needed which can addresses problems all levels, National, Regional and District, and across all aspects of the system The current model of in-service training (INSET) given in the Colleges of Education (CoEs) is over-reliant on indirectly cascading knowledge from national trainers down to teachers without backing this up with "one on one" mentoring once in post. This has the risk of transmission loss of both content and methodology each time the training is repeated at the next (lower) level. There also remains insufficient leadership in professional development from Head Teachers (who are largely un-trained themselves, and receive little guidance on how to provide assistance to their staff).

The ABL INSET provided through the GES MASHAV and SfL programmes was highly rated by the teachers surveyed for this report, and it is recommended that both be reviewed so that elements can be adapted into the national INSET model. One of the key limitations in terms of implementation and sustainability of the ABL INSET observed is that even where teachers had received some form of ABL training, they largely failed to continue to practice what they had learnt in sufficient numbers to create impact, and lacked "models" of best practice. This must be considered seriously, and it is recommended in this report that this be addressed either directly through mentoring and the use of "learning circles" / peer groups, and through media such as videos and audio demonstrations of peers which reinforce and update their learning.

Continuous assessment at all levels (teachers, school performance and management, and learners), is lacking, and not tailored towards ABL approaches. Circuit supervisors are overloaded and unable to provide sufficient support to all schools¹¹.

A new, innovative ABL based model is required which addresses the endemic issues described above, and tackles them at all levels, National, Regional and District, across all aspects of the system, Government (e.g. building the capacity of GES), teacher training, and at the school level through school support and community engagement, and improvements in assessment and monitoring.

In order to assess these issues and determine what *has* worked and what is still *missing* in Ghana, this study drew upon reviews of international and Ghanaian educational literature, semistructured interviews and focus groups of education officials and teachers, classroom observations, teacher surveys, and assessments of students in the early years of primary education, including kindergarten, to ensure a broad picture could be gained.

ABL implementation was conceptualised as involving changes in education processes at two levels: systemic and schools. The ABL innovations required at each level are outlined below:

- System Level: policy formulation, programmatic development, resource allocation, development of teaching and learning materials, pre-service teacher training (PRESET), in-service professional development training (INSET), academic / pedagogical support, teacher assessment, student assessment, community / parent engagement, and evaluation feedback loops.
- School Level: classroom furniture and layout, teaching methodologies, teaching and learning materials, promoting equality and diversity, head teacher support, teacher peer support, student arrangement, students' time on task, student engagement, classroom atmosphere and student interaction, and student continuous assessment.

Details of each of the specific aspects reviewed at each level were included in a Classification Framework (see Appendix C).

The report focused on two key research questions¹²:



. What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG and P1-3)?

. How could successful characteristics of ABL be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

To address these questions, the team reviewed international and Ghanaian ABL interventions.

At the international level, two interventions were selected (Tamil Nadu, and Escuela Nueva – see Section 5), which were deemed to offer the strongest evidence base (having been rigorously reviewed), and to be similar in context to Ghana i.e. widespread use of multi-grade teaching, high drop-out rates, and disparities between genders and between regional performance.



ABL in Tamil Nadu, India: the ABL initiative is implemented in Grades 1-4, in both single-grade and multigrade classrooms. It has transformed teaching and learning across the state in just a few years, and is now being adapted/adopted by several other Indian states (National Council of Education Research and Training, November 2011).¹³ This was the most recent large-scale (40,000 schools) and independently evaluated ABL programme– which is similar to Ghana in many respects, such as: use of multi-grade teaching, low student learning outcomes, poor performing teachers, and student dropout.



ABL in Escuela Nueva ("New School"), Colombia: the internationally recognised Escuela Nueva movement that begun in Colombia in the 1970s has improved educational outcomes, reduced achievement gaps between urban and rural youth, multi-grade and graded classrooms, and girls and boys¹⁴. It has served as the example for similar programmes throughout Latin America, the Indian Sub-continent, Africa, the Middle East, and the Central Asian Republics. Escuela Nueva was adopted in Guatemala and Peru, and up to 16 other countries by 2012. This was the earliest well-documented and extensively evaluated initiative to implement ABL and as such provides much relevant data for Ghana where there are similarities

At the national level, the review showed that:

- There have been multiple attempts at transforming teacher led system in Ghana
- There has been limited follow-up/on-going support and training and so ABL implementation has dissipated over time
- Most ABL interventions are largely externally funded and not coordinated thus affecting sustainability
- ABL is not yet integrated into teacher training at either INSET or PRESET
- There is evidence of some teachers continuing ABL, after sustained training from multiple interventions
- There is limited community support for ABL as yet

¹² Specified and finalised in consultation with DFID and GES.

 ¹³ Sources: British Council, 2009; National Council of Education Research and Training, 2011; Indian Ministry of Human Resource Development, Sarva Shiksha Abhiyan (SSA), 2008), "Programme Evaluation Report of Activity-Based Learning, Tamil Nadu", National Council of Education Research and Training, November 2011.
 ¹⁴ Sources: McEwan, P. J. (1998). The effectiveness of multigrade schools in Colombia. Stanford, CA: School of Education, Stanford University; McEwan, P.J. and Benveniste, L.A. (1999). Constraints to implementing educational innovations: The case of multigrade schools. Stanford, CA: School of Education, Stanford University; Rojas, C. (1994). The Escuela Nueva school programme in Colombia. In P. Dalin (Ed.), How schools improve: An international report. London: Cassel.

Two ABL interventions – School for Life (SfL), and GES-MASHAV - were selected from all ABL interventions currently or previously running in Ghana. They included the greatest number and percentage of ABL characteristics of all the ABL type programmes reviewed in Ghana¹⁵ with the exception of NALAP.



GES - MASHAV: aims to empower teachers to believe that Early Childhood Development (ECD) is the basis of further education and that their role is to mediate between the child and the world, creating a rich and stimulating learning environment, and building a flexible curriculum and daily schedule based on the child and providing opportunities for developing creativity and thinking skills¹⁶. The programme targets kindergarten-age children in urban centres.



School for Life (SfL): a nine-month mother tongue literacy programme provides complimentary basic education to get children in deprived areas into formal school by providing mother tongue literacy to out-of-school children between the ages of 8-14 years¹⁷. SfL is located in the Northern region.

SfL and GES-MASHAV were approved by DFID as the focus of the primary research which included classroom observations and semi-structured interviews in samples of the two interventions.

The school and system levels of ABL implementation for both GES-MASHAV and SfL were found to be related in terms of the level of ABL implementation, and were mutually reinforcing.

The most important aspects resulting in better ABL implementation were deemed to be INSET and pedagogical support at the system level. A national ABL intervention should thus consider these at the heart of its approach. SfL teachers for example, responded positively about what they had experienced and observed, and were trying to deepen and broaden their use of ABL methodologies. It should be noted however, that this not reflect the level of ABL implementation at the school level nationally, and indeed, SfL does not take place within GES public schools.

The findings suggest that more effort, especially at the system level may be productive for ABL to become embedded in Ghana. As cases from other parts of the world show, implementing ABL successfully calls for developing multiple system and school level aspects, which is a complex endeavour.

Overall, the study found that system level support for ABL remains in the early stages in Ghana, and has not yet "taken root". ABL must be embedded, institutionalised and sustained in policy and practice to ensure that ABL becomes truly mainstreamed in all public schools. To make this happen, recommendations for the future implementation of ABL in Ghana include:

- Reinforcing the capacity of education officials and development partners;
- Building the capacity of districts and schools;
- Providing school and CoE level training for teacher trainers, supervisors, teachers and Head teachers for ABL implementation;
- Developing an assessment system.

The DFID funded Girls Unite and PASS and Complimentary Basic Education programmes due to commence in 2013 should provide the opportunity to undertake more rigorous experimental/quasi-experimental and qualitative studies and longitudinal assessments to build on this study and to provide the evidence base for the application of these recommendations, as well as ensuring that Ghana's capacity at National, Regional and District levels is built sufficiently. These programmes will provide a clearer picture of how teacher's attitudes and beliefs, as well as practices change, and the transformational benefits to the learning outcomes

School level aspects of ABL already being used in Ghana have shown to improve student outcomes

At the system level however, ABL has not yet "taken root" in Ghana

¹⁵ With the exception of NALAP.

¹⁶ See <u>http://embassies.gov.il/un/NewsAndEvents/Pages/MASHAV-Ghana-education-project.aspx</u> for details.

¹⁷ See <u>http://www.schoolforlifegh.org/about%20us.htm</u> for more details.

Getting ABL right in Ghana at both the system and school levels has the potential to change the prospects of a generation, and those to come of all Ghana's children which the timeframe and scope of this study did not permit. This should provide a platform for national scale up – the evidence of what works, the capacity to implement this at scale, and the impetus to devote resources and amend policies accordingly by embedding practice – failure to so will result in limited buy-in, lack of funding and a continuation of poor quality provision. Getting ABL right in Ghana at both systemic and school levels has the potential to change the prospects of a generation, and those to come.

2. Introduction

This section sets out: the objectives of this research study on ABL in Ghana; provides an overview of the key concepts of ABL and a Classification Framework for assessing the extent of implementation of ABL in Ghana at both system and school levels (see Appendix C); details the research questions used as the framework for the study, and the hypotheses against each of these; and sets out the structure for the remainder of the report.

2.1 Objective of Research

This study aims to add value to the policy dialogue on educational quality in Ghana by:

- drawing upon the existing bodies of knowledge on ABL and related initiatives globally, as well as in Ghana;
- adding observations from primary research in Ghanaian schools to identify what ABL methods work in Ghana and how to scale up and sustain such successes;
- providing recommendations for expanding ABL nationwide, with a focus on teaching and learning practices within classrooms and teacher training institutions/Colleges of Education (CoEs).

The study will synthesise international and national research on ABL, present new primary indications of successful implementation of ABL aspects in Ghana, and make recommendations regarding the implementation of ABL in Ghana to inform and influence policymaking in the sector. In doing so, it should assist the Government of Ghana (GoG) and it's Development Partners (DPs) in the preparation and implementation of a strategy to improve teaching and learning in basic education in Ghana.

This report will thus focus on two key research questions¹⁸:



- 1. What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG P1-3)?
- 2. How could successful characteristics of ABL be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

To address these questions, this report will summarise findings from secondary case study evidence of both International, and national ABL interventions to determine key aspects of success which could be adopted/adapted in a national programme for Ghana. It will also include observational primary research on ABL interventions in Ghana using a case study approach, including school surveys and student assessments.

¹⁸ Specified and finalised in consultation with DFID and GES.

It should be noted that the timeframe and scope of this study did not permit a more rigorous experimental or longitudinal evaluation of ABL in Ghana and as such can only show indicators of success and not robust causality.

An additional objective of this study was the development of a tool for classifying the implementation of ABL in Ghana which policymakers and DPs could use to identify priorities and specific measures to improve the teaching and learning environment moving forward. The limited timeframe and scope of the study required an approach focussed on gathering information from interventions that were already identified and judged to be 'successful' examples of ABL, to provide a broad overview of them, and share lessons learned about the implementation of ABL in those contexts.

This study makes no claims about how to successfully implement ABL in contexts that differ from the ones studied, nor does it attempt to make comparisons of ABL interventions. It does however; provide a foundation for future work on ABL implementation across various contexts in Ghana.

2.2 Theoretical and Practical Definitions / Concepts of ABL - Internationally and from the Ghanaian Context

At the outset it is important to clarify what is meant in this report by the term "activity based learning", both what it is, and what it is not:

- What it is: ABL is an innovative, student-centred model of teaching and learning that encourages the use of multiple, small group activities that engage students in discovery learning or problem solving, and promotes frequent questions and discussion from students *it's not just about what, but how and why* (Leu and Price-Rom 2006, p. 19; Cuban, 1984, pp.3-4). Learners are guided by their teachers to make their own discoveries and offer their own negotiated solutions, through task based activities which excite them and allow them to progress at their own pace in a safe, inviting and stimulating environment. Students from multiple grades and learning abilities can be taught in one room, by one teacher as they are empowered to learn and share with small groups of peers on a similar level to themselves they do not get held back by slower learners, nor do they get left behind. Teaching and Learning Materials (TLMs) and curricula are developed at low cost, using the resources available (i.e. teachers develop their own posters, booklets etc.) and so even those schools in the most deprived areas can be enabled to deliver better, inclusive quality.
- What it is not: traditional rote learning or "formal" or "direct instruction" which relies heavily on teacher lecturing, dictation and direct transmission of factual knowledge coupled with "recitation and drill" (Spring, 2006, p. 6).
- In this regard, we can identify both behavioural and cognitive dimensions on which active-learning, student-centred pedagogies can be contrasted with formal or direct instruction (see Barrow et al., 2007; Ginsburg, 2006; 2009; Mayer, 2004). The behavioural dimension of active-learning pedagogies focuses on the degree to which instructional practices enable students to actively shape their own learning through their verbal and physical class participation, while the cognitive dimension highlights the degree to which teaching strategies enable students to engage in various forms / levels of thinking.

The behavioural dimension of active-learning pedagogies is differentiated from direct instruction (e.g. teacher lecture) in that it involves **learning "by doing" or "through play"**, as expressed through action and verbal communication (Ginsburg, 2009). Practically, this can be observed in a classroom where children work in groups, teach and listen to each other, express themselves, learn to take turns, work independently on self-study guides and math or science kits, play games and do role plays. It can also be seen in extra-curricular activities, such as children

ABL *is* an innovative, low cost, learner centred mechanism which could transform teaching, learning and achievement in Ghana

ABL *is not* traditional "rote learning" or "direct instruction"

exercising leadership positions (e.g. as managers of school libraries, or keeping school grounds clean).

Children through ABL:

- work in groups
- teach and listen to each other
- express themselves
- learn to take turns
- work independently on self-study
- play games and
- do role plays



Typically, activity-based learning promotes higher levels of cognition by promoting discussion and dialogue

One reason why prior efforts have not significantly changed teaching and learning in Ghana, is that both PRESET and INSET on ABL has been insufficient and un-sustained The cognition dimension refers to students' mental processes of perception, memory, judgement and reasoning. With some variations, cognition has been commonly classified into six levels:

- 1. Knowledge: ability to identify and recall information;
- 2. Comprehension: ability to organise, select facts and ideas;
- 3. Application: ability to use facts, rules and principles;
- 4. Analysis: ability to separate a whole into component parts;
- 5. Synthesis: ability to combine ideas to form a new whole; and
- 6. Evaluation: ability to develop opinions, judgments and decisions.

Each of these levels of cognition may be stimulated by different kinds of "teaching talk" (Alexandre, 2008), which progress from lower to higher levels, such as:

- **Rote:** the drilling of facts, knowledge, ideas and routines through constant repetition;
- Recitation: the accumulation of knowledge and understanding through questions designed to test or stimulate recall of what has previously been encountered, or to cue students to work out answers from clues provided in the question;
- Expository instruction: imparting information and / or explaining facts, principles or procedures;
- **Discussion:** open exchanges between teacher and student, or student and student, with a view to sharing information, exploring ideas or solving problems; and
- **Dialogue:** using authentic questioning, discussion and exposition to guide High and prompt.

Typically, activity-based learning promotes higher levels of cognition by promoting discussion and dialogue through question and answer with the teacher. Direct instruction used in traditional "chalk and talk" methods tend to develop lower cognitive levels by emphasising more passive, rote learning and recitation through reading drills for example. Thus we see that activity-based learning is different from traditional teaching in terms of both student behaviour, and cognitive development.

2.3 Concepts Regarding the Process of Change in Teaching Behaviour through ABL

A key aspect to improving the quality of teaching and learning in Ghana lies in changing teacher classroom behaviour. This study hypothesised that *many reform efforts fail because their theory of change differs from the actual processes by which teachers change their behaviours and attitudes* (Guskey, 1986).

Multiple studies of Ghana's education sector have identified the challenges to improving the quality of education in Ghana (see Appendix A). These have noted that *all, or almost all, the components of ABL already exist within the current Ghanaian system*. Over the past 15-20 years, child-friendly policies have been formulated; multiple teaching and learning materials (TLMs) – including syllabi, teachers' guides, and textbooks – have been developed; student assessments have been modified; and administrators, teacher trainers and teachers in various parts of the country have been trained at either the pre-service or in-service levels on how to implement ABL. Training has often proved inadequate and is not sustained at the school level;

Low

this is potentially one reason why prior efforts have not significantly changed teaching and learning practices in Ghana.

This report asserts that a key aspect to improving the quality of teaching and learning in Ghana lies in the process of changing teacher classroom behaviour, as part of a holistic approach. The following diagram drawn from the SfL intervention studies, illustrates what we mean by "holistic" in the context of this report.



Many attempts to change teaching practice in Ghana have failed because they did not demonstrate to teachers the *evidence* of student improvement through good ABL practice Such a holistic approach has the potential to have far greater impact on Ghana's education quality issues, if tackled at both system and school levels.

Professional development leaders, often attempt to change teachers' beliefs about certain aspects of teaching or the desirability of a particular curriculum or instructional innovation. Countless "sensitisation" workshops are held to convince teachers of why they should not lecture, but rather use ABL approaches. But in some cases, such workshops do not model the ABL approaches they recommend, and even when these "new" ideas are presented in an active, creative, and involving manner, they still presume that changes in teachers' attitudes and beliefs will lead to specific changes in their classroom behaviours and practices, which in turn will result in improved student learning. Such theories of change have not only a long history of failure in Ghana, but in many countries throughout the world.

Three major goals of professional development, including many conducted in Ghana are:

Figure 2.1: Flawed Theory of How Teachers Change Classroom Practices and Attitudes

Change in teac	hers' attitudes,
beliefs, and	perceptions

Change in the classroom practices or behaviours of teachers

Change in learning outcomes

This report adopts Guskey's concept (2002) regarding the way that teachers in Ghana, and other parts of the world, *actually* change their classroom practices and attitudes. The model suggests a different sequence among the three major outcomes of professional development. According to the model, significant change in teachers' attitudes and beliefs occurs primarily *after* they gain *evidence of improvements in student learning through their own observation*, or through various forms of assessment which is summarised in Figure 3.2 below as "professional development".

Figure 2.2: Theory of How Teachers Really Change Classroom Practice and Attitudes



For teachers to understand ABL, and be willing to implement it, they need to:

- Observe it in action, from an experienced teacher in a classroom similar to theirs
- 2. Review and discuss evidence / info which indicates ABL leads to improved learning outcomes and student progress
- **3.** Learn specific classroom practices, on what they see working and try them in their own class

The key to long-term change in teachers' attitudes and beliefs is clear evidence of improvement in learning outcomes and alignment with assessments and incentives This conceptualisation has several implications.

First, for teachers to understand ABL they need to observe it in action, as practiced by an experienced teacher in a classroom similar to theirs. They need to observe the different role and relationship between the teacher and students, the physical layout of the classroom, the ways teaching and learning materials are used as part of students' learning activities, the active participation and engagement of students in asking questions, working in small groups and making tangible products which demonstrate their learning. Ideally, they need to interact with an experienced ABL teacher to understand that teacher's own journey from traditional, to ABL pedagogy.

Secondly, teachers need to review and discuss whatever evidence or information exists which indicates that ABL leads to improved learning outcomes and student progress through the educational system. With both their own observation experience and solid documentation of the advantages of an ABL approach, they may be open and even desirous of changing their teaching practices.

Thirdly, as part of their professional development and training, **teachers need to learn specific** sets of classroom practices, which are based on what they see working for them or other teachers, and try them out in their classrooms, under close supervision and monitoring of head teachers or other mentors. They may still be sceptical of the ABL approach, but at least willing to learn ABL concepts and methodologies, and to try them out in their own classroom.

It is also true that if any teaching activity is seen as taking additional time and money, then underpaid and underappreciated teachers may be hesitant to adopt it, regardless of how much supervision and monitoring they are placed under. Approaches that teachers perceive as taking too much extra time or money, or yielding no tangible evidence of success, are generally abandoned.

In the Ghanaian context, interviews and observations in this study found that teachers paid particular attention to activities in which they were assessed, or for which incentives were provided. For example, teachers in PRESET and INSET training paid greater attention to items on assessment instruments that were used to evaluate themselves. Additionally, teachers respond to being positively recognised for effective teaching.

Finally, when teachers see improvements that result from changes they have made in their classroom practices, such as a new teaching approach, the use of new materials or curricula, or simply a modification in teaching procedures or classroom format, and when they find them to be aligned with how their teaching is being assessed, and the incentives provided them, then

they do internalise the new behaviours and come to a new set of beliefs and attitudes, beginning a sustainable change of teaching behaviour.

Ultimately, the key to long-term change in teachers' attitudes and beliefs is clear evidence of improvement in the learning outcomes of their students (Guskey, 1989), as well as alignment with assessments and incentives provided, particularly in the Ghanaian context. This model of change is based on an experientially based learning process for teachers.



Teachers are more likely to retain and repeat practices that they observe to be bringing improvements in their students and for which they are rewarded, not because research, theory, or experts promote them, but because they have seen and felt the results. Neither workshop lectures, nor modelled activities in workshops, may be sufficiently powerful for most teachers to internalise the change. As is the case with learning more generally, changes are internalised when teachers experience the benefits in the classroom, preferably their own, with children, *not* in an idealised laboratory or workshop setting.

Teachers in Ghana rarely know how their students are doing as there is no comparable assessment of students nationwide that is meaningful at the school level

Average teaching behaviour over the past 15-20 years¹⁹ has not improved, urgent action is now needed – as for example:

- Up to 27% of public primary school teachers in 2008 were absent on any given day
- Only 39% of days in the 2007 school year were actually used for teaching and learning

An issue with such evidence based learning in Ghana is that teachers often do not know how their students are doing as there is no comparable assessment of students nationwide that is meaningful at the school level. The NEA is only done at the regional level every two years and the SEA has not been carried out since 2009. Whilst classroom based observations and learner progression through the curriculum will demonstrate results of ABL practice, better, more regular assessment is needed of both teaching and student outcomes in the longer term. It is not thought that such classroom observations are currently taking place in any regular or indeed regulated manner, and this must be addressed in any national approach developed for Ghana.

2.4 The Problem of Teaching and Learning in Ghana

While Ghana has impressively improved access to basic education rates, with an increase in the Gross Enrolment Ratio (GER) at the primary level from 94.9 in 2008-09 to 96.4 in 2010-11 (Ministry of Education, 2011), trained teacher supply and educational quality in key subject areas remain alarmingly low. Ghana scored next to lowest worldwide on the 2003 Trends in International Mathematics and Science Study (TIMSS)²⁰, and as recently as 2011 the National Educational Assessment (NEA) showed that only 35% of children leaving 6th grade were proficient in English and only 16% in Mathematics.

One of the key reasons for Ghana's continued low learning levels is that time spent in school is not always productively used. A 2008 study by the Center for Democratic

Development (CDD) found that 27% of public primary school teachers were absent on any given day, whilst out of 197 days expected for learning in the school year, only 76.3 days were actually used for learning (Abadzi, 2007, p. vi). Teaching behaviour over the past 15-20 years²¹ has not improved.

Problems such as inefficient resource allocation include: the challenge of information transfer between the District Education Offices (DEOs) and the GES central divisions; and the fact that 97% of recurrent budget goes on salaries and ADEOPs²² are not fulfilled - interviews of district officials indicated that long time-lags between the beginning of the school year and when they receive funding and materials makes it difficult for them to implement policies. In addition to this, training on ABL has largely receded after funding has stopped, particularly as most of this has come from Donor sources.

¹⁹ The period over which the DFID Terms of Reference noted for this study

²⁰ See <u>http://nces.ed.gov/timss/</u> - however, it should be noted that TIMSS countries do not include other SSA countries i.e. is not worldwide comparison, but a group of higher income countries

²¹ The period over which the DFID Terms of Reference noted for this study

²² Annual District Education Operational Plan

Some of the key challenges for education quality in Ghana include:

- alarmingly low trained teacher supply and educational quality in key subjects
- significant teacher absenteeism and high level of unproductive time in classrooms
- inefficient resource allocation and long delays in schools receive funding and materials
- inefficient information transfer
- teacher training in ABL has not been sustained
- low learning levels

ABL could have the ability to make a real impact on addressing these issues. 15 years after Ghana embarked on its major education reforms²³, the time is here to take stock of lessons learned from successful and unsuccessful aspects of reforms and previous interventions, to determine what could be feasibly be achieved, and ensure we put Ghana's children at the centre of the approach to delivering quality basic education going forwards. It is within this context that this study was undertaken.

2.5 History of ABL in Ghana

Ghana has been the testing ground for many teaching and learning initiatives over the past 15-20 years. These initiatives, largely funded by donors, have sought to improve learning by introducing and reinforcing valuable teaching skills, materials and approaches, most of them child-friendly, learner-centred, and involving ABL.

Indeed, many of these initiatives have developed and revised ABL specific curricula²⁴, teaching guides, and other teaching and learning materials (TLMs). Teacher training has been part of such curriculum reform initiatives, along with curricular and teacher standards, alternative forms of assessment, out-of-school educational programming and mother tongue initiatives. However, few if any of these have been adopted nationwide, or sustained after donor-funding ended (see section 6 and Appendices B and D for full discussion on this).

With various governmental and non-governmental organisations conducting interventions, there have been challenges in coordination, information-sharing and consistent application of standards and curriculum. Little evaluation has been done, and where it is has (i.e. NALAP), interviews conducted during this study indicated that results were not widely known at either the school or national/system level²⁵.

A full mapping of current and previous intervention schools was beyond the remit of this study, but doing so might enable the tracking of students and teachers through the system to ascertain whether the benefits of ABL have dissipated over time, or whether they have led to improved outcomes higher up the system, i.e. if a GES-MASHAV taught child would achieve better results beyond the programme – during primary and even high school. This would be of particular interest given DFID's upcoming Girls Unite and PASS in Ghana programme which will be using ABL methods at high school level – if children had come from ABL feeder schools lower down would they have even more chance of success, than those benefitting from the methods only at high school. Again this is far beyond the remit of this study but presents an area for future research which might support the take up of ABL throughout the whole system in Ghana.

Ghana's children must be at the centre of delivering quality basic education

Ghana has been the testing ground for many ABL based teaching and learning initiatives

Challenges to ABL to date:

- Largely been funded by donors
- Few if any adopted nationwide, or sustained after funding ended
- Poorly coordinated with limited evaluation or information sharing
- Good lessons learned which can be built on to create a national approach to improve the quality of teaching and learning in Ghana

²³ In 1997

²⁴ Not part of national curriculum updates.

²⁵ A research report showing positive outcomes from SfL is due to be finalised by VSO in January 2013.

Assessed what elements of Ghanaian ABL initiatives are best-suited to the national context

2.6 Research Questions, Hypotheses, and Justification of Approaches

Given the range of experimentation with ABL approaches in Ghana, this research aimed to ask *what elements of these initiatives are best-suited to the national context* - to generate knowledge of what teaching and learning approaches work best in Ghana and provide some basis for decision-makers to develop a truly 'Ghanaian package' of ABL teaching and learning materials and approaches.

This report therefore aims to consolidate our analysis and learning from several quality-focused initiatives in Ghana, and to synthesise lessons learned from similar initiatives in other countries. The evidence base and associated analysis generated should enable leaders in the MoE and the GES to better utilise the existing body of knowledge and experience with effective teaching approaches, and to make informed, strategic decisions about how to systematically improve the quality of teaching and learning in basic education in Ghana. Since this study attempted to deal with both *policy and practice,* it used a range of qualitative and quantitative research methodology approaches.

2.6.1 Research Questions and Hypotheses

This study focussed on two key questions:



1. What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG and P1-3)?

Hypothesis: students from programmes with more characteristics of ABL have higher attainment levels than those from schools with less ABL characteristics.



2. How could successful characteristics of ABL be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

Hypothesis: it is expected that for successful ABL to occur, where system level factors are successfully being implemented, school level aspects of ABL will also be successfully implemented, and there should be correlation between ABL implementation in both.

2.6.2 Justification of Approaches

Addressing the research questions required diverse methodological approaches. For the first research question on *what* education programmes include characteristics of ABL, qualitative explorations of various education programmes in Ghana were undertaken by reviewing secondary data (see Appendix B) and collecting primary data through interviews and observations (see Section 7 below). ABL is already being used across Ghana, with teachers having been trained in nationwide programmes that incorporate elements of ABL such as the National Literacy Acceleration Program (NALAP), as well as in smaller scale programmes such as School for Life (SfL).

Uncovering evidence about which programmes demonstrate positive results for scaling up also required a mixed approach: interviews of experts (policy makers, teacher educators, teachers, etc.) in Ghana's education system, as well as informal and formal assessments of students during school visits. The hypothesis related to the first question is as follows:

• Students from programmes with more characteristics of ABL have higher attainment levels than those from schools with less ABL characteristics.

ABL is being used in Ghana e.g.:

- National Literacy
 Acceleration Programme
 (NALAP)
- School for Life (SfL)

Two Ghanaian ABL interventions were studied – GES-MASHAV and SfL through literature review and classroom observation

Rigorous experimental evaluation was not possible, but should be conducted to deepen the evidence base in preparation of a national ABL policy

Successful aspects of ABL (such as ABL specific INSET) and unsuccessful aspects (such as unsustained donor funding) were reviewed

The most important aspects resulting in better ABL implementation from the SfL and GES-MASHAV samples, were ABL specific INSET training and pedagogical support Following a literature review of all identified ABL interventions in Ghana (see Appendix B) the research team identified two ABL interventions which showed the highest number of ABL characteristics, SfL and GES-MASHAV. Discussions with DFID and other stakeholders verified that these were the best interventions to examine. School surveys and student assessments were then conducted. Individual schools were selected through a combination of random, non-random and cluster based sampling techniques (as described in Section 3.1.3.1 below), and approved by DFID.

In the both sites - GES-MASHAV and SfL - the school and system levels of ABL implementation appeared to be related, and mutually reinforcing, though due to unsuitable field instruments, the link between learning outcomes and ABL was not clear (see Section 7 for full details).

Ideally, the fieldwork would have involved an assessment of student achievement gains, as measured through a longitudinal experimental study design, in which students from similar backgrounds were randomly assigned to ABL treatment or control groups, and assessed over one or more school years. However, as previously mentioned, due to resource and time constraints, it was not possible to meet this "gold standard" of experimental design in this study. This should however, form part of any future research (for more detail see Section 3.1, and recommendations in Section 8.2 below). This study cannot, and does not claim to provide "evidence" about ABL *impact* in Ghana, but provides a foundation for further research and policy by showing indications of success.

Addressing the second research question on *how* successful ABL characteristics can be combined and implemented in Ghana involved collecting data on processes already being used successfully (such as ABL specific INSET training, support from GES/MoE and low cost TLMs) or unsuccessfully (such as un-sustained funding - particularly as most interventions were donor funded, training not repeated, and teachers not replaced by other trained teachers when they moved schools).

Secondary data, such as programme evaluations, and primary data from interviews, focus group discussions, and observations were collected. Such a process approach highlights what has been learned in other international settings.

Successful ABL requires addressing multiple aspects of teaching and learning simultaneously, including system and school level factors such as: programme development and classroom arrangement. Thus in relation to the second research question:

 It is expected that for successful ABL to occur, where system level factors are successfully being implemented, school level aspects of ABL will also be successfully implemented, and there should be correlation between ABL implementation at both levels.

The most important aspects resulting in better ABL implementation from the SfL and GES-MASHAV samples, were ABL specific INSET training and pedagogical support. **Any national ABL intervention should thus consider these at the heart of any approach**.

The findings in this study suggest that more effort, especially at the system level may be productive for ABL to become embedded in Ghana. As cases from other parts of the world show, implementing ABL successfully calls for developing multiple system and school level aspects, which is a complex endeavour.

Again, although the initial objective for the fieldwork was to adopt a quasi-experimental approach involving ABL intervention and control sites, a case study approach was used instead - given time and budget constraints it was not possible to gather enough relevant data for close matching of sites, specifically, for selection of non-ABL intervention schools that could be compared to ABL intervention schools. The data collected should be considered observational and not statistically reliable. The main implication from the limitations of this study, are that the findings cannot be generalised to the whole of Ghana. Given the contextual restrictions – an out of school programme and one based on basic schools only in Kumasi - this factor should be taken into account if any pilot programmes are developed from this study. Despite the

limitations, the study, and the approaches it used set the stage for further work on developing more specific hypotheses about improving teaching and learning in Ghana.

2.7 Outline of Report

The remainder of this report will include the following sections:

- Section 3 Methodology: a discussion regarding research methodology, and Classification Framework for assessing the extent of implementation of ABL at system and school levels in Ghana;
- Section 4 Lessons from International ABL Interventions: a literature review of international experience with regards to activity-based learning, and its relevance for Ghanaian education;
- Section 5 Lessons from ABL Interventions in Ghana: mapping of different initiatives to improve educational outcomes in Ghana (location, funding source, level of Government involvement, key features, materials and other inputs provided);
- Section 6 Lessons from Primary Research on ABL Interventions in Ghana: analysis of the technical strengths and weaknesses of certain high-potential approaches (drawn from classroom observation, interviews of teachers and other key educational stakeholders, and student literacy and numeracy diagnostic testing);
- Section 7 What Works and Does Not Work in Ghana Capacity Gap Analysis and: analysis of what works and does not work in the Ghanaian context, and an analysis of current capacity gaps to meeting kindergarten and early primary education needs and the emerging ABL vision;
- Section 8 Recommendations for Progress recommendations for moving forward with concrete steps to improve learning outcomes in the early years of primary education;
- Section 9 Conclusions: concise summary of the main conclusions as they relate to the research questions, and methods undertaken;
- **Section 10 Appendices:** technical appendices (including full versions of: Literature Review; Classification Tool; survey instruments/tools) and general appendices (including: ToRs, references etc.).

3. Methodology

This section will detail the methodology used in this study including: data collection and sampling techniques; desiring the classification tool; assessing the level of ABL implementation found and the processes for changing teaching behaviour in Ghana

3.1 Overview of Methodological Approach: Data Collection and Processes

This study was carried out in two phases, utilising a triangulated research approach (Barrett, Crossley and Dachi, 2010) which involved qualitative and quantitative techniques: literature review, semi-structured interviews, focus group discussions, classroom observations, teacher surveys, and student assessments.

- 3. Methodology
- 4. Lessons from International ABL Interventions
- 5. Lessons from ABL Interventions in Ghana
- 6. Lessons from Primary Research on ABL Interventions in Ghana
- Analysis of ABL in the Ghanaian Context -Capacity Gap Analysis
- 8. Recommendations
- 9. Conclusions
- **10.** Appendices

•



Niglas' extensive review of 46 studies (1999) provided justification for the approach of collecting data at multiple levels (international, national, district, and school); and using a combination of quantitative and qualitative methods²⁶. Detail on sampling is provided in 3.1.2.1 below.

3.1.1 Phase 1: Literature Review and Contextual Analysis

The first phase was focused on developing a better understanding of ABL concepts and practice at the international and national levels, largely through literature review. None of the literature identified and reviewed on ABL in Ghana or in developing country contexts were experimental or quasi-experimental studies, a finding that is not surprising given that a DFID-funded study of education research found that out of 605 articles reviewed in four key international education journals over the period 2004-2008, only four used experimental or quasi-experimental approaches (Foster et al., 2012, p. 712)²⁷. Noting the dearth of international education research using direct observations and fieldwork interviews, and given the context of the schools sampled in Ghana, data was gathered with informal collection methods, such as open-ended conversations with experts - considered an essential part of operational research in the Ghanaian context.

3.1.1.1 Bringing together Knowledge on ABL Practice

Through a review of literature of both international and Ghanaian evidence, this study brings together in a systematic way the major ABL interventions previously undertaken in Ghana and internationally which demonstrate ABL aspects. It analyses their strengths and shortcomings, to distil lessons learned and identify opportunities for improving primary education in Ghana through ABL. It takes stock of the current situation, benchmarks Ghana's experience with ABL against international best practice, and provides an evidence-based approach for education policy dialogue going forward. It provides a tool that will allow Ghanaian education policymakers to assess and accelerate progress in implementing ABL at systemic and school levels. In particular, it looks at the critical process of changing teacher behaviour with respect to ABL for improved student learning outcomes.

The interventions analysed were selected based on the contextual knowledge about education by study team members, initial literature review, and interviews that were conducted about interventions in Ghana. None of the literature identified and reviewed were experimental or

Phase 1 research focussed on literature reviews of:

International ABL

Ghanaian ABL

It is critical to change teacher behaviour on ABL to improve student learning outcomes

²⁶ Approximately 40% of studies reviewed by Niglas combined quantitative and qualitative techniques, at different levels of enquiry. Some used quantitative sampling and data handling methods; others used case studies with non-randomised sampling methods (purposive sampling); while others used both quantitative and qualitative data handling methods alongside quantitative strategies such as small-scale surveys.

²⁷ Additionally, the review found that only 5 to of the 605 articles were tracer studies (that studied subjects over time). The authors suggest that the lack of in-depth Field-based research may be due to the lack of incentives (including limited resources for intensive research and short-timelines that researchers face).

quasi-experimental studies, with most being summative evaluations of projects and programmes.

3.1.1.2 Justification for Interventions Reviewed

In the research literature, ABL is related to many widely studied approaches to teaching and learning²⁸. This study focused on a large range of ABL programmes and projects throughout developing countries, particularly in Africa, Asia and Latin America, most of which received external support and funding through multilateral institutions such as the World Bank, UNICEF and the EU, or bilaterally through USAID, DFID, CIDA or individual countries, and particularly those which had "gone-to-scale," and on which a range of research studies and evaluations had been conducted. Other large-scale ABL programmes in a single country were also included in the review, if they had been in place for several years, and had had evaluations and / or research done on how ABL affected teaching behaviour and student learning and attendance.



Two key factors provided the basis for this literature on ABL interventions:

- the educational outcomes achieved
- the extent to which the characteristics and implementation of the interventions were consistent with the system and school level aspects of ABL in the classification tool (see Appendix C)

3.1.1.3 Sources of Evidence and ABL Initiatives Reviewed

The sources of evidence on ABL in developing nations were primarily internal evaluations (conducted by programme staff) and external evaluations (conducted by independent experts) of ABL type projects / programmes, and reviews of ABL interventions by various bilateral and multilateral donor agencies. The quality of the research and evaluations varied greatly. Of particular importance were evaluations and research on four major ABL interventions: Escuela Nueva in Colombia, ABL in Tamil Nadu India, NEU in Guatemala and BASE in Nicaragua. Multiple criteria were used to make judgments about the quality of the finds on these four programmes/projects, as outlined in the following table.

Figure 3.1: Evaluation of Evidence Quality

Programme Name / Evaluation Criteria	Escuela Nueva Colombia	ABLTamil Nadu	NEU Guatemala	BASE Nicaragua
Quality External Evaluations	5	5	4	3
Quality of Internal Evaluations	5	5	5	3
Longitudinal Studies	5	4	5	4
International Recognition for Quality	5	5	4	3
Effects on Teacher Behaviour and Classroom Environment	5	5	4	4
Effects on Student Learning	5	5	4	3
Quantitative Research	5	5	5	3
Qualitative Research	5	5	4	5
Experimental Designs	5	5	-	-
Consistency of Results	5	4	3	3
Sampling Procedures	5	5	5	4

Research Quality Ratings: 5=Excellent 4=Good 3=Moderate 2=Poor 1=Non-existent

²⁸ The approaches to teaching and learning are under various names. Some of the names include: experiential, active, project-based, cooperative, inquiry, constructivist, problem-based, action-research, community-based, service, child- or student- centred, reflective, individualised, and integrated subject matter.

The evaluations concentrated on one or another component of the ABL intervention, sometimes utilising control groups, but often just a pre-post design. The typical evaluations utilised a set of ABL school or classroom observation instruments, teacher and administrator questionnaires, interview protocols, time-lines, reviews of national literature, checklists, attitudinal studies, field visits and focus groups.

A review of research which utilised randomised evaluations was conducted. This revealed a number of interventions effective in improving aspects of student performance and attendance, including: school feeding; scholarships; cash transfers; uniforms; health programmes; teacher attendance; teacher incentives; parental involvement; and locally recruited teachers. However, there were few randomised studies found that directly spoke to the efficacy of ABL in improving student attendance or learning achievement and as such the depth of information or ability for these findings to be generalised has some limitations. In light of this, the team focussed on two studies which had the most available and relevant/comparable data - two key international primary school ABL models that have progressed from "latent" to "advanced" ABL (see Appendix A for details) **ABL in Tamil Nadu and Escuela Nueva in Colombia**.

The educational issues these two ABL initiatives attempted to address (low student learning outcomes, poor performing teachers, student dropout/repetition, etc.) were identical to the quality issues facing Ghana, although repetition is not part of Ghana's education policy. There was thus a wealth of independently evaluated information from these two programmes which were judged to be highly relevant for this operational research programme.



There are few

randomised studies that

show the efficacy of ABL

in improving student

attendance or learning

achievement - the ability

generalised therefore has

for these findings to be

some limitations

Case Study 1: ABL in Tamil Nadu, India: the ABL initiative is implemented in Grades 1-4, in both single-grade and multi-grade classrooms. It has transformed teaching and learning across the state in just a few years, and is now being adapted/adopted by several other Indian states (National Council of Education Research and Training, November 2011).²⁹ This was the most recent large-scale (40,000 schools) and independently evaluated ABL programme– which is similar to Ghana in many respects, such as: use of multi-grade teaching, low student learning outcomes, poor performing teachers, and student dropout.



Case Study 2: ABL in Escuela Nueva ("New School"), Colombia: the internationally recognised Escuela Nueva movement that begun in Colombia in the 1970s has improved educational outcomes, reduced achievement gaps between urban and rural youth, multi-grade and graded classrooms, and girls and boys³⁰. It has served as the example for similar programmes in countries throughout Latin America, the Indian Sub-continent, Africa, the Middle East, and the Central Asian Republics (Kline, 2002). Escuela Nueva was adopted in Guatemala (*Nueva Escuela Unitaria, NEU*) and Peru (*AprenDes*), and up to 16 other countries by 2012³¹. This was the earliest well-documented and extensively evaluated initiative to implement activity-based learning and as such provides much relevant data for Ghana where there are similarities such as: use of multi-grade teaching, disparities between genders and between regional performance.

 ²⁹ Sources: British Council, 2009; National Council of Education Research and Training, 2011; Indian Ministry of Human Resource Development, Sarva Shiksha Abhiyan (SSA), 2008), "Programme Evaluation Report of Activity-Based Learning, Tamil Nadu", National Council of Education Research and Training, November 2011.
 ³⁰ Sources: McEwan, P. J. (1998). The effectiveness of multigrade schools in Colombia. Stanford, CA: School of Education, Stanford University; McEwan, P.J. and Benveniste, L.A. (1999). Constraints to implementing educational innovations: The case of multigrade schools. Stanford, CA: School of Education, Stanford University; Rojas, C. (1994). The Escuela Nueva school programme in Colombia. In P. Dalin (Ed.), How schools improve: An international report. London: Cassel.

³¹ Lessons are also drawn from the implementation of the Escuela Nueva model in Bolivia and Ecuador. See Kline, 2002; Kraft, 1998; Schiefelbein, 1992; Chesterfield, 1996a.

A number of other international ABL interventions were also reviewed, and lessons were drawn from the system and school level implementation of these³², including (see Appendix A for full details:

- Bangladesh: Bangladesh Rehabilitation Assistance Committee (BRAC)
- Bangladesh: Friends In Village Development Bangladesh (FIVDB)
- Egypt: Education Reform Program (ERP)
- Ethiopia: Basic Education System Overhaul (BESO) Project 1 and 2
- Indonesia: Managing Basic Education learning that is Active, Creative, Effective and Joyful in Indonesia (MBE)
- Indonesia: Creating Learning Communities for Children (CLCC) (UNICEF)
- Jordan: Education Reform for Knowledge Economy Project (ERfKE)
- Malawi: Malawi Education Support Activity (MESA)
- Nicaragua: Basic Education (BASE) Project I and II
- Nigeria: Literacy Enhancement Assistance Program (LEAP)
- Zambia: Primary Reading Programme (PRP)

The literature review also focused on the following major initiatives in Ghana (see Appendix B for full details):

Figure 3.2: Summary of Major ABL Initiatives in Ghana

Ghanaian ABL Intervention	Coverage	Key Elements and Lessons Learned from Approach
GES-MASHAV	Kumasi Metropolis. Involves 10 schools and 50 teachers. KG1-2 classrooms. Pilot group involving 5 schools. Extended to 10.	 Produced 75 trainees to date. Significant change in the learning environment of the pilot classrooms. New environment included activity corners for socio-dramatic play, a book corner, a corner for creative activities, blocks and table games, at different levels and which could be used in different teaching situations. The classroom has become much richer learning environment. Children enjoy learning and demonstrate independent work attitude and creative thinking.
		 Very positive impact on teachers and pupils. Teachers who were trained have adopted a new philosophy in teaching in ECD classrooms, understand the importance of integrative planning for teaching in the kindergarten, and encourage children to work in small groups and give them more individual attention.
		Absenteeism (both children and teachers) has reduced.
School for Life (SfL)	Operates in 9 districts in northern Ghana.	 Over 90% of children graduated, and 65% of enrolees integrated into the formal system. At least 50% are girls. Graduates transit smoothly to formal school. Success led to the founding of Futures for Kids Ghana in April 2008. 85,000 children enrolled between 1995 -2006. Trained 1,674 regular teachers and 7,000 community-based facilitators in use of native language literacy methodology in lower primary classes. Now transformed into a Learning and Development Centre.
National Literacy Acceleration Programme (NALAP)	National - KG and Lower primary Schools in all 170 districts of Ghana.	 70,000 head teaches / teachers for grades K1-P3 received one-week orientation workshop. Improved teachers' practices on arranging learners, use of TLMs, thinking skills and learner interactions. Activities such as read aloud, group work, role plays and by pupils' creative interpretation of pictures and text added value to children's learning Strong positive response from educators, trained teachers and community members (great majority welcomed a bilingual early grade literacy program). Teacher guides and instructional materials supplied to schools – though majority didn't receive materials after end of 2nd term and only began to implement during the 3rd term.

³² Please note that in some cases not all aspects of information needed to fully analyse the interventions according to the classification scheme were available. However, lessons presented are drawn from the combination of interventions analysed.

Ghanaian ABL Intervention	Coverage	Key Elements and Lessons Learned from Approach
		 Endorsement of NALAP by MoE / GES provides an avenue for sustainability - threatened by limited follow-up training, NALAP trained teachers who move out of schools not often replaced with other trained teachers. With no further training, some claim NALAP has "died".
		 Limited impact as it appears there was limited follow-up training. Need second round of training, to replace instructional materials, ensure implementation of 90-minute language and literacy period and re-activate public awareness campaign.
Molteno / Breakthrough to Literacy (BTL)	Piloted in 4 districts in 2 regions with 50 schools: Northern and Eastern.	 Teachers in pilot schools given training in teaching and learning in the mother tongue. Most pupils able to read and write in first language by the end of P1 (70% of learners made "good to excellent progress") through intensive teaching of phonics in context and word writing tasks. Transition to English in P2 smooth, with time spent on oral work through play and games, reading and writing. Teachers and learners are highly motivated . Attitudinal change in punctuality, regular attendance and increased enrolment in P1; and more active participation of pupils in lessons. Teachers indicated they enjoyed teaching more, felt they were better teachers, teach differently than before, and that children enjoy class more. Teachers receive training in making classroom print-rich classroom with lots of environmental prints hanging everywhere. Increased parents' interest in children's schooling. Parents and community members asserted that the program was suitable because they liked the emphasis on the local language
		Successes contributed to the design of NALAP
UCC / CoE Curriculum Reform	5/ 38 CoEs targeted. These are the CoEs that offer training in pre- school teaching.	 Expected tutors will gain expertise to train pre-school teachers in use of ABL methods. Expected outputs are prototypes of TLMs for use at the pre-school level. Sustainability will depend upon how tutors can be utilised to train head teachers at district level, with funding provided by the district, municipal or metropolitan assemblies.
Leadership for Learning (LfL)	Targeted 125 head teachers and 60 circuit supervisors from 60 districts in all 10 regions. With TED, over 1,500 Head Teachers and 200 Circuit Supervisors trained.	 Head teachers utilised principles of Dialogue and Accountability to address challenges of teacher and pupil absenteeism. Increased awareness of head teachers in their capacity to initiate change at the school level, improving pupil learning through dialogue. Trained head teachers and circuit supervisors demonstrated positive orientation towards LEARNING as the central issue throughout. 125 school transformational leaders (STLs) trained to promote peer learning at school level Over 2,500 head teachers and 200 circuit supervisors have been trained Very high impact on policy makers (MOE/GES) , head teachers and circuit supervisors MoE / GES integrated principles into contents of GoG's Head teacher Handbook. Trained head teachers see themselves as Leaders for promoting learning not administrators.
GES School Based Assessment (SBA) Reform	Nationwide. All primary and JHS level schools across the 10 regions and 178 districts in the country	 Developed handbooks to help teachers in writing school based assessment tasks. Previous experiences indicated suspicion in consistency, accuracy and reliability of continuous assessments from school (i.e. believed some teachers make up marks). Unclear how changes provide greater accountability.
JICA / GES Nationwide IN-SET Programme	National. All basic schools (KG, Primary and JHS) involved	 Various manuals and handbooks produced with guidelines on INSET, organisational structures, how often training sessions (cluster based INSETBI and SBI) should be held, etc. INSET Sourcebook developed with 6 modules: District Guidelines; Operational Manual for District Level INSET; School Based INSET (SBI) and Cluster Based INSET (CBI) manual; General Pedagogy; Sample Lesson Plans in Mathematics; Sample Lesson Plans in Science. SBI/CBI lesson observation sheet developed for: Demonstration Lessons; Peer Teaching, and; TLM Preparation and Usage. High Impact. INSET programmes have impacted positively on participants. Trainings held on INSET.
		 Initial surveys indicate that 80% of schools in the 10 pilot districts organised SB/CBI at least twice a term (INSET brochure). Yet to be seen whether pilot schools will continue to implement INSET. GES established Staff Development Centre to support TED's INSET activities as a way of sustaining the programme. Selected teachers sent to Japan for study tour to learn child-centred lesson planning (seen as a sign of recognition). Primary school teachers who underwent TLM training "seem" to have improved how they deliver mathematics and science.

Ghanaian ABL Intervention	Coverage	Key Elements and Lessons Learned from Approach
Untrained Teachers Training Programme: Untrained Teachers' Diploma in Basic Education (UTDBE)	National. Carried out in all 10 regions. Eventually enrolled over 30,000 untrained teachers.	 Learning focused teaching skills and techniques developed in teachers and Diploma certificates awarded to graduates. On-going sustainability – CoEs brought on board to integrate programme into their curriculum. Some beneficiaries taken up teaching appointments in community schools; thus reducing teaching staff pressure on schools.
Teachers for Africa (TFA) Programme	All regions, except Upper East and Upper West.	 Established 24 Teacher Resource Centres (TRCs) in 24 colleges. Resource centres provide TLMs and training. Resulting in improved ABL teacher training. Trained 5,000 university students, 8,000 TTC tutors, 50,000 teacher trainees, 7,500 serving teachers in basic schools, and 3,000 secondary school students. Still being used in some TTCs, even where there no IFESH volunteers (e.g. Accra College of Education). However, resource centre was taken off the TTC curriculum.
Community Teachers for Ghana	-/-	 258/260 uncertified teachers trained, improving quality of ABL instruction to 4,300 primary students in rural and under-served areas. 2 gained admission into teacher training college to receive a Diploma in Basic Education. Increased abilities in reading and math for primary school aged children. Improved teaching and learning in rural areas. Relatively small scale due to funding. Report not yet available to determine sustainability.
Sfl. and GES MASH	Based on	an analysis of each programme's incorporation of ABL characteristics, two of these

SfL and GES-MASHAV were selected as they included the greatest number and % of ABL characteristics in Ghana Based on an analysis of each programme's incorporation of ABL characteristics, two of these programmes were selected for additional research (presented in Section 6): School for Life (SfL) and GES-MASHAV, as they included the greatest number and percentage of ABL characteristics of all the ABL type programmes in Ghana. The proposal and rationale for the selection of these two programmes was discussed explicitly and approved by DFID.

The analysis for selection was based on the paper prepared by Professor Richard Kraft, "Activity-Based Learning - A Comparison of 18 International and Ghanaian Programmes: Key Activity Based Learning Characteristics of International and Ghanaian Programmes" (see Figure 3.3 below and Appendices A and B). The Numbered columns in the figure indicate the international or national programmes which have been reviewed as part of this research:

Figure 3.3: Analysis of ABL Characteristics of International and Ghanaian Programmes

ABL/Characteristic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
System Level																		
ABL in PRESET	Х	Х		Х											Х		Х	
Sustained INSET	Х	Х	Х	Х	Х	X	Х		Х	Х	Х	Х		Х		Х		
Mentors/Teacher Learning Circles	х	х	Х	Х	Х	X	Х			Х	Х			х		Х	х	
Incentives: promotion; salary; recognition	Х	Х	Х	Х	Х		Х				Х	Х	Х					
Strong Understanding of ABL by teachers	Х	Х	Х	Х	Х	X	Х				Х			Х		Х		
Some History of ABL		Х					Х					Х						
Impact National Policy	Х	Х							Х						Х	х	Х	x
School Level																		
HT/Supervisory Support	Х	Х	Х	Х	Х		Х		Х			Х		Х	Х	Х	Х	
Model Schools	Х	Х	Х	Х	Х	X				Х	Х		Х	Х	Х	Х	Х	x
Literacy/Numeracy Limited Curriculum	Х	Х													Х	Х	Х	х
Community/Parent Involvement	Х	Х	Х	Х	Х	X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	x
Strong PTA, SCM	Х		Х	Х		Х	Х	Х				Х				Х		
Teacher Exchanges	Х	Х	X	Х		Х	X											
Hard-to-Reach Populations	Х	Х	Х	х	Х	X	Х	х	х	Х	х	Х	х	Х	Х	х	х	х

ABL/Characteristic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Constructivist Approach	Х	Х	Х	Х		Х	Х	Х		Х		Х	Х	Х	Х	Х	Х	х
Child Centred Approach	Х	х	Х	х	Х	X	Х	Х		Х	Х	Х	Х	х	Х	Х	Х	х
Vehicles or Transport	Х		Х				Х					Х				Х		
Classroom Furniture	Х		Х	Х		Х	Х		Х								Х	
Teaching/Office Equipment	Х		Х	Х		Х	Х		Х	Х		Х					Х	
Delivered / Funded By																		
International Donor Involvement	Х	Х	Х	Х	Х	X	Х	Х	х	Х	Х	Х	Х	Х	Х	х	Х	Х
National, International NGOs	Х	Х	X	Х	Х	X	Х	X	Х	Х	Х	Х	Х	X	Х	X	Х	Х

(Note: X=ABL Characteristic Present. Blank= not reported in the research literature-but may exist)

- 1=Escuela Nueva-Colombia
 10=BESO I/II-Ethiopia
- 2=ABL-Tamil Nadu-India
- 3=NEU-Guatemala
- 4=AprenDes/CETT-Peru

6=BASE I/II-Nicaragua

- 5=BRAC-Bangladesh
- 15=NALAP-Ghana

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- 7=PAKEM/CLCC-Indonesia
- 8=MESA-Malawi
- 17=GES-MASHAV-Ghana

16=Schools for Life (SfL)-Ghana

11=FIVDB-Bangladesh

12=ERP-Egypt

13=LEAP-Nigeria

14=PRP-Zambia

9=ERfKE-Jordan • 18=Breakthrough to Literacy-Ghana

3.1.2 Phase 2: Classification Framework Development

Through an iterative research process (Pettigrew, 1997), and emerging from a review of the literature on ABL in phase 1, an ABL implementation classification tool was developed to provide a framework for this study (see Appendix C for full details).

3.1.2.1 Justification and Development Process

The ABL Classification Framework was derived from a World Bank (SABER trust) programme which detailed what each criterion would look like along a spectrum from "Latent" to "Advanced". A review of the literature further informed what the specific criteria or *aspect* of ABL should be for the ABL Classification Framework (see Figure 3.4 below), and the details of how these criteria develop along the implementation spectrum. The draft Classification Framework was shared with a number of international and Ghanaian education experts, and the criteria were modified accordingly (Appendix A, Section 6).

Figure 3.4: Aspects of ABL at System and School Level

The Classification

aspect of ABL

Framework shows how each

implementation develops

from "Latent" to "Advanced"

1	System Level	2	School Level
1.1	Policy Formulation	2.1	Classroom Furniture and Layout
1.2	Programmatic Development	2.2	Teaching Methodologies
1.3	Resource Allocation	2.3	Teaching and Learning Materials (TLMs)
1.4	Development of Teaching and Learning Materials (TLMs)	2.4	Promoting Equality and Diversity
1.5	Pre-Service Teacher Training (PRESET)	2.5	Head Teacher Support
1.6	In-Service Professional Development (INSET / CPD)	2.6	Teacher Peer Support

1	System Level	2	School Level
1.7	Academic / Pedagogical Support	2.7	Student Arrangement
1.8	Teacher Assessment	2.8	Student Time on Task
1.9	Student Assessment	2.9	Student Engagement
1.10	Community / Parent Engagement	2.10	Classroom Atmosphere and Student Interaction
1.11	Evaluation Feedback Loops	2.11	Student Continuous Assessment

The ABL Classification Framework represents a distillation of hundreds of our team's classroom observations, teacher interviews and education reports on ABL globally

In addition, the framework represents a distillation of hundreds of classroom observations, teacher interviews and education project reports regarding ABL in South Asia, Latin America, Africa and the United States undertaken by our team³³, and which were cross-checked with Professor Richard Kraft's paper "International Research on Activity-Based Learning"³⁴. The draft Classification Framework was shared with Professor Kraft whose suggestions were incorporated into the final version. To that extent the Evidence Base includes a list of publications which can be found in Appendix A. The final version was approved by DFID before use.

3.1.2.2 System and School Level Aspects of ABL

In addressing the research questions regarding the characteristics of successful ABL and lessons learned from how they were implemented, the classification framework focused on aspects of ABL at two levels: system and school level. The specific aspects at each level are set out in Figure 3.4 above.

The combination of ABL aspects characterises successful ABL

Some of the aspects may be present in any education system, including in systems that promote traditional teacher lecturing. For example, in a class where there is teacher lecturing, student time on task or student engagement may be high, but TLMs may not be effectively used. Hence, it is the combination of the various aspects that characterises successful ABL. For the purposes of this study, we look at how aspects traditionally implemented or controlled at the system/national level, such as INSET training or TLM design affect individual interventions, for example, in the interventions studied, GES-MASHAV and SfL, school based, ABL specific INSET was provided – the implementation of INSET would normally occur through CoEs with its curricula and pedagogy approved by MoE/GES - could such ABL INSET be incorporated into standardised national INSET.

3.1.2.3 Assessment of ABL Intensities

According to the classification framework, at both system and school levels, each of the aspects of ABL interventions can be classified into four degrees or "intensities" of ABL implementation: Latent, Emerging, Established, and Advanced:



³³ For example, Sam Carlson, who whilst at the World Bank managed the Activity-Based Learning Education Policymaker Training Program, which included study tours to observe and study the Escuela Nueva Programme in Colombia and its off-shoots in Central America; led a team to adapt Escuela Nueva to Haiti; and was lead education specialist overseeing the World Bank's assistance (co-financed by DFID) from 2007-2010 to Tamil Nadu's Activity-Based Learning (ABL) initiative under the Indian Government's Sarva Shiksha Abhiyan (Education For All Programme), which involved study tours and financing of independent evaluation. ³⁴ January 2012

- Latent: indicates no significant implementation (much less impact) of the particular aspect of ABL.
- **Emerging:** indicates that an aspect of the ABL intervention has been introduced, but remains in the early stages, and has not yet taken root. Typically, there is a high risk of dissipation of the intervention at the classroom level if it is not reinforced.
- **Established:** indicates that the aspect of the ABL intervention has been introduced, understood, replicated and accepted by most schools and teachers into regular practice. Reinforcement of the intervention reduces dissipation. Sceptics remain however, and the intervention could ultimately fade away if policy, programmatic and financial support are not maintained.
- Advanced: indicates that the aspect of the ABL intervention has become the norm, embedded into policy, planning, resource allocation, MoE documentation, teacher training and behaviour, production of learning materials, design of assessment systems, etc. These different aspects are treated and implemented in a holistic, comprehensive and synergistic manner, with each aspect reinforcing the other.

For both the system and school levels, an overall assessment of ABL was based on the multiple aspects observed.

3.1.3 Phase 2: Fieldwork

The second phase of the study was guided by the literature review, and comprised classroom observations, teacher surveys, and student assessments of two ABL interventions in Ghana – GES-MASHAV and SfL. The criteria developed in the Classification Framework (see Appendix C) were used to ascertain the level of ABL implementation in the two interventions along a 4 point scale: "latent", "emerging", "established" and "advanced". This classification guided the final analysis of data (see Section 6 below).

After reviewing wide ranging literature on ABL in phase 1, the research approach was modified to take into account how other researchers had studied ABL previously. Throughout the study, discussions were held with DFID Ghana to incorporate their input into the sample selection.

Although the initial objective for the second phase of fieldwork was to adopt a quasiexperimental approach involving ABL intervention and control sites, a case study approach was used instead. Given time and budget constraints it was not possible to gather enough relevant data for close matching of sites, specifically, for selection of non-ABL intervention schools that could be compared to ABL intervention schools. Yin, (2003, p. 7) notes that a case study research approach is relevant when the interventions being studied have already been initiated, and participants' behaviours cannot be manipulated, as was true in the cases studied.

The fieldwork was conducted by a team of 8 field researchers, and included a total of 1,146 participants (181 teachers, 900 randomly selected pupils, 23 head teachers, 24 GES / Development Partner representatives, and 18 purposively selected representatives of the Colleges of Education).

The following figure provides an overview of the school visits made during the fieldwork, and the type of sampling used.

Fieldwork comprised:

- classroom
 observations
- teacher surveys
- student assessments

Primary research included 1,146 participants:

- 181 teachers
- 900 pupils
- 23 head teachers
- 24 GES / Donor reps
- 18 reps from CoEs

Figure 3.5: Overview of Phase 2 School Visits

Sample	Phase 2
Period	28th May – 8th June 2012
# Regions	2 Regions (Ashanti and Northern)
# Districts	2 Districts
# Schools	30 schools (10 purposively selected MASHAV) 10 SfL selected through cluster sampling approach from 150 classes (North/Upper West/Upper East regions) 10 randomly selected comparison schools – 5 neighbouring each type
Focus	GES-MASHAV and SfL
Sampling	Random / Purposive (non-random)

3.1.3.1 Sampling

Two interventions - **GES-MASHAV** and School for Life (SfL) were purposively (non-randomly) selected based on feedback from interviews in the first phase of the study highlighting the innovative ABL approaches the two interventions had introduced. Innovative approach in this context means teaching approaches used that have features different from the normal teaching approaches in Ghanaian classrooms, such as pupil-

pupil dialogue, teacher-pupil dialogue. Focusing on these, the research thus looked at the two regions covered by these interventions: Ashanti (though limited to Kumasi), and Northern, and specifically looked at two districts and 30 schools.

The sample schools were selected through randomised and non-randomised sampling techniques: *all* **10 schools in the GES-MASHAV programme** (including the original 5 pilot schools and the second cohort of 5 schools) were selected (non-randomised sampling), while **10 classes of the SfL** were selected through a cluster sampling approach from 150 classes in total. In each of the two regions, 5 public schools near to the intervention sites were randomly selected as comparison sites³⁵. These were observed by the researchers to be quite similar in terms of geography, language, school infrastructure and other socio-economic characteristics, although this was not verified through reference to household survey data or poverty maps, nor was data collected on other specific school level criteria such as teacher numbers, teacher management, Parent Teacher Association (PTA) involvement, etc.

Purposive (non-random) Sampling: the purposive sampling of the intervention, research sites and participants was based on the following criteria, informed by the literature review:



GES-MASHAV and School

for Life (SfL) were selected

highlighting the innovative

introduced to enhance ABL

approaches the two had

based on feedback

in schools

Criteria 1: the selected intervention should focus on promoting ABL techniques in schools.
Criteria 2: the intervention should have been accepted, supported and seen as a successful ABL intervention in Ghanaian schools by the Ministry of Education and Ghana Education Service (GES).
Criteria 3: research sites and participants should demonstrate active involvement in the implementation of the ABL intervention in Ghana.

The purposive "critical case" sampling approach – is useful in research with limited resources, as well as research where a single case (or small number of cases) can be decisive in explaining the phenomenon of interest³⁶. In this case, critical case sampling was considered most appropriate because of the limited time and logistical resources available. This method involves selecting a small number of key cases that in the contextual opinion of the researcher³⁷

³⁵ As this was not an experimental evaluation these cannot be considered to be "control" schools - schools which are not receiving any aspect of the intervention, measured against "treatment" schools who were receiving the intervention.
³⁶ See Lund Research Ltd 2010, Patton, 2002, p.237.

³⁷ "Determining adequate sample size in qualitative research is ultimately a matter of judgement and experience"

are more likely to "yield the most information and have the greatest impact on the development of knowledge" (Patton, 2001, p. 236)³⁸.

Random Sampling: in terms of the student diagnostic tests undertaken, a simple "random without replacement" approach was used in selecting pupils:



- Pupils picked out folded paper
- Prior to the folding of the papers, and the act of picking, the word 'YES' was written on 10 of the papers with the remaining left blank
- The quantity of the folded papers depended on the class size of each participating class
- Each pupil in a class was asked to pick one folded paper
- Those who picked papers with the inscription 'YES' were then used for diagnostic test

45 Teachers from KG1, KG2 and Grade 1 were selected for each of the sampled GES-MASHAV and neighbouring schools for observation and interview. The teachers surveyed were randomly selected based on availability of staff at the point of site visit.

SfL and MASHAV schools:

- 10 GES-MASHAV
- 10 SfL classes
- 10 public 5 per region

In the SfL sites, the teacher (called a facilitator) was observed and interviewed. Early grade teachers (in Grades 1-3) were sampled in neighbouring schools, but a decision was taken to exclude these from the analysis, given differences between such schools and SfL sites³⁹. As the SfL programme is a 1 year programme, the number of teachers is comparably lower to the GES-MASHAV schools.

Students for the diagnostic tests were selected in the same manner as above, using a random without replacement approach.

Figure 3.6: Sampled Teachers for Phase 2 Fieldwork

Sample	Number of Teachers Sampled
GES-MASHAV	30 (3 per school representing KG1, KG2 and Grade 1)
Schools neighbouring GES-MASHAV	15
SfL Centres	20 (2 per site)
Schools neighbouring SfL Centres	15

3.1.3.2 Data Collection and Fieldwork Instruments

Data was gathered through three key instruments (see Appendix E), the first two of which were closely aligned with the ABL Classification Framework (Appendix C):

- **Classroom Observations:** teaching techniques used by teachers in the classroom were observed to identify ABL features in lesson delivery. The observation instrument was developed after reviewing instruments used in previous ABL evaluations, including of NALAP. The observations lasted an average of 35 minutes and focused on the lesson plan; teaching time utilisation; learner task behaviours; classroom management; gender sensitivity; use of TLMs; feedback to students; teaching techniques; etc.
- Educator Interviews: the following were interviewed: teachers, head teachers, supervisors, development partners, tutors and lecturers.
- Diagnostic Test (Literacy and Numeracy): two diagnostic tests in reading and numeracy were conducted to assess the cognitive levels of pupils:

³⁸ It may or may not be best practice being reviewed, but will generate the most information and learning.
³⁹ SfL focuses on getting out-of-school children (between ages 8-14) in deprived areas into formal school through a functional literacy programme. The neighbouring public schools are, however, formal schools that directly operate under the Ghana Education Service and operate under standardised conditions.



Research instruments were piloted with actual teachers, and observation tools and assessments piloted in classrooms before fieldwork was undertaken

Data and findings were validated by feedback from education officials, development partners, and teachers, as well as informal feedback

In each classroom observed, 10 students were randomly selected. The tests had been previously piloted and validated by the Teacher Community Assistant Initiative (TCAI)⁴⁰ in Ghana for assessing student learning in Grades 1-5 and were administered in appropriate local languages.

- In the GES-MASHAV schools and in neighbouring schools, learners in KG1, KG2 and Grade 1 were
- For the SfL classes, learners completing their first year, as well as learners in Grades 1-3 in neighbouring schools were assessed.

While the diagnostic test used had the advantage of being previously validated and readily available in local languages (the timeline for this study simply would not have permitted the development and testing of a new diagnostic test in multiple languages), it was not specifically designed to differentiate levels of learning at the KG and Grade 1 levels. This limited its effectiveness for the purposes of this study.

The classroom observation data for each specific class were matched with the interview data of the class teacher, and the test score for students sampled from the class for each of the three sources noted above. For example, the classroom observation data for Teacher X were matched with the interview data for that teacher. The diagnostic tests of 10 of that teacher's pupils, who were randomly selected and tested, were also matched with that teacher's observation and interview data for analysis⁴¹.

The research instruments were piloted with teachers in classrooms (in the Central Region) before fieldwork was undertaken. Data and findings were validated by obtaining feedback from education officials, development partners, and teachers who had been involved in the study through two workshops held in April and June 2012, as well as through informal feedback.

For each teacher sampled, interview and classroom observation data were recorded on hard copy protocol documents, which trained researchers then recorded electronically and scored according to a classification system.

3.1.3.3 Data Analysis

Using the Classification Tool developed as part of this research (see Appendix C); analytical variables were created to indicate 22 aspects of ABL (11 system level and 11 school level aspects). The 22 aspects are set out in Figure 3.7 below.

Figure 3.7: Aspects of ABL at System and School Level

1	System Level	2	School Level
1.1	Policy Formulation	2.1	Classroom Furniture and Layout
1.2	Programmatic Development	2.2	Teaching Methodologies
1.3	Resource Allocation	2.3	Teaching and Learning Materials (TLMs)
1.4	Development of Teaching and Learning Materials (TLMs)	2.4	Promoting Equality and Diversity
1.5	Pre-Service Teacher Training (PRESET)	2.5	Head Teacher Support
1.6	In-Service Professional Development (INSET / CPD)	2.6	Teacher Peer Support
1.7	Academic / Pedagogical Support	2.7	Student Arrangement
1.8	Teacher Assessment	2.8	Students' Time on Task
1.9	Student Assessment	2.9	Student Engagement
1.10	Community / Parent Engagement	2.10	Classroom Atmosphere and Student Interaction
1.11	Evaluation Feedback Loops	2.11	Student Continuous Assessment

For information on TCAI, see for example

http://www.povertyactionlab.org/sites/default/files/documents/8_Stephen_Adu_presentation.pdf ⁴¹ Note: this did not include pupil characteristics, which were not included in the survey instrument.

Implementation scale:

- 1 "Latent" ABL
- 2 "Emerging" ABL
- 3 "Established" ABL
- 4 "Advanced" ABL

The findings provide a basis for developing more specific measures of *all* ABL aspects for future research

For the system and school levels respectively, an overall assessment of ABL was calculated as an average of the multiple aspects of ABL coded

Variables were expected to relate to teaching practices and student outcomes, e.g. teacher's age, gender, training should correlate with student outcomes Qualitative variables were created for all 22 aspects, drawn from the classroom observation and interview data collected. The ABL scores were calculated based on each researcher's observation of the class⁴². For 17 of the ABL *aspects* (6 system level and *all* 11 school level aspects) the variables were coded into quantitative measures on a scale of 1 to 4, with 1 representing "Latent" ABL implementation and 4 representing "Advanced" ABL implementation (as described in Section 3). Notably, teacher interview data allowed for quantifying of *sampled teachers' perceptions* of 6 of the system level ABL aspects⁴³. For the purposes of this study, we look at how aspects traditionally implemented or controlled at the system/national level, such as INSET training or TLM design affect individual ABL interventions, for example, in the interventions studied, ABL specific INSET was provided - where the implementation of INSET would normally occur through CoEs with its curricula and pedagogy approved by MoE/GES.

The teacher interviews and classroom observation did not contain data that could be coded for 5 of the 11 system-level aspects highlighted in *italics* in the figure above⁴⁴. For these aspects, impressions were largely drawn from interviews of programme officials.

As will be discussed in the limitations section of this report (see Section 7.2), the findings from this study provide some basis for developing more specific measures of *all* ABL *aspects* for future research, including those where this study does not provide results.

Questions related to each ABL *aspect* were scored based upon the ABL classification scheme for each ABL *aspect*, classified into four degrees or "intensities" of ABL implementation at system and school levels: Latent=1; Emerging=2; Established=3; and Advanced=4 (see Section 3.1.3 above, and Appendix C for more details). For the 6 non-italicised system level ABL aspects, and for *all* school level ABL aspects, codes were developed to quantitatively measure the intensities of ABL implementation, on the 4 point scale.

Where multiple observation or interview questions were related to a particular ABL *aspect*, the average score was calculated as a mean for that *aspect*, with Cronbach's Alpha test⁴⁵ conducted for reliability. For example, there were two classroom observation items tagged as "classroom layout." The Classroom Layout ABL rating for each teacher was the average of the score the teacher received for the two observation items. For the system and school levels respectively, an overall assessment of ABL was calculated as an average of the multiple aspects of ABL coded.

In addition to the ABL implementation ratings (1-4), the variables below were developed and analysed based on the expectation that they are related to teaching practices and student outcomes. For example: teacher's age, gender, training, class size, and language of instruction are variables that are expected to be correlated with student outcomes, and included in studies of teaching practices and student outcomes in sub-Saharan Africa (e.g. Carnoy et al. 2012)⁴⁶. Such assumed correlations include:

- Teacher demographic factors such as age and gender may be expected to be associated with ABL teaching practices and outcomes.
- Teachers who have been exposed to more training which incorporates ABL may be more effective in applying ABL methodologies.

⁴² Prior to collecting data, researchers were trained on scoring based on observations and discussions to reach consensus about ratings.

⁴³ 1.2. Programmatic Development, 1.3. Resource Allocation, 1.5. Pre-Service Teacher Training (PRESET), 1.6. In-Service Professional Development (INSET / CPD), 1.7. Academic / Pedagogical Support, and 1.10. Community / Parent Engagement.

⁴⁴ 1.1. Policy Formulation; 1.4. Development of Teaching and Learning Materials (TLM); 1.8. Teacher Assessment; 1.9. Student Assessment; and 1.11. Evaluation Feedback Loops.

⁴⁵ Cronbach's alpha is a measure, or coefficient of internal consistency which is used to see how closely related a set of items are as a group.

⁴⁶ Other variables, such as student age, may be correlated with student achievement outcomes, but were not included as such data was not collected during the study.

- Teachers in large classes may find it more challenging to use ABL approaches in teaching.
- Use of mother tongue in early primary schooling may be related to better student outcomes, and this is also controlled for.
- With the teacher as the primary unit of analysis, key variables that were created from the teacher interviews and classroom observations are summarised in figure 3.8 below.

Figure 3.8: Key Variables Created and Analysed

Variable Assessed	Derivation	
Specific System-level ABL Ratings	Coded interview data for the teacher for each of the 6 specific aspects	
Overall System-level ABL Rating	Average for the teacher across the 6 aspects	
Specific School-level ABL Ratings: Classroom Observations	Coded classroom observation data for the teacher for specific school-level aspects	
Specific School-level ABL Ratings: Teacher Interviews	Coded teacher interview data for the teacher for specific school-level aspects	
Overall School-level ABL Rating	Average for the teacher across the 11 aspects	
Age	Coded from interviews	
Gender	Coded from observation	
# of interventions that teacher has participated in training	Total number of trainings teacher has participated in	
# Students Present	Total number of students present in classroom observed	
Language Mostly used in Instruction	Coded for Ghanaian Language (used as reference category), English, and Mixed	
Student Literacy Scores	Average literacy score for 10 randomly selected students from the observed class taught by the teacher	
Student Numeracy Scores	Average numeracy score for 10 randomly selected students from the observed class taught by the teacher	

Although additional factors, such as teacher experience and teacher and student socioeconomic status may also be related to ABL implementation and student outcomes, such data were not available to be used for this study, a weakness that should be addressed in future studies building upon this.

3.1.3.4 Descriptive Analysis of Key Variables

Demographic and background data of the GES-MASHAV and SfL interventions obtained from classroom observations and teacher interviews were coded and analysed. Means and standard deviations were calculated for the quantitative variables, while quotes and notes were analysed from qualitative data, notably from teacher interviews.

All 10 GES-MASHAV schools (5 pilot, 5 post pilot) were included in the study. In the selected schools, teachers from Kindergarten (2 teachers each on average) and Grade 1 (1 teacher) were randomly included in the sample, making 30 teachers. Out of the 30 observed, there were 28 included in the analysis, as two had extensive missing data. All 20 SfL teachers who were sampled and observed were included in the analysis. Note that in SfL there is only one class run by a teacher (facilitator) unlike MASHAV which runs in public schools. Additionally, each of the system and school level aspects of ABL for the observed teachers was analysed. In addition to the ABL aspects, key variables analysed include:

the number of interventions in which the sampled teacher had participated in training (i.e. GES-MASHAV, SfL, NALAP, BTL / Molteno, Other)

All 10 GES-MASHAV schools were included with 30 teachers

All 20 SfL teachers were included in the analysis.

Each of the system and school level aspects of ABL for the observed teachers was analysed

- class size (the number of student present in class)
- language of instruction mostly used in the classroom observed (i.e. Ghanaian language, English, Mixed).

Note that this study *makes no attempt to draw comparisons between ABL in SfL and GES-MASHAV schools.* SfL is located in the Northern region, and the programme structure and target differs from GES-MASHAV. SfL is a nine-month mother tongue literacy programme delivered to out-of-school children between the ages of 8-14 years, whereas the GES-MASHAV programme targets kindergarten age children in urban centres in Kumasi (Ashanti region).

The teachers from the GES-MASHAV sample and the neighbouring schools are similar in some respects. For example:

Figure 3.9: Key Characteristics of Schools

GES-MASHAV Characteristics	Neighbouring School Characteristics
All sampled teachers female	All sampled teachers female
All sampled teachers average age of 43yrs	All sampled teachers average age of 43yrs
Received ABL training	Had not received ABL training
Larger class size	Smaller class size

Most SfL teachers were male, av. Age of 31 yrs.

This study does not

compare ABL in SfL and

GES-MASHAV schools

Analysis has served to develop indicators of ABL implementation in Ghana

Findings are presented of ABL ratings calculated from the *combination* of classroom observations and teacher interviews Due to differences between the SfL centres and SfL "comparison" schools, results for SfL "comparison" schools were discarded.

The SfL teachers differed significantly from the other samples, and we make no attempt to compare the different samples. All the Ashanti Region teachers studied for GES-MASHAV were female. All but one of the 20 SfL teachers sampled were male, and among the 19 who agreed to provide their age, this ranged from 21 to 58.

The average age for these teachers was 31. Among the 14 teachers who provided their teaching start date, the average length of teaching experience was 6 years, with the earliest teaching start date being 1997, and the latest having started teaching in 2011. 50% of SfL teachers had obtained their O-Level or SSCE as their highest qualification, with 20% indicating the MSLC or BECE, and 30% indicating they had none of the formal qualifications.

3.1.3.5 Limitations with Primary Fieldwork

There are a number of limitations to this study that must be noted.

First, the primary research component was based on a specific sample, and thus generalizable only to the contexts studied: relatively successful examples of ABL in Ghana. Hence inferences about generalizability in the sense of scalability i.e. for adoption to a national policy are restricted. Additionally, the small sample sizes of schools studies, limit what generalisations may be made. This should be kept in mind regarding results presented in percentages as well. The small sample sizes for the different interventions also limited sub-sample analysis that may have been possible with larger samples. For example, given differences between teachers and students from GES-MASHAV and SfL, it was not possible to combine these samples to then analyse issues such as the relationships between ABL implementation and class size or grade levels.
Key limitations:

- Primary research is generalizable only to the contexts studied inferences for scaling up are thus restricted
- 2. Longitudinal data on teachers was not available
- 3. Whether schools were selected or self-selected for ABL was unclear and could affect ABL rankings observed
- 4. Time and resources limited the amount of independent data validation, however, bias was reduced through triangulation

This study cannot / does not claim to provide "evidence" about ABL impact in Ghana, but provides a foundation for further research and policy



Second, the study did not have access to longitudinal data on teachers, which means any claims made about changes that teachers and schools may have undergone, could not be verified and may have been missed. Further to this, if schools self-selected into ABL interventions, or were chosen for ABL interventions for specific reasons, the expected levels of ABL ratings and student scores would be different (higher or lower) than if they were randomly chosen. Within ABL intervention schools, enthusiastic and effective teachers may have been purposefully recruited, and some may have higher positivity about ABL system status than others. Such an argument also extends to differences between intervention and non-intervention schools, where teachers may not be randomly distributed. Such selection issues may affect the inferences about differences between ABL intervention schools and "regular" schools; it may also affect results estimated within the ABL sample. However, this data was not included in the fieldwork instruments, and as such no inferences on this are available in this study. An experimental design would be better able to dig into these areas.

Finally, there may be potential biases. For example, emerging from the case study research methodology chosen; despite the training offered to researchers for consistent scoring of ABL practices observed, the resources and short time period available for data collection made it impossible to independently ascertain that scoring was being done consistently. Where time and resources allow, biases may be reduced by having two researchers score the same teacher independently and then validating the scores. Additionally, there may be a bias in the selection of cases studied, where there are ABL interventions and practices that the study did not identify. To address such shortcomings, interviews were conducted with education experts in Ghana, and findings were disseminated in discussion workshops. Additionally, there may be biases in findings from collection of data through interviews and focus groups, where participants in ABL interventions may tend to be more vocal and report the positive aspects of their practices, or vice-versa. To mitigate against such biases researchers indicated to participants during interviews that the study was not an evaluation, but was seeking to understand what was happening in the schools. Researchers also approached less vocal teachers and other participants in focus groups to share their views one on one, in informal conversations.

Keeping these limitations in mind, this study cannot, and does not claim to provide evidence about the positive impact of ABL across the Ghanaian education system. Rather, this study provides a foundation for further work.

4. Lessons from International ABL Interventions

- Student achievement gains
- Lower repetition rates
- Narrowed gaps between genders and urban/rural students
- Improvements in students' social skills and democratic behaviour

This section provides a summary of key lessons learned from an analysis of literature on international experience of ABL interventions and their relevance for Ghanaian education (see Appendix A for full literature review)

In the Ghanaian setting, lessons learned from international experience on ABL provide an opportunity to improve education in the country. Lessons can specifically be learned from the literature on the educational outcomes of successful ABL, the common characteristics of successful ABL, as well as how best to implement and instil ABL into the way teachers teach and the way children learn. These are summarised below:

- ABL has great potential to change outcomes: evidence shows positive relationships between ABL and student achievement gains; correlations with lower repetition rates and narrowed gaps between genders and urban/rural students; and improvements in students' social skills and promote democratic behaviour.
- Achieving the desired characteristics and implementation of ABL calls for: formulating appropriate policies and incentives; developing pilots and then scaling up

In the most successful ABL programmes, each aspect (e.g. curriculum, training) reinforces the other

Successful characteristics from elsewhere, could be used for a Ghanaian ABL approach through piloting and scale up with revised INSET and improved student assessment

ABL requires the a longterm, sustained vision and commitment to improved learning based on pilot experience; allocating the right types and amounts of resources; developing high-quality Teaching and Learning Materials (TLMs) and training teachers in local TLM production; and integrating ABL into Pre-Service Teacher Training and In-Service Professional Development

- International evaluations of ABL programmes provide evidence to support the incorporation of their successful characteristics into ABL in Ghana: for example, the State of Tamil Nadu in India⁴⁷ and "Escuela Nueva" in Latin American countries such a Colombia, Guatemala, and Peru⁴⁸. Case Studies 1, 2, and 3 in Appendix A summarise some features of the interventions and related educational outcomes.
- International experience suggests successful ABL characteristics could be combined into a coherent Ghanaian pedagogy through piloting and scale up over 5-15 year timeframes⁴⁹. In the literature reviewed, such pilot programmes included system wide changes to policies and practices that were scaled up based on lessons learned, in particular, with continuous, school-based training and pedagogical support provided to enable and motivate teachers to adopt ABL methodologies. The most successful ABL programmes take an approach in which each aspect of the educational process (e.g. curriculum, training, teaching and learning materials, supervision, and assessment) reinforces the other.
- ABL developed in other countries by: adopting a long-term, sustained vision and commitment to improved learning; involving multiple stakeholders in the provision of academic / pedagogical support; integrating ABL into teacher and student assessments, and providing incentives for teachers to engage in ABL; involving communities and parents in ABL; and developing evaluation feedback loops in iterative processes for ABL to become the norm in the educational system.

The team focussed on two studies which had the most available and relevant/comparable data - two key international primary school ABL models that have progressed from "latent" to "advanced" ABL (see Appendix A for details) **ABL in Tamil Nadu and Escuela Nueva in Colombia**.

The educational issues these two ABL initiatives attempted to address (low student learning outcomes, poor performing teachers, student dropout/repetition, etc.) were identical to the quality issues facing Ghana, although repetition is not part of Ghana's education policy. There was thus a wealth of independently evaluated information from these two programmes which were judged to be highly relevant for this operational research programme.



Case Study 1: ABL in Tamil Nadu, India: the ABL initiative is implemented in Grades 1-4, in both single-grade and multi-grade classrooms. It has transformed teaching and learning across the state in just a few years, and is now being adapted/adopted by several other Indian states (National Council of Education Research and Training, November 2011).⁵⁰ This was the most recent large-scale (40,000 schools) and independently evaluated ABL programme– which is similar to Ghana in many respects, such as: use of multi-grade teaching, low student learning outcomes, poor performing teachers, and student dropout.

⁴⁷ National Council of Education Research and Training, 2011.

⁴⁸ As of 2012 the "Escuela Nueva" model has been adopted in 16 countries – see Mogollón and Solano, 2011; Kline, 2002.

⁴⁹ E.g. Chesterfield, 1996a; Mogollón and Solano, 2011; Kline, 2002; National Council of Education Research and Training, 2011; and SSA, 2008.

⁵⁰ Sources: British Council, 2009; National Council of Education Research and Training, 2011; Indian Ministry of Human Resource Development, Sarva Shiksha Abhiyan (SSA), 2008), "Programme Evaluation Report of Activity-Based Learning, Tamil Nadu", National Council of Education Research and Training, November 2011.

For each subject, competencies are divided into learning units ("milestones"). Clusters of milestones are linked together into ladders, which indicate students' attainment. Each milestone has different steps of the learning processes broken into six types of implementable activities: introduction; practice; reinforcement; self-assessment; remediation; and enrichment.

Students are organised in small groups by learning levels and use a variety of learning materials (e.g. high-quality learning cards, learning ladders, science and mathematics kits, supplementary reading materials) to complete structured and logically sequenced learning activities. Student interaction is high. The teacher acts as a facilitator of learning, moving between groups and providing individualised attention as needed.

Supplementary learning materials include low-level blackboards on all classroom walls for students to practice their work, displays of student work, charts, puppetry, storybooks, and simple, movable class mats and writing surfaces. **Children get support from peers,** monitor their own learning and progress at their own pace. Support for teachers is provided by a trained head-teacher and sub-district teacher educators (1 for every 12 schools, 2 visits/month).

ABL was piloted in 13 city schools in 2003, then expanded to all 264 city schools in 2004, to 4,100 schools in 2007 (10 schools in each sub-District), and to all 37,500 publically-supported primary schools in the State in 2008.

Outcomes Attributable to ABL

Learning Outcomes: identical national (i.e. third-party) achievement tests in language (Tamil) and mathematics were administered in 2004 and 2008. Grade 3 language test scores improved from an average of 66% to 80%, while math test scores improved from 53% to 75%. Rural students outperformed urban students, and girls outperformed boys. Interestingly, longer school exposure to ABL did not improve average scores.

Other Student-Related Outcomes: teachers and parents reported that students have: no fear; higher levels of self-confidence; increased creativity; increased ability and desire to learn independently; increased self-motivation; and increased responsibility.

Teacher-Related Outcomes: while teachers reported a highly positive perception of ABL methodologies, on the negative side they mentioned: increased workload (checking each students' work individually), difficulty in providing individualised attention, and challenges with parents who want their children to have homework. More positively, teachers reported that their own involvement in student learning increased, and their relationships and cooperation with students improved.

Some of the key results from the ABL in Tamil Nadu programme include:



This was achieved by:





Case Study 2: ABL in Escuela Nueva ("New School"), Colombia: the internationally recognised Escuela Nueva movement that begun in Colombia in the 1970s has improved educational outcomes, reduced achievement gaps between urban and rural youth, multi-grade and graded classrooms, and girls and boys⁵¹. It has served as the example for similar programmes in countries throughout Latin America, the Indian Sub-continent, Africa, the Middle East, and the Central Asian Republics (Kline, 2002). Escuela Nueva was adopted in Guatemala (*Nueva Escuela Unitaria, NEU*) and Peru (*AprenDes*), and up to 16 other countries by 2012⁵². This was the earliest well-documented and extensively evaluated initiative to implement activity-based learning and as such provides much relevant data for Ghana where there are similarities such as: use of multi-grade teaching, disparities between genders and between regional performance.

Escuela Nueva was initiated to address problems of multi-grade rural classes: students only spent 50-60% of instruction hours engaged in schoolwork. In 1983, before Escuela Nueva expanded, only 20% of rural students completed primary school in five years and 35% of rural students were dropping out in the first grade. Internal efficiency of rural schools was also affected by frequent use of a curricula geared toward urban students, a lack of instructional materials, school buildings in disrepair, and teachers who usually employed passive methods of pedagogy.

Colombia's Escuela Nueva used seven basic components:

- flexibility in learning with students working independently in a discovery approach;
- active student participation and individualised learning techniques;
- formative evaluation of student learning;
- flexible promotion with student self-guided workbooks;

⁵¹ Sources: McEwan, P. J. (1998). The effectiveness of multigrade schools in Colombia. Stanford, CA: School of Education, Stanford University; McEwan, P.J. and Benveniste, L.A. (1999). Constraints to implementing educational innovations: The case of multigrade schools. Stanford, CA: School of Education, Stanford University; Rojas, C. (1994). The Escuela Nueva school programme in Colombia. In P. Dalin (Ed.), How schools improve: An international report. London: Cassel.

⁵² Lessons are also drawn from the implementation of the Escuela Nueva model in Bolivia and Ecuador. See Kline, 2002; Kraft, 1998; Schiefelbein, 1992; Chesterfield, 1996a.

- developing flexible curricula and calendars;
- bolstering parent and community involvement; and

• generating public-private partnerships

Parents and communities rarely involved in these schools. Escuela Nueva was a refinement and expansion of the ideas from the UNESCO sponsored "Unitary Schools" project, designed in the 1960s to address these problems in rural primary schools.

Outcomes Attributable to ABL

Teacher support is the most crucial component of Escuela Nueva 's success: the government provided teachers with educational materials, resources, and opportunities for capacity building, and trained local supervisors to serve as pedagogical advisors to teachers.

Colombia's Escuela Nueva programme was scaled up over a 15-year time frame: it was piloted in a few schools in 1973, and expanded to 500 schools in 1976, to 2,000 schools in 1982, and then to 18,000 schools nationwide in 1989.

Some of the key results from the Escuela Neuva programme in Colombia include:



This was achieved by:

Teachers train other teachers: Lesson / Cluster meetings bi-weekly, visit model classes twice yearly

Teachers empowered: they author student workbooks, teacher guides, unit plans

Student Learning guides supplement textbooks and replace teachers' writing of lesson plans

Flexible daily schedules

Flexible promotion on mastery of subject, not time spent

Learning Corners for individual, self-directed learning

Children write stories and small books

Student original art, essays, stories cover all surfaces

Student leadership: run library, health, lunch and enforce school rules

Formative assessment built into student learning guides

Community-based learning

Parents assist in the classrooms

4.1 Summary of Lessons Learned about ABL from International Literature

The successful Escuela Nueva and Tamil Nadu studies were selected as they scored between Excellent - Good in the evaluation of research quality, including an Excellent rating for "internationally recognised for quality", thus showing a strong, credible level of data. These highlighted four key findings for potential incorporation into ABL in Ghana:

Table: 4.1: Key Findings from International ABL for Potential Incorporation into ABL in Ghana

ABL	Key Finding
Educational outcomes of successful ABL	Positive relationships between ABL and student achievement gains , and related benefits of greater group work among students, democratic behaviour ⁵³ , lower repetition rates, and narrowing of rural / urban and gender gaps.
System level characteristics and implementation of successful ABL	Achieving the desired characteristics and implementation of ABL in Ghana calls for formulating appropriate policies, developing and scaling up ABL programmes / projects, allocating resources to ABL, developing Teaching and Learning Materials (TLMs), and integrating ABL in PRE-SET and IN-SET. ABL has developed in other countries where stakeholders have provided pedagogical support, integrated ABL into teacher and student assessments, provided incentives for ABL, engaged communities and parents in ABL, and developed evaluation feedback loops in iterative processes for ABL to become the norm.
School level characteristics and implementation of successful ABL	As is the case in other countries, for ABL to be successful in Ghana, there is the need for a better understanding and specification of key school level characteristics for implementation . All of these school-level characteristics need to be implemented in a holistic and sustained manner. Each characteristic should reinforce the other (or at a minimum, not contradict the other). Addressing only one, or a few characteristics and expecting real change may be unrealistic.
Teacher change processes by which successful ABL emerges	Change in teachers' attitudes and beliefs for changing their teaching practices occurs over time, primarily <i>after</i> they gain evidence of improvements in their teaching, and in student learning through their own observation, or through various forms of assessment. Through iterative processes that <i>may span multiple years</i> , teachers see and internalise evidence occurring at the system and school levels.

Successful ABL interventions addressed *both* School and System aspects, whilst a number of the most advanced interventions transformed primary education at little or no extra cost The review of the international literature on ABL for primary schools indicated that **interventions progressed from "Latent" to "Advanced" ABL where both system and school level factors were addressed** to improve educational outcomes. A piecemeal approach, such as offering a series of workshops on ABL to teachers, is insufficient to either change teaching behaviour, or improve student learning outcomes.

There are a number of "Advanced" programmes around the world that transformed primary education at little or no extra cost, with teachers' utilisation of ABL techniques becoming the norm. These successful programmes have adopted an approach of reforms at system and school levels, affecting almost all aspects of the learning experience, including:

- teaching styles and practices
- activity-oriented learning materials
- head teacher and pedagogical supervisor training and support
- incentives for teachers to adopt new practices
- increased student leadership opportunities, etc.

- learning modalities
- classroom furniture modifications
- community sensitisation
- student continuous assessment and feedback to parents, students and teachers

⁵³ I.e. equal and fair participation of all students including classroom rules applied fairly to all students.



The international literature on the Escuela Nueva and Tamil Nadu studies shows robust evidence, backed by feedback from other non-experimental studies elsewhere that: with such ABL mainstreaming it is possible to improve student learning, raise attendance, lower teacher absenteeism and student dropout rates, improve parent participation, and reduce or eliminate achievement gaps between boys and girls and between rural and urban settings. The successful components of these interventions could be combined into a national ABL model in Ghana.

Key initiatives to improve educational outcomes in Ghana were mapped to identify successful practices and gaps within the context of ABL This literature review highlights the analysis required of Ghana's ABL interventions, as well as where gaps in knowledge need to be filled for characterising and implementing ABL in Ghana to improve educational outcomes. Thus, the review set the stage for the gathering of secondary and primary data on ABL in Ghana. In the next section, we present findings on ABL interventions in Ghana, drawing from the literature reviewed on ABL interventions in the country.

5. Lessons from ABL Interventions in Ghana

This section summarises the mapping of key initiatives to improve educational outcomes introduced in Ghana, with the purpose of identifying successful practices and gaps associated with such initiatives within the context of ABL (See Appendix B for ABL Matrix which includes location, unit costs, funding source, level of GoG involvement, key features of intervention, materials and other inputs provided)

This study drew upon aggregate system and school level characteristics of multiple ABL interventions in Ghana in presenting the status of ABL. This was further informed by the Classification tool, secondary data, and qualitative interviews of national and district officials, and teachers in schools visited during a first round of fieldwork⁵⁴. Understanding the nature, objectives and impact of ABL initiatives in Ghana on learning will provide a means for identifying gaps in such initiatives. The gaps identified provide a basis for exploring ways of transforming teaching and learning in the classroom. The analysis also identified those programmes which incorporate ABL methodologies to the greatest extent, and so merit additional primary research.

The classification of ABL interventions in Ghana in this study focused on specific *aspects* of ABL at two levels: system and school. The system level focused on issues relating to ABL policy making, programming, resource distribution, and reinforcement; while the school level addressed issues relating to ABL policy implementation at the school and classroom levels.

5.1 System Level

The review of interventions, suggested that **at the system level**, **ABL is** *Emerging*. This indicates that: **ABL has been introduced in Ghana but remains in the early stages**. Through GES involvement in interventions such as MASHAV and the JICA cluster model, it's clear there is some level of knowledge and buy-in to the concept of ABL, but it is less clear that has yet progressed to policy level. ABL has not yet taken root in Ghana, and there is a high risk of dissipation if not reinforced (see Classification Framework for detail on what this means in relation to all aspects of ABL implementation). Issues with sustainability of ABL implementation

None of the literature identified and reviewed were experimental or quasiexperimental studies

⁵⁴ To analyse each of the ABL interventions based on the detailed classification scheme that has been developed in the course of this study calls for more time for more in-depth data collection than was provided for in this study, including interviews, observations, etc. Our secondary data and the ABL matrix in Appendix B on Ghanaian ABL provide the groundwork for a more in-depth analysis of the interventions presented here.

after donor funding ends is an indicator of this, where ABL is not embedded into both policy and the national budget. One of the key reasons why ABL may not have taken root in Ghana is because ABL is not sufficiently including in standard INSET training and as such its impact is limited.

5.1.1 What would a Systematic Ghanaian ABL Package Look Like?



- I) Continuous assessment and M&E of ABL being implemented
- 2) Trainers, Head Teachers, and Supervisors trained in ABL and supporting teachers
- 3) Teacher training (PRESET and INSET) in ABL and creating peer group learning circles
 -) Developing, supplying and using quality, low cost TLMs tailored for ABL

5.2 School Level

As well as classroom observations in schools where NALAP, Molteno / BTL, SfL⁵⁵ and TED / JICA's Nationwide INSET interventions were implemented, the literature review suggested that overall: **ABL is** *Emerging* **at the school level in the contexts studied**. This indicates that in Ghana⁵⁶, ABL has been introduced but remains in the early stages. Aspects of ABL that were being implemented at the school level would need to be reinforced to avoid dissipation.

5.2.1 What would School Level Ghanaian ABL Look Like?



-) Multiple small group activities
- 3) Discovery learning and problem-solving with frequent discussion
- 4) Teachers involved in developing their own materials

5.3 Weaknesses of Ghanaian ABL Interventions to date

The following sets out the key weaknesses found in the implementation of ABL interventions in Ghana to date, and the potential implication for the future design of a national policy/roll out.

Figure 5.1: Summary of Key Weaknesses of ABL Interventions in Ghana

Weaknesses of ABL Interventions in Ghana to Date	Implications for Future Design
Uncoordinated nature of implementation, particularly, where ABL is not properly integrated into the pre-service curriculum of CoEs.	To enable national scale up, ABL must be properly incorporated into standard PRESET and INSET training, and training provided to head teachers and Circuit Supervisors to ensure that it is carried out over time and does not dissipate.
Newly trained teachers are posted to a particular ABL intervention school with little or no knowledge of the skills and attitudes associated with that ABL intervention. Lack of INSET further exacerbates this situation when trained teachers move into new schools and another trained teacher is not provided.	INSET should be a particular focus – not only to catch those who have already gone through PRESET, but to ensure that knowledge is continually updated and that the movement of teachers between schools does not lead to a loss in ABL implementation.
Existing ABL initiatives are linked to externally-funded projects which may pose sustainability challenges to	Sustainability is a key issue to be considered in the scale up of a national programme – ABL needs to be incorporated into annual government budgets

⁵⁵ Is not a school in the traditional sense, but rather an informal class. However, it is included at the "school" level for the purpose of this report

⁵⁶ As the schools mentioned here were selected due to having ABL interventions in place, it is important to note that this does not represent an assessment of schools more generally in Ghana where ABL would be expected to be lower.

Weaknesses of ABL Interventions in Ghana to Date	Implications for Future Design	
schools.	throughout the system and supported by a renewed national policy.	
Lack of renewed training rounds as mentioned above is a serious challenge.	Any future design should look to adapt/adopt the most effective/ cost effective elements from past programmes (such as the use of low cost, teacher designed TLMs) and keep the design simple so that it can be flexible to changing requirements such as by region.	
Schools that participate in ABL interventions rarely get requisite support from communities ; largely because there is limited information available to the communities about the processes and the performance of schools.	The most successful programmes from international studies have shown the importance of involving the community, and that this can be done successfully - in Ghana, the Breakthrough to Literacy (BTL) programme showed increased parents' interest in children's schooling.	
Communities lack appreciation of the benefits of ABL which makes access to fundamental material support from the community challenging	Parents and community members asserted that the program was suitable because they liked the emphasis on the local language.	
Communities don't really know how schools are performing, as there are no results of students' performance and thus schools' performance published or disseminated to communities.	In NALAP, there was a strong positive response from community members, with a great majority welcoming a bilingual early grade literacy program – the key issue is in sustaining this positive engagement.	

5.4 Summary of Findings from Research in Ghana



The findings from the review of ABL initiatives in Ghana provided the basis for more intensive data collection from the GES-MASHAV and SfL initiatives, as presented in the following section.

6. Lessons from Primary Research on ABL Interventions in Ghana

This section presents the primary research conducted on two selected ABL interventions in Ghana: GES-MASHAV and SfL. It summarises the data collection previously detailed, and the methods used for analysing the system and school level data. Key findings from the fieldwork are outlined

This section presents the analysis of the technical strengths and weaknesses of two highpotential ABL initiatives GES-MASHAV and SfL examined in the fieldwork, drawn from classroom observation, interviews of teachers, and student literacy and numeracy diagnostic testing (see Appendix E for research instruments).



GES - MASHAV: works in KG1 and KG2 classrooms, and aims to empower teachers to believe that Early Childhood Development (ECD) is the basis of further education and that their role is to mediate between the child and the world, creating a rich and stimulating learning environment, and building a flexible curriculum and daily schedule based on the child and providing opportunities for developing creativity and thinking skills⁵⁷. The programme targets kindergarten-age children in urban centres in Kumasi.



School for Life (SfL): a nine-month mother tongue literacy programme provides complimentary basic education to get children in deprived areas into formal school by providing mother tongue literacy to out-of-school children between the ages of 8-14 years⁵⁸. SfL is located in the Northern region.

This report presents findings of ABL ratings calculated from the *combination* of classroom observations (including student diagnostics) and teacher interviews. The implementation of ABL was rated at both the school and system levels, against a four-point scale: **1** = **latent**; **2** = **emerging**; **3** = **established**; **4** = **advanced** (see Appendix C). For example:

Figure 6.1: Sample of ABL Classification Scale

II. School Level	1. Latent	2. Emerging	3. Established	4. Advanced
II.B. Teaching	Teacher stands at front of class	Teacher circulates through the	Teachers in all schools where ABL	Facilitation of student learning
Methodologies	and lectures, children repeat what	classroom, and uses a mix of	is implemented actively flow from	through their engagement in
	teacher says, teacher perhaps	traditional (i.e. lecture-based) and	group to group, facilitating	groups, individually or as a whole
	write on the blackboard, does not	ABL teaching strategies.	students' engagement and	class in sequenced, practical
	encourage questions or create		completion of learning activities,	learning activities is the dominant
	opportunities for self-learning by		reviewing students' work,	mode of teaching, the norm.
	students.		answering questions, providing	
			guidance for students to move to	
			next activities after demonstrating	
			mastery of current lesson.	

A regression analysis of the data was conducted, but the sample sizes were not sufficient to provide reliable evidence and as such were discarded. What is presented here are observations which have served to develop indicators of ABL implementation in Ghana, and provide useful findings. These cannot be deemed statistically significant and future work analysing larger samples will be needed which builds upon what is presented.

 ⁵⁷ See <u>http://embassies.gov.il/un/NewsAndEvents/Pages/MASHAV-Ghana-education-project.aspx</u> for more details.
 ⁵⁸ See <u>http://www.schoolforlifegh.org/about%20us.htm</u> for more details.

6.1 Relationship between Observed ABL Practice and Student Outcomes

Research Q 1

Relationship between ABL implementation and student outcomes

Higher test scores in the SfL sample show a relationship to school level ABL implementation

No apparent relationship between system / school level ABL ratings and student outcomes for GES-MASHAV - poor testing

Research Q 2

Relationship between school level and system level ABL implementation

1. What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG and P1-3)?

Hypothesis: students from programmes with more characteristics of ABL have higher attainment levels than those from schools with less ABL characteristics.

Findings presented below estimate the relationships between student achievement (from diagnostic scores taken in classroom observations) and school and system level ABL implementation ratings to ascertain whether: students from programmes with more characteristics of ABL showed higher attainment levels than those from schools with less ABL characteristics.

6.1.1. School Level ABL from Student Diagnostic Scores for SfL

School level ABL was found to be positively related to higher student test scores for the SfL sample (as observed from numeracy diagnostic scores). All the specific school level ABL aspects seemed to be positively related to student outcomes, particularly classroom layout, and student engagement. However, it's unclear whether there was any particular relationship between the average system level ABL ratings and student outcomes.

6.1.2 School Level ABL from Student Diagnostic Scores for GES-MASHAV

Oberservations from a sample of GES-MASHAV schools and "traditional" neighbouring schools did not show any apparent relationship between system or school level ABL ratings and student outcomes. This largely appears to be because the instruments used to quickly assess student learning in Grades 1-5 (see Appendix E on observation tools), were likely to be beyond the capabilities of what a KG or Grade 1 student could be expected to answer. There was limited variation in student diagnostic scores in the GES-MASHAV data - the student diagnostic assessments available and used for this study, were designed for learners between Grades 1-5, whereas the GES-MASHAV learners sampled were in KG1-Grade 1. In other words, the diagnostic instrument lacked the "granularity" to detect smaller differences in learning levels at KG and Grade 1.

6.2. Relationship between System and School Level ABL and ABL **Practice**

2. How could successful characteristics be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

Hypothesis: it is expected that for successful ABL to occur, where system level factors are successfully being implemented, school level aspects of ABL will also be successfully implemented, and there should be a correlation between ABL implementation in both.

Findings from sampled GES-MASHAV and SfL schools are presented below looking at the relationships between system and school level ABL ratings in each sample to determine whether: successful ABL was occurring in either sample and if so, was this because system and/or school level aspects were being successfully implemented, and if there was any correlation between ABL implementation at both levels.

Because GES-MASHAV is a small pilot programme and SfL is an informal education programme outside of formal GES provided education, the primary focus was on school level Analysis of high-potential ABL initiatives showed a relationship between school and system level ABL – the two levels are seen to be mutually reinforcing as expected

61% of the teachers in the GES-MASHAV schools had participated in GES-MASHAV training

36% of classes were in KG1 and KG2, and 29% were in Primary 1

79% were literacy, 3% were numeracy, and 18% were other subjects

In 80%, instruction was in Twi, a mix of both Twi and English was used in 17% implementation, with a secondary focus on system level implementation (which neither sought to achieve).

The results are presented separately for the teachers from schools in the GES-MASHAV (and neighbouring schools in the Ashanti region) and SfL interventions studied (across three regions: Northern Region - Nanumba North, Nanumba South, Saboba, Chereponi, East Gonja, Tolon/Kumbungu, West Mamprusi, East Mamprusi, Central Gonja, Savelugu; Upper East - Kasena-Nankana West, Kasena-Nankana East, Bawku West; and Upper West – Jirapa, Nadowli). This is because *there was no intent to compare teachers from these different regions, who work with very different types of students* (as described in Appendix B on Ghanaian ABL interventions), in particular, the ages of students were not included in the data collection or analyses - the focus point of this study was on the teachers.

6.2.1. Description of GES-MASHAV Teacher / Classroom Sample

61% of the teachers sampled (17 out of 28 teachers) in the GES-MASHAV schools confirmed that they had participated in GES-MASHAV training. Training in this context means that the capacity of Early Childhood Education coordinators, teachers and head teachers of MASHAV schools was built through practical workshops and reflective engagements with the aim of exposing them to principles underlying MASHAV's early childhood development and delivery techniques. The capacity building workshops took place both in Haifa Israel and locally in Kumasi. The reason for the participation rates, was that whereas MASHAV training is limited to KG, Grade 1 teachers in the schools were also sampled, and some may have joined the schools after the training had been offered.

86% of teachers' sampled (24 / 28 teachers) had received NALAP training, with 7% (2 / 28) reporting that they received training in BTL / Molteno, and 1 teacher indicating other type of GES training. The average teacher in the sample had participated in about two of the interventions (including GES-MASHAV). One teacher reported that she had participated in none of the trainings, whereas another teacher reported having participated in three of the interventions (GES-MASHAV, NALAP, and BTL / Molteno).

Among the classes observed, 10 (36%) were in KG1 and KG2 respectively, and 8 (29%) were in Primary 1. Among the classes observed, 22 (79%) were lessons in literacy, 1 (3%) was a lesson in numeracy, and 5 (18%) were lessons in other subject areas (Environmental Studies, Health, and Religion).

The average class observed had 37 learners present, out of 41 enrolled on average. It should be noted that these were scheduled visits; the schools knew in advance that they were to be visited. The number enrolled ranged from a minimum of 24 to a maximum of 71, with a minimum of 21 learners present as compared to a maximum of 63 learners present. On average, classes observed had an equal number of boys and girls present.

In 80% of the classes (22 out of 28) the language of instruction mostly used was Twi, whereas a mix of both Twi and English was used in about 17% of classes (5 out of 28). In one class, the language of instruction was mostly English. The predominant use of Ghanaian language as language of instruction is consistent with the current national policy on use of mother tongue in the early grades. It is not clear why English was being used predominantly in some of the classes.

6.2.2 Overall School Level ABL from GES-MASHAV Classroom Observations and Teacher Interviews

Analysis of the indicators developed from the classroom observations and interviews of the sampled teachers showed that on average, the school level aspects of ABL for GES-MASHAV are consistently rated between Emerging (ABL rating 2) and Established (ABL rating 3). In other words, on average, the school level aspects of GES-MASHAV have been introduced, understood, and are being replicated and accepted by most schools and teachers into regular practice. Given the implementation timeframe and scope for this pilot intervention, this is a very positive finding.

The highest rated aspect was students' time on task, rated as 2.7, just below Established. The lowest rated aspects are student arrangement and classroom furniture and layout, at 2.2 and 2.3 respectively, just above Emerging.

Overall summary findings for specific school level ABL aspects of GES-MASHAV schools are outlined below in Figure 6.2.

Figure 6.2: Summary Findings and School Level ABL Ratings for GES-MASHAV

2	School Level	Summary Findings	ABL Rating 1 = latent 2 = emerging 3 = established 4 = advanced
	Overall	• On average, the school-level aspects of GES-MASHAV have been introduced, understood, and are being replicated and accepted by most schools and teachers into regular practice. Reinforcement of the intervention will reduce dissipation. However, the intervention could ultimately fade away if system-level aspects such as policy, programmatic and financial support are not maintained.	Emerging - Established (2.5)
2.1	Classroom Furniture and Layout	 GES-MASHAV schools have movable furniture (e.g. height-appropriate desks and chairs), which facilitates student group work, but were mostly still arranged in rows as opposed to circles. Students have adequate seating and writing space. Some classrooms have lockable cabinets for storage of high-value TLMs. 	Emerging (2.3)
2.2	Teaching Methodologies	 Teachers circulated through the classroom, and used a mix of traditional (i.e. lecture-based) and ABL teaching strategies. Teachers encouraged students to ask questions if they do not understand. Teachers and students begin to use TLMs on a regular basis. Teachers only occasionally reprimanded students for mistakes. Teachers were aware of the need to involve boys and girls equally for class participation. 	Emerging - Established (2.6)
2.3	Teaching and Learning Materials (TLMs)	 TLMs had been developed and distributed to GES-MASHAV classrooms. The TLMs are displayed in the classroom, along with student work (writing and art), and available on shelves or tables. TLMs include self-instructional activities, and structured, sequenced group learning activities. Evaluation and teacher feedback of TLMs was being conducted. 	Emerging - Established (2.5)
2.4	Promoting Equality and Diversity	 Teachers' still focused on group responses and treated students as homogenous learners, but provided some individualised attention to students, and also tried to ensure that students participate equally in posing and answering questions. Girls participated equally in responding to teacher questions. 	Emerging - Established (2.5)
2.5	Head Teacher Support	Head teachers had received training in ABL concepts and methodologies, understand what to look for during classroom observations to assess teachers' mastery of ABL, and encourage teachers to implement ABL.	Emerging - Established (2.5)
2.6	Teacher Peer Support	With support from GES-MASHAV programme administrators and head teachers, teachers organise into peer support groups, which allow them to share and discuss their respective pedagogical strategies, ABL methodologies. TLMs or assessment practices with fellow teachers.	Emerging (2.3)

On average, school level aspects of GES-MASHAV have been introduced, understood, and are being replicated and accepted by most schools / teachers into regular practice - this is very positive

2	School Level	Summary Findings	ABL Rating
			1 = latent
			2 = emerging
			3 = established
			4 = advanced
		 Teacher groups discuss and agree on how they will function: frequency and duration of meetings, facilitation/ leadership of meetings, topics to be discussed, materials and resources which need to be mobilised, etc. 	
		 Project financial resources are sometimes used to support snacks during meetings. 	
2.7	Student	This was the lowest rated school-level ABL aspect for GES-MASHAV (just beyond Emerging).	Emerging
	Arrangement	Students sit in groups but primarily work as a whole class or individually.	(2.2)
2.8	Students' Time on Task	 This was the most highly rated school-level ABL aspect for GES-MASHAV (beyond Emerging, but below Established). 	Emerging - Established
		 Most students are on-task, engaged in individual, group or whole class learning activities. 	(2.7)
		In some cases some students remain off-task, but teachers attempt to get them on-task.	
2.9	Student	Most students are engaged in learning activities, but not all.	Emerging -
	Engagement	Some students actively participate and ask questions, while others mainly watch, listen and imitate.	Established
		Students share ideas within their groups or as part of whole class choral answers.	(2.5)
2.1 0	Classroom Atmosphere and	 Students are encouraged to interact and learn with each other. Teachers are warm, friendly and approachable, and positively respond to learners, who do not appear to fear the 	Emerging - Established
	Interaction	teacher.	(2.6)
2.1	Student	• Teachers provide regular constructive feedback to students on adequacy of work (indicating correct and	Emerging
1	Continuous Assessment	incorrect responses) for each learning activity.	(2.4)

Some of the teachers do not like using ABL, they normally use lecture method. They will stand there "bra bra bra bra..." and at the end of the period the child will not understand it...only 2 or 5 will understand what was taught." (Ghanaian Teacher)

" ...from the Training College we learn that it should be child centered not teacher centered...when teachers come for teaching practice, they use the activity method...It seems when we are teaching for marks we use it (ABL), but when teaching for money we don't." (Ghanaian Teacher) Some think ABL is time consuming so do not like using it Some don't use ABL because they don't think TLMs are adequate and they don't have the skills to prepare or use them

ABL is used mostly in Maths and Science

Some teacher attitudes towards ABL found in study

6.2.3 System Level ABL Observed from GES-MASHAV Teacher Interviews

Summary findings from the 11 specific system level ABL aspects for the GES-MASHAV sample are outlined below in Figure 6.3. As previously noted, 6 of the system level aspects were quantified⁵⁹, drawing from the interviews of sampled teachers, whereas 5 of the aspects were not quantified, and are impressions largely drawn from interviews with programme officials, and are indicated in *italics*⁶⁰.

The analysis of interview data gathered from the 28 classrooms showed that the average system level ABL rating measured from the 6 quantifiable aspects was "Emerging". This indicates that the overall average system level rating of ABL is just below the Emerging stage. The 6 specific system level aspects of ABL ranged from just above "Latent" to just above "Emerging". From teacher interview data, **Resource Allocation was rated lowest at just above Latent**. **INSET was rated the highest at Emerging**.

Figure 6.3: Summary Findings and System Level ABL Ratings for GES-MASHAV

1	System Level	Summary Findings	ABL Rating 1 = latent 2 = emerging 3 = established 4 = advanced
	Overall	 The system level aspects of ABL have been introduced, but remain in the early stages, and have not yet taken root. Based on interviews at the regional and district levels, there is a great deal of support for MASHAV. However, teacher's responses indicate that system level aspects such as resource allocation are not as strong as teacher's desire. 	Latent - Emerging (1.9)
1.1	Policy Formulation	 There is government and external support for piloting GES-MASHAV, but not yet agreement on how lessons learned from the intervention will be employed beyond the pilot stage. Currently attempts are being made to include written Ministry-level policy with respect to ABL, which describes what ABL means and looks like. Policymakers and administrators in the education system are being exposed to ABL concepts or methodologies, and are able to verbally articulate what a classroom implementing ABL would look like. 	Emerging
1.2	Programmatic Development	 Programmatic development on ABL was found to be just below Emerging. There are GES-MASHAV programme documents, including guides for teachers and administrators that have guided the development of its ABL intervention. The MoE curriculum that is also being used has aspects of ABL (e.g. use of TLMs). However, aspects of ABL are yet to be explicitly specified in MoE programme documents (e.g. student and teacher assessment, and Teacher Professional Development policy documents) to enable full-scale MoE-sponsored ABL pilots to take place. 	Latent - Emerging (1.8)
1.3	Resource Allocation	 Among all the GES-MASHAV ABL ratings, resource allocation was the weakest aspect reported by teachers, just above Latent. There is limited allocation of resources to enable further piloting of ABL methodologies nationwide. 	Latent (1.3)
1.4	Provision and Development of Teaching and Learning Materials (TLM)	 TLMs have been produced as part of GES-MASHAV pilot, reflecting ABL concepts and methodologies. TLMs enable structured, sequenced classroom activities that facilitate student learning in groups and pairs, and an individual basis. Work has begun to identify which TLMs can be produced at school and which need to be produced by TLM experts. An NGO known as Sabre Trust had taken the lead to support some schools with the production of TLMs that are being made locally. 	Emerging
1.5	Pre-Service Teacher Training	 Teachers reported that at the Colleges of Education (CoE) they were introduced to ABL theory, concepts and practices, but traditional teacher lecture-style methodologies prevailed as both the form of pre-service training and the expected form of classroom instruction post-training. Although the development of TLMs was part of the 	Emerging (2.0)

⁵⁹ 1.2. Programmatic Development, 1.3. Resource Allocation, 1.5. Pre-Service Teacher Training (PRESET), 1.6. In-Service Professional Development (INSET / CPD), 1.7. Academic / Pedagogical Support, and 1.10. Community / Parent Engagement.

The average system level ABL rating measured from the 6 quantifiable aspects was "Emerging"

Engagement. ⁶⁰ 1.1. Policy Formulation; 1.4. Development of Teaching and Learning Materials (TLM); 1.8. Teacher Assessment; 1.9. Student Assessment; and 1.11. Evaluation Feedback Loops.

1	System Level	Summary Findings	ABL Rating
			1 = latent
			2 = emerging
			3 = established 4 = advanced
	(PRESET)	CoE curriculum in the past, it has been removed, given that the curriculum would otherwise be crowded and the inclusion of other "subjects" such as HIV/AIDS.	
		 Some pre-service trainers are aware of ABL, but reported that they remain sceptical and noncommittal, especially given the belief that using "ABL takes time." 	
		• There is a lack of in-depth knowledge and/or expertise about ABL, and pre-service instructors lack incentives to change their content and methodologies, with some noting that teachers are not assessed on ABL implementation.	
1.6	In-Service Professional	 On average, GES-MASHAV teachers rating of INSET/CPD was the highest among the system-level ABL aspects. 	Emerging (2.4)
	Development (INSET / CPD)	• GES-MASHAV pilots include introduction to ABL concepts, methodologies and techniques for in-service training for teachers engaged in pilot. Some teachers participated in trainings where they saw ABL being practiced in other contexts, in Israel.	
		• Training includes awareness of individual learning styles, changing the role of teacher from lecturer to learning facilitator, development and use of ABL TLMs, and teacher demonstration of how they might use TLMs as part of their teaching.	
1.7	Academic / Pedagogical Support	 Head teachers and trainers have received training in ABL concepts and methodologies, understand what to look for during classroom observations to assess teachers' mastery of ABL, and encourage teachers to strengthen their knowledge and skills related to ABL. 	Emerging (2.2)
1.8	Teacher Assessment	 GES-MASHAV teachers are embedded within the Ghanaian education system, and teachers reported that teacher assessment on ABL is Latent, as there is limited formal GES assessment of teachers' use of ABL. Teachers are usually assessed on quantifiable outputs such as number of lessons they give. 	Latent
1.9	Student Assessment	• Interviews indicated that formal student assessment on ABL is Latent, as GES-MASHAV is embedded within the Ghanaian education system, in which there is much more focus on written exams.	Latent
		There is some informal assessment that includes student presentation / demonstration of knowledge. Teachers ask questions in an attempt to probe deeper thinking.	
1.10	Community / Parent Engagement	 Some parents help their children with learning activities at home. Parents are exposed to active learning concepts and methodologies, although some think that children do not learn by "playing," and thus they prefer traditional methodologies. 	Latent - Emerging (1.9)
1.11	Evaluation Feedback Loops	 In GES-MASHAV pilot areas there are currently efforts at collecting baseline and end-of-pilot evaluations of the extent and effectiveness of ABL methodologies, and their correlation with student educational outcomes. Feedback and lessons learned are informing administrators and policy-makers, particularly with regards to replicability / scale-up and potential sustainability. 	Emerging

Higher system level ABL ratings were related to overall school level ABL ratings, as was language of instruction

6.2.4 Overall School Level ABL Rating related to System Level ABL Ratings for GES-MASHAV Sample

From the GES-MASHAV data, higher system level ABL ratings (assessed from teacher interviews) generally appeared to be positively related with overall school level ABL ratings (assessed from classroom observations and teacher interviews).

There did not however, appear to be a relationship between the average school level ABL rating and the number of interventions in which the teacher had participated in training or the class size, though a relationship did appear for language of instruction. The one teacher who mostly used English instruction had a significantly lower overall school level ABL rating, relative to teachers who used Ghanaian language in class instruction. This indicates that the teacher who was using English in teaching was rated as exhibiting fewer aspects of good ABL in their teaching. Since this is a finding based on only one teacher, it should be interpreted with caution, as there may be other unmeasured factors that may be associated with that teacher having low ABL ratings. GES-MASHAV teachers had much higher overall school level ABL ratings than neighbouring teachers who had not received ABL training

System level ABL ratings appeared to be positively related to *all* ratings for *all* the 11 school level aspects, but had only a weak link to Student Arrangement, and Students' Time on Task

The GES-MASHAV pilot has largely been successful at implementing ABL at the school level

GES-MASHAV teachers beliefs and attitudes about teaching appear to have changed

But, there is a high risk of dissipation at the classroom level if system level aspects are not reinforced

SfL is an informal education model, as such none of the facilitators had attended a College of Education (CoE)

6.2.5 Overall School Level ABL Rating related to ABL Intervention Status and System Level ABL Ratings for GES-MASHAV and "Traditional" Teacher Sample

Sampled GES-MASHAV teachers appeared to have much higher overall school level ABL ratings on average, as compared to their colleagues from neighbouring "traditional" schools.

Observations of the sampled GES-MASHAV teachers showed much higher overall school level ABL ratings on average, as compared to their colleagues from neighbouring "traditional" schools.

The lack of school background data however, did not allow the research team to assess whether teacher and student variables were associated with deeper ABL practice.

Notwithstanding this, the findings are worthy of note, and call for a more in-depth and robust study of such differences.

6.2.6 Specific School Level ABL Rating related to System Level ABL Ratings for GES-MASHAV Sample

Although, system level ABL ratings (as assessed from teacher interviews) appeared to show a positive relationship with ratings for *all* the 11 school level aspects (e.g. classroom furniture and layout, teaching methodologies, teaching and learning materials, promoting equality), this was very limited for Student Arrangement, and Students' Time on Task. In terms of language of instruction, the one teacher who mostly used English instruction had a consistently lower ABL rating for each of the school level aspects relative to teachers who used Ghanaian language, but this must be taken with caution given the sample size and should be studied further. On average, larger class size seemed to be strongly related to a lower ABL rating for classroom layout, as might be expected.

6.2.7 Summary Findings for GES-MASHAV Sample

Findings showed that school level ABL implementation is between the Emerging and Established stages in the GES-MASHAV schools, whereas the system level aspects of ABL have evolved beyond the Latent stage (ABL rating 1), but have yet to reach the Emerging stage (ABL rating 2).

In other words, the GES-MASHAV pilot intervention has been largely successful at implementing ABL at the school level, and teachers have responded positively to what they have experienced and observed, such that they are trying to deepen and broaden its application. Their beliefs and attitudes about teaching appear to have changed. On the other hand, while the system level aspects of ABL, such as teacher training have been introduced, they remain in the early stages and have not yet taken root. There is a high risk of dissipation of ABL at the classroom level if system level aspects are not reinforced. Further details of the sample and findings are presented below.

6.2.8 Description of SfL Teacher / Classroom Sample

None of the 20 sampled SfL teachers had attended a teacher training college, and all but one reported having only obtained one type of teacher training: SfL teacher training. The only teacher who reported having obtained another type of training was the female teacher who indicated that she had been trained as part of an intervention called "Alliance for Change," which trained community teachers to provide education to out of school children⁶¹. This highlights the difference in the SfL and GES-MASHAV teacher samples, and is one of the reasons why we do not make direct comparisons of the two interventions. SfL is an informal education model explaining why none of the facilitators had attended a College of Education (CoE). GES-MASHAV however, is part of the formal kindergarten system, with a greater proportion of teachers thus having attended CoEs.

⁶¹ For more on Alliance for Change, see: <u>http://www.ei-</u>

ie.org/developmentcooperation/en/project_detail.php?id=390&country=ghana&geography=africa

On average, school level aspects of SfL have been introduced, but remain in the early stages. There is a risk of dissipation at the classroom level

The highest ABL aspect was students' time on task, the lowest was head teacher support The SfL programme lasts for one year. Among the classes observed, 75% (15 out of 20) were lessons in literacy, and 25% (5 out of 20) were lessons in numeracy. In all classes observed the main language of instruction was a Ghanaian language, Dagbani.

The average class observed had 22 learners present, out of about 24 enrolled. The number enrolled ranged from a minimum of 20 to a maximum of 25, with a minimum of 14 learners present as compared to a maximum of 25. On average, classes observed had 13 boys and 9 girls present.

6.2.8 School-Level ABL from SfL Classroom Observations and Teacher Interviews

Analysis of the indicators developed from the classroom observations and interviews of sampled teachers, showed that on average, the school level aspects of ABL for SfL are just above Emerging. In other words, on average, the school level aspects of SfL have been introduced, but remain in the early stages. There is a risk of dissipation of the intervention at the classroom level if it is not reinforced.

There was variation in the ABL ratings for the various school level aspects. Consistent with the case for GES-MASHAV at the school level, the highest rated ABL aspect was students' time on task, rated between Established and Advanced. The lowest rated aspect was head teacher support, rated as Latent.

Overall summary findings for specific school level ABL aspects are outlined below:.

Figure 6.4: Summary Findings and School Level ABL Ratings for SfL

2	School Level	Summary Findings	ABL Rating 1 = latent 2 = emerging 3 = established 4 = advanced
	Overall	• On average, the school-level aspects of SfL have been introduced, but remain in the early stages. There is a risk of dissipation of the intervention at the classroom level if it is not reinforced.	Emerging (2.2)
2.1	Classroom Furniture and Layout	SfL centres have movable furniture which facilitates student group work, but were mostly still arranged in rows as opposed to circles.	Latent -Emerging (1.7)
2.2	Teaching Methodologies	 Teachers circulated through the classroom, and used a mix of traditional (i.e. lecture-based) and ABL teaching strategies. Teachers encouraged students to ask questions if they do not understand. Teachers and students begin to use TLMs on a regular basis. Teachers only occasionally reprimanded students for mistakes. Teachers were aware of the need to involve boys and girls equally for class participation. 	Emerging (2.2)
2.3	Teaching and Learning Materials (TLMs)	 Few TLMs are displayed or used in classrooms, as classes are not always held in classrooms, but sometimes under trees. Student work (e.g. writing, posters, and art) is not displayed in the classroom. Primary TLMs remain the blackboard, student notebooks and some textbooks. 	Latent - Emerging (1.6)
2.4	Promoting Equality and Diversity	 Teachers' focused on group responses and treated students as homogenous learners, but provided some individualised attention to students, and also tried to ensure that students participate equally in posing and answering questions. 	Emerging (2.0)
2.5	Head Teacher Support	 SfL centres do not have a head teacher, but rather there are supervisors who visit the SfL sites at least once a month, with visits becoming more frequent where needed. N.B. The lower ABL score given here should perhaps not be given too much weight in the broader picture of SfL success – given that this is the established model, and that SfL only costs £95 a year for a student to go through the programme, managed by the community. 	Latent (1.1)
2.6	Teacher Peer Support	 Teachers organise into peer support groups, which allow them to share and discuss their respective pedagogical strategies, ABL methodologies, TLMs or assessment practices with fellow teachers. 	Emerging

2	School Level	Summary Findings	ABL Rating 1 = latent 2 = emerging 3 = established
			4 = advanced
		 Teacher groups discuss and agree on how they will function: frequency and duration of meetings, facilitation/ leadership of meetings, topics to be discussed, materials and resources which need to be mobilised, etc. 	(2.3)
2.7	Student Arrangement	Students sit in groups but primarily work as a whole class or individually.	Latent-Emerging (1.7)
2.8	Students' Time on Task	 This was the most highly rated school-level ABL aspect for SfL (beyond Established, but below Advanced). Most students are on-task, engaged in individual, group or whole class learning activities. In some cases some students remain off-task, but teachers attempt to get them on-task. 	Established - Advanced (3.5)
2.9	Student Engagement	 Most students are engaged in learning activities, but not all. Some students actively participate and ask questions, while others mainly watch, listen and imitate. Students share ideas within their groups or as part of whole class choral answers. 	Emerging- Established (2.9)
2.10	Classroom Atmosphere and Student Interaction	 Students are encouraged to interact and learn with each other. Teachers are warm, friendly and approachable, and positively respond to learners, who do not appear to fear the teacher. 	Emerging (2.4)
2.11	Student Continuous Assessment	 Teachers provide regular constructive feedback to students on adequacy of work (indicating correct and incorrect responses) for each learning activity. 	Emerging (2.0)

6.2.9 System Level ABL from SfL Teacher Interviews

The overall average system level rating of ABL for SfL is just below the Emerging stage For the SfL sample, the analysis of interview data gathered from the 20 classrooms showed that the average system level ABL rating measured from the 6 quantifiable aspects was 1.9. This rating is similar to what was found for GES-MASHAV. The rating indicates that the overall average system level rating of ABL for SfL is just below the Emerging stage. The ratings for the 6 specific system level aspects of ABL ranged from midway between Latent and Emerging (Pre-Service teacher training=1.4) to just above Emerging (In-Service teacher training=2.2).

Summary findings from the 11 specific system level ABL aspects are outlined below in Figure 6.5 below. As previously noted, 6 of the system level aspects were quantified, drawing from the interviews of sampled teachers, whereas 5 of the aspects were not quantified, and are impressions largely drawn from interviews with programme officials, and are indicated in *italics*.

Figure 6.5: Summary Findings and System Level ABL Ratings for SfL

1	System Level	Summary Findings	ABL Rating 1 = latent 2 = emerging 3 = established 4 = advanced
	Overall	 The system level aspects of ABL have been introduced, but remain in the early stages, and have not yet taken root. 	Latent -Emerging (1.9)
1.1	Policy Formulation	 There is government and external donor support for the SfL piloting, but not yet agreement on going beyond the initial phase of implementation. Currently attempts are being made to include written Ministry-level policy with respect to ABL, which describes what ABL means and looks like. This forms the draft Complimentary Basic Education (CBE) policy. Policymakers are being exposed to ABL concepts or methodologies from SfL, and are able to verbally articulate what a classroom implementing ABL would look like. 	Emerging

1	System Level	Summary Findings	ABL Rating
			1 = latent
			2 = emerging
			3 = established
			4 = advanced
1.2	Programmatic Development	 Programmatic development on ABL was found to be just below Emerging. There are SfL programme documents that have guided the development of its ABL intervention. 	Latent -Emerging (1.8)
1.3	Resource Allocation	 There has been some allocation of external and some internal resources to enable further piloting of ABL methodologies learned from SfL nationwide. For example, lessons learned from SfL were incorporated into NALAP, which was extended nationwide. 	Latent -Emerging (1.9)
1.4	Development of	TLMs have been produced as part of SfL, reflecting ABL concepts and methodologies.	Emerging
	Teaching and Learning Materials (TLM)	 TLMs enable structured, sequenced classroom activities that facilitate student learning in groups and pairs, and an individual basis. SfL TLMs are primers designed with exercises that test the learners' understanding, with facilitators guiding the learners through exercises and occasionally asking them to do some homework to consolidate their understanding. 	
1.5	Pre-Service	• SfL is a low-cost model for catch-up education; hence training occurs outside of Colleges of Education	Latent
	Teacher Training (PRESET)	(CoE). Rather teachers receive a 3-week pre-service training. During this training, facilitators are taught SfL methodology. This essentially involves development of skills in using activity and group methods. They are also taken through the content of primers and how to make and use relevant TLMs.	(1.4)
1.6	In-Service	On average, SfL teachers' rating of INSET/CPD was the highest among the system-level ABL aspects.	Emerging
	Professional	• After SfL facilitators have been on the job (i.e. 3 months after the pre-service training), they return to the SfL	(2.2)
	(INSET / CPD)	training centre for a refresher course that lasts one (1) week. This course focuses on some of the	
	(,	They are also given the opportunity to make more TLMs.	
		• Three months after the refresher course (i.e. 6 months after the pre-service training), another refresher	
		course is organised for the facilitators. This second refresher course lasts four (4) days, and further addresses any difficulties that the facilitators may be encountering, and provides support for them to successfully complete the final quarter of the SfL cycle.	
1.7	Academic / Pedagogical Support	 Programme officials and trainers have received training in ABL concepts and methodologies; understand what to look for during classroom observations to assess teachers' mastery of ABL, and encourage teachers to strengthen their knowledge and skills related to ABL. 	Latent -Emerging (1.9)
		• Supervisors visit SfL communities at least once a month, with more visits if there is a problem. During visits	
		the supervisor observes lessons, interacts with the learners and gives the facilitator feedback on their	
		performance. Where there is the need to intervene the supervisor meets with the facilitator and provides suggestions regarding how to improve both teaching and learning outcomes. There is then a follow up visit	
		to find out whether there has been any improvement and what further support would be necessary.	
1.8	Teacher Assessment	• SfL teachers are embedded within the Ghanaian education system, and teachers themselves were trained in the system, in which there is limited formal assessment of teachers' ABL implementation. Teachers are usually assessed on quantifiable outputs such as number of lessons they give.	Latent
1.9	Student Assessment	 Interviews indicated that formal student assessment on ABL is Latent, as it is embedded within the Ghanaian education system, in which there is much more focus on written exams. 	Latent
		 There is some informal assessment that includes student presentation / demonstration of knowledge. Teachers ask questions in an attempt to probe deeper thinking. 	
1.10	Community / Parent	Some parents help their children with learning activities at home, but, it should be noted that this in a context of low-literacy.	Emerging
	Engagement	Parents are exposed to active learning concepts and methodologies, although some think that children do	(2.0)
		 not learn by "playing," and thus they prefer traditional methodologies. There is a community management committee. 	
1.11	Evaluation	• In SfL areas there have been efforts at collecting baseline and additional evaluations of the extent and	Emerging
	Feedback Loops	effectiveness of ABL methodologies, and their correlation with student educational outcomes. Feedback and	
		scale-up and potential sustainability.	

Most SfL school aspects of ABL were between Emerging and Established, whilst some were beyond Established

SfL system level has evolved beyond Latent, but no aspects were Established

SfL teachers who received better pedagogical support may be implementing ABL more effectively, or those who *perceive* they are receiving better support may be more enthusiastic about ABL

6.3 Summary of System and School Level ABL Ratings for SfL

Based on the survey of SfL learning centres, most of the school level aspects of ABL implementation were between the Emerging and Established stages, and some were beyond the Established stage. Meanwhile, system level aspects of ABL have evolved beyond the Latent stage, but no aspects had yet reached the Established stage. As with the GES-MASHAV programme, the system level aspects of ABL have been introduced, but remain in the early stages, and have not yet taken root. There is a high risk of dissipation of ABL at the classroom level if system level aspects are not reinforced.

Given the relative lack of variation in overall ABL ratings for the SfL data, analysis of the relationships between specific system level aspects of ABL and school level ABL ratings was conducted. There did not appear to be a relationship between most of the specific system level variables and school level ABL ratings. However, a higher ABL rating of the pedagogical support that a teacher received did seem to be related to a higher school level ABL rating. This finding may mean that SfL teachers who received better pedagogical support may be implementing ABL more effectively, or it may mean that SfL teachers who *perceive* that they are receiving better pedagogical support may be more enthusiastic about ABL. Overall it highlights the importance of pedagogical support in the contexts of interventions such as SfL and warrants further research.

6.4 Summary of Key Findings from Primary Research

The following sets out a summary of key findings, as they relate to each of the two research questions and their hypotheses.

Figure 6.6: Summary of Key Findings from Primary Research

Q2. Successful characteristics for a national ABL pedagogy	Q2. Training and pedagogical support observed which have persuaded or enabled teachers to adopt ABL methodologies	Q1. Did either programme demonstrate positive results, sufficient to justify scaling up / incorporation of successful characteristics into formal early basic education? / Q2. Was successful ABL at system / school levels?	Q. 2 If both levels were found, were these mutually reinforcing?	Q1. Did students from programmes with more ABL characteristics show higher attainment?
GES MASHAV Sa	mple			
INSET training	 Teachers had much higher overall school level ABL ratings than neighbouring teachers who had not received ABL training. 61% of teachers in GES-MASHAV schools had participated in training. Some teachers in neighbouring schools had received GES- MASHAV training - this appears to show a positive relationship between the training received at the system level and the school level ABL. 	 On average, the school level aspects of GES-MASHAV have been introduced, understood, and are being replicated and accepted by most schools / teachers into regular practice - this is very positive. The pilot has largely been successful at implementing ABL at the school level. Teacher's beliefs and attitudes about teaching appear to have changed. However, while the system level aspects of ABL have been introduced in GES-MASHAV, they remain in the early stages and have not yet taken root. The average system level ABL rating was "Emerging". At the system level, Resource Allocation was rated lowest at just above Latent. INSET was rated the highest at Emerging. There is a high risk of dissipation at the classroom level if system level aspects are not reinforced. 	 Analysis showed a relationship between school and system level ABL implementation - the two levels are seen to be mutually reinforcing as expected. Higher system level ABL ratings were related to overall school level ABL ratings, as was language of instruction, indeed, system level ABL ratings appeared to be positively related to all ratings for all the 11 school level aspects, but had only a weak link to Student Arrangement, and Students' Time on Task. 	 No relationship found between system / school level ABL implementation and student outcomes – this was considered to be the result of poor fieldwork instruments which were not fit for purpose – i.e. measuring KG students, but intended to measure grades 1-5.
SfL Sample		·		
Pedagogical	 Informal education model, as such none of 	 Most school level aspects of ABL were between Emerging and Established levels, whilst some 	Appears to be a positive relationship between the	 Higher student test scores were found in

Q2. Successful characteristics for a national ABL pedagogy	Q2. Training and pedagogical support observed which have persuaded or enabled teachers to adopt ABL methodologies	Q1. Did either programme demonstrate positive results, sufficient to justify scaling up / incorporation of successful characteristics into formal early basic education? / Q2. Was successful ABL at system / school levels?	Q. 2 If both levels were found, were these mutually reinforcing?	Q1. Did students from programmes with more ABL characteristics show higher attainment?
Support	the facilitators had attended a College of Education (CoE)	 were beyond Established. On average, school level aspects have been introduced, but remain in the early stages. Teachers who received better pedagogical support may be implementing ABL more effectively, or those who perceive they are receiving better support may be more enthusiastic about ABL. Risk of dissipation at the classroom level. Consistent with GES-MASHAV, at the school level, the highest rated aspect was students' time on task, rated Established - Advanced. The lowest was head teacher support, rated as Latent. Implementation at the system level has evolved beyond the Latent stage just below Emerging, but no aspects were yet deemed Established. 	system level ABL rating and the school level ABL rating – as expected, appear to be mutually rein-enforceable – risks to success if both are not given attention.	the SfL sample showing a relationship to school level ABL, but unclear whether system ratings and student outcomes were linked at all.

The school and system levels of ABL implementation for both GES-MASHAV and SfL appear to be related, and mutually reinforcing, though due to unsuitable field instruments, the link between learning outcomes and ABL was not clear in GES-MASHAV.

The most important aspects resulting in better ABL implementation were deemed to be INSET and pedagogical support at the system level. A national ABL intervention should thus consider these at the heart of its approach. The classification framework developed shows progression to Advanced implementation in these aspects as:

1 Latent	2. Emerging	3. Established	4. Advanced
Regular MoE INSET programmes do not incorporate or promote ABL concepts, methodologies or techniques. Training involves the traditional "cascade" model which often results in transmission loss of both content and methodology each time the training is repeated at the next (lower) level. Teachers usually removed from school / classroom environment from training, which reduces realism, relevancy and applicability of training.	ABL pilots include introduction to ABL concepts, methodologies and techniques for in-service training for teachers engaged in pilot. Training includes awareness of individual learning styles, changing role of teacher from lecturer to learning facilitator, development and use of ABL TLM materials, and teacher demonstration of how they might use TLMs as part of their teaching.	Expansion of ABL to system level includes iterative national- scale INSET programmes, which model ABL methodologies, supervision by MoE teacher support staff, and regular evaluation. Programmes include use of TLMs, small group discussions, teachers' demonstrations of ABL and peer feedback. Following training, teachers able to articulate key ABL principles / methodologies. Teachers encouraged to reflect on practice with peers.	All MOE INSET trainers are fully versed in ABL concepts, methodologies and techniques, and apply these in their ABL INSET programmes (financed by national budget). INSET programmes incorporate all aspects from "established" stage. Teachers have structured opportunities at school level for action research: planning, action, observation and reflection. MoE has conducted evaluations of ABL INSET programmes and made revisions based on findings and recommendations.
INSET		Head teachers participate in training	

			4 Advanced
1. Latent	2. Emerging	3. Established	
Head teachers and Curriculum Leaders are unfamiliar with ABL concepts and methodologies, and do not encourage teachers to apply them.	Head teachers and Curriculum Leaders in ABL intervention have received training in ABL concepts and methodologies, understand what to look for during classroom observations to assess teachers' mastery of ABL, and encourage teachers to strengthen their knowledge and skills related to ABL.	Curriculum Leaders nationwide (at least those covering grades where ABL is to be expanded) and Head teachers all trained in ABL concepts and methodologies, able to demonstrate ABL techniques, provide constructive feedback to teachers to enable them to use ABL more effectively in their classrooms.	Regular MoE training programmes for Head teachers, Circuit Supervisors and Curriculum Leaders (financed by national budget) include written and practical exercises to understand and apply ABL concepts and methodologies (i.e. they model the ABL desired in the classroom as part of their training).
Pedagogical Support		Head teachers and Pedagogical Supervisors encourage teachers to deepen their understanding and skills with ABL.	Supervisors exposed to evaluations which link improved educational outcomes to ABL methodologies, and are able to demonstrate ABL to teachers, and use supervision/classroom observation data capture formats which include extensive review of observed ABL practices.

The findings in this study suggest that more effort, especially at the system level may be productive for ABL to become embedded in Ghana. As cases from other parts of the world show, implementing ABL successfully calls for developing multiple system and school level aspects, which is a complex endeavour.

Findings in the context of addressing the challenges faced for improving ABL implementation in Ghana are discussed in the sections that follow.

7. Analysis of What Works and What does not - Capacity Gaps in the Ghanaian Context

This section draws from the data gathered to discuss what works and does not work in the Ghanaian contexts studied, as well as the current human and institutional capacity gaps that need to be bridged to meet KG and early primary education needs and provide an emerging ABL vision for Ghana (see Appendix D for further details). Addressing system level gaps is linked with success in implementation of ABL at the school level

INSET cited as an example of what *is* working in ABL

In both GES-MASHAV and SfL samples, the most highly rated ABL aspect was INSET

7.1 Capacity Gaps in ABL Implementation in Ghana

The discussion in this section draws from interviews with teachers, trainers, and education officials, in various regions as well as that from the SfL and GES-MASAHAV samples, and will discuss what works and does not work in ABL in Ghana, as well as the gaps to be addressed at the system level. This will be followed by a discussion at the school level. In both discussions, the change processes occurring in the contexts studied, or that must occur for successfully implementing ABL, are noted.

7.1.1 System Level

Problems include:

- inefficient resource allocation
- challenging information transfer
- long time-lags between start of school year and receipt of funding / materials
- inadequate training and misalignment between assessments / practice
- transportation problems limit teacher training or monitoring of teaching
- insufficient evidence based feedback
- limitations with assessments

Ghana is currently undergoing changes to address some of these challenges and this presents an opportunity for changing student / teacher assessments to include ABL practice

System challenges include:

- Delays in establishing decentralised bodies
- Need to improve teacher assessment and incentives
- Need for leadership in professional development and changes in training

At the system level, teachers and officials across sites reported the development of INSET as an example of what *is* working in their implementation of ABL. In both GES-MASHAV and SfL samples, the most highly rated ABL aspect was INSET. This relates to ABL specific training and not the general INSET received by all trained teachers. This was consistent with findings from teachers who had also participated in ABL interventions such as NALAP and BTL / Molteno where they received ABL training.

However, informants also noted system level aspects that are *not* working. Problems such as inefficient resource allocation (e.g. 97% of recurrent budget goes on salaries and ADEOPs are not fulfilled with spend for the districts), include the challenge of information transfer between the District Education Offices (DEOs) and the GES central divisions. Interviews of district officials indicated that long time-lags between the beginning of the school year and when they receive funding and materials makes it difficult for them to implement policies. Hence, such system level problems would have to be addressed if any policies developed on ABL are to be implemented successfully. Challenges related to information gathering and sharing at the system level are also related to inadequate training and misalignment between assessments and desired practices. Interviews of district officials indicated that for example, transportation problems meant they were not always able to visit all schools to provide teacher training or monitor teaching practice.

Developing policies and practice is also a challenge with insufficient evidence based feedback being provided on a timely and continuous basis. A key reason why policies and teachers' behaviour do not change is because policy makers and teachers don't have information on how *individual* students are performing in the long or short term. For example, the National Education Assessment (NEA), administered to a 3.5% sample of schools in English Language and Mathematics at grade 3 and 6, is only useful for comparison at the national and regional levels, not of individuals at the school level.

A better measure of student performance is the School Education Assessment (SEA), administered by schools across Ghana at grade 2 and 4 to ascertain student achievement levels and needs. A limitation of this however, is that it is financed through donor funding and is not administered regularly. The first time that students actually find out how they are performing is after 9 years of basic education, during the Basic Education Certificate Examination (BECE).

7.1.1.1 Moving Forward

The educational system in Ghana is undergoing some changes to address the challenges faced in providing quality basic education, including in information flow. These present a window of opportunity for changing student and teacher knowledge, practice and assessment to include measurement of ABL practices and outcomes. With the formation of the new education bodies, school level assessments that support teachers to understand the progress of their students may be developed from the materials being used in the ABL initiatives identified, including GES-MASHAV and SfL. As part of the Ghana Education Decentralisation Programme (GEDP), support is being provided for operationalising a number of new autonomous bodies: a National Inspectorate Board (NIB); a National Teaching Council (NTC); and a National Council on Curriculum and Assessment (NCCA); which will oversee decentralised education in Ghana. Additionally, teacher education has been shifted from TED to the tertiary institutions, under the management of the National Council for Tertiary Education (NCTE). It is important to recognise though, that such changes may bring problems with them which will need to be carefully considered, such as: ensuring linkages between GES and teacher development in the new structure; the potential time lags in the creation of new bodies; and limited funding. The timeline to achieve effectiveness from these changes is currently unclear.

There are a number of issues at the system level which could undermine a national approach if not addressed holistically such as: teacher performance measures, teacher incentives such as merit based promotion, and supervision. Challenges such as the reform of assessment to encourage ABL practice will require long-term efforts, particularly by the Colleges of Education (CoE) and the Institute of Education, University of Cape Coast, as the teacher education curriculum is reformed. This will also require strong professional development leadership from Head Teachers. Lessons should be learned from existing programmes such as NALAP which have encountered such issues.

7.1.2 School Level

This study found that at the school level, there has been success in aspects of ABL implementation, such as keeping students engaged and on task during classroom activities, within a nurturing classroom atmosphere. Efforts at promoting teachers' recognition of equality and diversity also seem to be paying off. Teachers sampled from the GES-MASHAV programme and SfL were rated highly on this ABL aspect from classroom observations and interviews. Additionally, sampled teachers were rated relatively high in their abilities to use ABL teaching methodologies.

However, challenges remain, particularly in assessing ABL and developing incentives for teachers and students to practice it in classrooms.

- Gaps in structural school level aspects such as classroom layout and student arrangement may be addressed by teachers and head teachers in the short-term.
- In the longer term, school based coaching of Head Teachers as professional development leads for teaching staff is needed for ABL pedagogic approaches to be sustained and institutionalised and to incentivise teachers to practice ABL in their classrooms:
 - The Head Teacher will need extended coaching in ABL and practical pedagogy. Part of this training should involve the Head Teacher shadowing a coach as s/he leads on the coaching of the school's teachers. In time, the Head Teacher will take over from the coach and lead on the professional development of their staff themselves.
 - A complete set of materials should be developed and provided to the Head Teacher to continue leading on the professional development of her/his staff. This should be combined with audio and visual materials of model teaching.

Such longer-term factors are in turn linked to system level factors, such as the development of programmes and national policies on how to assess and provide incentives for teachers to practice ABL. One of the means for gaining a better understanding of, and improving, both school and system level ABL, is through studies such as this.

7.2 Limitations and Future Work Needed

Due to time and resource constraints, this study was only able to draw upon small sample sizes, resulting in a relative lack of variation in data. The same constraints prevented a more sophisticated longitudinal, experimental (or even robust quasi-experimental) evaluation design. This means caution must be used in interpreting and using the results. However, lessons learned from this study can feed into design of additional studies of pilot interventions, with tools adapted for larger randomised sample sizes. Several such lessons are discussed below.

School level successes include:

- keeping students engaged and on task
- promoting teachers' recognition of equality and diversity - teachers from GES-MASHAV and SfL rated highly

 sampled teachers were rated relatively high in abilities to use ABL

School level challenges:

- assessing ABL
- developing incentives for teachers / students to practice ABL in class
- classroom layout and student arrangement
- professional development leadership from Head Teachers
- teaching and learning materials in all schools

Lessons learned from this study can feed into design of additional studies, with tools adapted for larger randomised sample sizes

7.2.1 Drawing on the Successes of Existing ABL Work in Ghana

Successful characteristics of existing ABL programmes in Ghana such as NALAP, SfL and MASHAV should be combined into a national model through a pilot to be expanded over several years, such as will occur through the upcoming DFID funded Girls Unite and PASS in Ghana and Complementary Basic Education programmes.

A full mapping of current and previous intervention schools (beyond the remit of this study) might enable the tracking of students and teachers through the system to ascertain whether the benefits of ABL have dissipated over time, or whether they have led to improved outcomes higher up the system, i.e. if a GES-MASHAV taught child for example, would achieve better results beyond the programme – during primary and even high school. This would be of particular interest given the aforementioned Girls Unite and PASS in Ghana programme which will be using ABL methods at high school level – if children had come from ABL feeder schools lower down would they have even more chance of success, than those benefitting from the methods for the first time at high school. Again this is far beyond the remit of this study but presents an area for future research which might add great support to the take up of ABL throughout the whole system in Ghana.

7.2.2 Reviewing and Developing a Finer-grained Classification Scheme

Given that ABL in Ghana was largely found to be within the Latent to Established stages, with most aspects around the Emerging stage, a more fine-grained rating may have allowed for greater variation and for clearer results about the specific ABL aspects within each stage.

All classification frameworks should be regularly reviewed and updated for their relevance to the situation. The ABL Classification Framework is no different. For future work in Ghana it should be further analysed by Ministry of Education officials to determine whether it needs to be more closely aligned with the Ministry's own definitions of ABL and its reflection in the official curriculum. For future work internationally, the Framework would benefit from additional review by other education / pedagogical experts and, if possible, adapted to the specific countries in which it was being applied.

Further discussion will be needed regarding the specification, measurement, and analyses of aspects of ABL, given that the various aspects interact. For example, whereas student time on task, student engagement, and classroom atmosphere and student interaction are aspects that may be engendered to promote ABL, they are also outcomes of other factors, such as teacher training, or even good student nutrition.

7.2.3 Studying Multiple Levels of ABL Implementation

In future studies of ABL, further specificity is needed in measuring ABL processes at their various levels of implementation. Particularly, the system level aspects of ABL which occur at: national; district; and cluster/community levels. Processes need to be specifically studied at these multiple levels to gain insights into how to better improve ABL implementation. Just as school level ABL implementation processes were measured through observations in this study, further studies of ABL interventions should observe specific system level aspects of ABL as well. For example, policy-formulation processes should be observed to better understand the roles that teachers play in developing ABL policies. Similarly, the roles of teachers and learners can be better understood during ABL programme development, resource allocation, development of TLMs, teacher training, provision of academic and pedagogical support, teacher and student assessment, community / parent engagement, and in developing feedback loops to further improve the quality of education in Ghana.

Lessons can be drawn from other studies of education reform processes in Africa, which have particularly highlighted the role that short-timelines, teachers' heavy workloads and other understudied factors play in the complex challenge of engaging teachers in both system and school level processes, to implement student-centred curricula in Africa (Addy, 2012).

Lessons for the future:

- Successful aspects of ABL should be piloted further in Ghana, at larger scale and with longer durations with a view to scale up a national approach
- A national mapping should be undertaken to allow ABL students to be tracked throughout the system from KG to Senior High School
- The classification framework should be refined to allow a finer grained analysis and be reviewed and amended in line with GES needs
- Further specificity is needed in measuring ABL processes at their various levels of implementation: national; district; and community
- The Student Literacy and Numeracy Diagnostic Instruments should be refined to differentiate between levels of learning across grades
- A mutual agreement and understanding on a definition of ABL should be developed
- More research is needed on what factors effect changes in how teacher educators conduct their work in Ghana

7.2.4 Revising Student Literacy and Numeracy Diagnostic Instrument

If implementation of ABL is concentrated for the time being on the early grades of primary education (including KG) in Ghana, then a revised student literacy and numeracy diagnostic instrument should be developed to differentiate between levels of learning in these grades. Based on their own classroom observations of students and educator interviewers, the field researchers for this study believe that the learning outcomes of students participating in the GES-MASHAV programme were superior to those in the "neighbouring" schools visited by the same researchers, but this could not be demonstrated with the diagnostic instrument (designed to assess learning in Grades 1-5).

7.2.6 Designing Research Focused on ABL

A vital limitation found in the literature review internationally and in Ghana was the near total lack of carefully designed research focused specifically on ABL.

One of the most critical missing components in both the practice of ABL in the classroom and in ABL research or evaluations is the lack of joint understanding of what is meant by activitybased-learning. This lack of consensus on what the term means was generally found among parents, students, teachers, administrators and policy makers in most countries. Without a mutual agreement and understanding on a definition, it is no wonder that few of the research studies and evaluations were able to come up with much definitive proof on the efficacy of ABL.

More research is needed on what factors effect changes in how teacher educators conduct their work for example, in addition to what school-based efforts make a difference in adopting ABL techniques for new and experienced teachers. While more evidence can be found on the efficacy of INSET on teachers' use of ABL, further research on the types, timing, incentives and other factors is needed.

8. Recommendations for Moving Forward

This section presents recommendations for moving towards a Ghanaian ABL vision, with concrete steps to improve educational outcomes in the early years of primary education, which could be supported through the Global Partnership for Education and other broader educational strategies. This will provide guidance on how education systems can move to Advanced implementation of ABL

Some of the key capacity gaps to be addressed for the successful implementation of ABL in Ghana include:

- Reinforcing the capacity of education officials and development partners to develop policies, and allocate resources and time to ABL.
- Building the capacity of districts and schools to include ABL into their budgets, utilise funds expeditiously, and share information that leads to further system level improvements.
 - School and CoE based coaching, including coaching teachers in preparing their own activities, resources and lessons – including a 'learning how to learn' model which will ensure sustainability and institutionalisation. Teachers should receive regular, tailored (small) group INSET based on practical hands-on pedagogies which would ensure adequate attention is paid to individual teacher's learning needs.

Recommendations for the future implementation of ABL in Ghana include:

- 1 Reinforcing the capacity of education officials and development partners
- 2 Building the capacity of districts and schools
- 3 Providing school and COE level training for teacher trainers, supervisors, teachers and Head teachers for ABL implementation
- 4 Developing an assessment system



Reform needs to occur at all levels - National, Regional and District - to ensure both institutionalisation and sustainability

Teachers learn best how to teach by seeing peers in practice

- Providing ABL pedagogic materials, including:
 - Development of audio visual tools at districts and school, such as videos that illustrate best practice ABL implementation. As has been demonstrated elsewhere (e.g. Tamil Nadu in India), the use of audio and video to capture successful ABL policies and school level practices can be extremely effective for both evaluation and dialogue among educators. Such visual tools would show teaching examples, with introductory comments, excerpts from a lesson and deconstruction of each excerpt evaluating colleagues in action, and should be widely circulated to provide more interactive means of disseminating ABL practice and benefits. These should also serve as incentives for teachers who practice ABL and are featured in them. It is recommended that teachers / classes implementing ABL (and those who are not) be videotaped, with a specific focus on capturing the different elements of school level ABL implementation described in the Classification Framework. Such a visual tool may be more powerful than assessment instruments which attempt to quantify the extent of ABL implementation, and can serve to demonstrate to others what successful ABL truly looks like in the classroom (as opposed to traditional teaching), this will also help for replication / roll-out at scale. N.B. this model will be trialled in DFIDs Girls Unite and Pass programme at the JHS/SHS levels.
- Developing an assessment system in which there are:
 - Set targets for learning improvements within specific time-frames;
 - Regular cycles of learning assessments for the early grades, with skills being measured and reported
 - Mapping of students and teachers receiving/using ABL so that the benefits of this and sustained effects can be tracked and measured over time, and throughout the system, from KG to Senior high School.

Such reforms will need to occur at all levels - National, Regional and District - to ensure both institutionalisation and sustainability, and should include: TED and other relevant divisions of GES particularly Basic Education, CoEs, coaches, teachers, Head Teachers, trainee teachers, the District INSET Committee, District Directorate Staff, Circuit Supervisors, the District Training and Support Team, and selected Curriculum Leaders across each district.

8.1 How to "do" ABL

The key issue emerging from teachers and others, who informed this study, was the lack of "how to do ABL." Teachers particularly indicated that they learned how to implement teaching methodologies by seeing them in practice. Hence, teachers were keen to see their peers practicing ABL. What follows is a summary of recommendations on how to "do" ABL.



Further recommendations for

ABL in Ghana include:

- **5** Teacher observation
- 6 Teacher professional development and training: INSET for all teachers, led by Head Teachers and based in the classroom; Head Teacher training; and training for circuit supervisors



- 7 Teaching and learning materials
- 8 Putting in place a local ABL Coordinator
- 9 Evaluation (both formative and summative)

8.1.2 Putting ABL into Practice

As a result of this study, the following have been determined as essential for putting good ABL into practice in Ghana:

- Teacher Observation: before teachers change their behaviour, much less their beliefs and attitudes about teaching, they first need to observe ABL approaches practiced by an experienced teacher in classrooms similar to theirs. This means, of course, the necessity to invest in "model schools" which include those with the most experience implementing ABL in Ghana. Model schools are formally linked with a teacher training college, and act as a space for trainee teachers to have hands on experiences, as well as enable demonstrations of best practice and innovations in teaching and learning. Model Schools provide the motivation for other government officials and teachers to observe the change that can occur when the entire community and teaching institutions play their part. Financing would be required for teachers to travel to these Model Schools, and some additional financing is likely to be required to ensure these Model Schools have the necessary facilities and supplies to welcome visiting teachers and make their experience both educational and positive.
- **Teacher Professional Development and Training:** would be the primary expenditure, and would be needed for all teachers, head teachers and Circuit Supervisors. In addition, the CoEs providing PRESET would need in-depth capacity-building and training in ABL concepts and methodologies, as would the providers of INSET. It is the belief of this review team that the national cascade models currently used in Ghana will not produce optimum results to effect widespread change a focus on learning within the school/classroom environment through direct mentoring as part of their PRESET, and during INSET from peers and others throughout the system including from the CoEs. Whilst more input heavy, this should achieve better results⁶². The review team would suggest the following:

⁶² See for example, Hardman, F. 2011. A Review of Save the Children's Global Teacher Support and Development Interventions and Avalos, B. 2010. Teacher professional development in Teaching and Teacher Education over ten years.

Previous ABL interventions such as NALAP, GES-MASHAV, SfL and BLT/Molteno should be reviewed and successful components considered for replication or adaptation

Head Teachers should organise regular (at least monthly) teacher exchanges to share ABL practices, learning activities, lesson plans, experiences, TLMs, challenges, continuous assessment practices, etc. to build a "community of practice"

- At least five full days of face-to-face in-school training would be needed each year for all participating teachers, supplemented by monthly or bimonthly local trainings with the district-level coordinator, and weekly peerbased "learning circles" among all participating teachers at the school level so that learning on effective teaching can be assessed through application in the classroom. The INSET programmes used in previous ABL interventions such as NALAP, GES-MASHAV, SfL and BLT/Molteno should be reviewed and successful components considered for replication or adaptation. Teachers involved in the GES-MASHAV pilot program at the KG level for example, showed without a doubt their capacity to fully grasp and implement ABL concepts and practices. The combination of training, teacher observation, monthly supervision, weekly meetings with fellow teachers and their own personal commitment to the learning of their students strongly demonstrated the possibility of significantly improving teachers' attitudes and practices. In almost all classrooms observed, students were engaged, on-task and actively participating in their learning, etc.
- Head Teachers would need at least one initial three-day training course in ABL concepts and methodologies, followed by 1-2 day trainings on an annual basis to share experiences, resolve challenges and deepen their understanding of ABL⁶³. The first day of training would focus on building consensus around the need to improve quality of learning at the KG / early primary level, ABL concepts, and international / national experience with ABL. Ideally, head teachers would have the opportunity to observe for at least one hour, a model ABL classroom in session. The second day would address how to translate the topics included in the existing curriculum / syllabus into practical ABL activities, and how to build informal "communities of practice" among teachers within schools and with neighbouring schools so that these practical activities can be shared, inventoried, improved and used more widely. The third day could address the role of the head teacher, circuit supervisor, parent, teacher and student in implementing ABL successfully, as well as possible financial and administrative implications of implementing ABL which head teachers need to be aware of. Head Teachers should organise regular (at least monthly) teacher exchanges to share ABL practices, learning activities, lesson plans, experiences, TLMs, challenges, continuous assessment practices, etc. to build a "community of practice".
- Circuit Supervisors would need similar training to the head teachers. In particular, it would be important for them to place less emphasis in their observations of teachers on "work output" as reflected in the student exercise books or periodic exams, and more emphasis on "pedagogical process" as reflected in the larger portfolios of student work and actual learning activities undertaken. They would also need specific training in their supportive role how to provide constructive and formative feedback to teachers which is non-punitive, and builds on each teacher's knowledge and skills in implementing ABL, understanding that this is a process that takes time not something which changes overnight. It must be recognised however, that Circuit Supervisors need more than just training, as they can have difficulties staying mobile and getting out in the districts.
- **Teaching and learning materials (TLMs):** sample TLMs would be needed for training purposes (both pre-service and in-service) that ABL methods and practices could be demonstrated. This would include training guides for all those participating in the

⁶³ It is uncertain that this has been included in previous ABL INSET in Ghana, however, it will be trialled in the upcoming DFID funded Girls Unite and PASS programme – although it should be noted that will be at secondary level, not KG/primary.

training programmes above. However, it is worth pointing out that most TLMs used in the classrooms are low cost and typically available at the school level, and it is not proposed here for government financing to substitute what can be mobilised in terms of "in-kind" resources.

- At the District (or other appropriate regional level), an ABL Coordinator would be needed to build human capacity among teachers, head teachers, supervisors and other administrative staff, and to monitor teachers' progress in implementing ABL in the classroom. The Coordinator would provide regular formal trainings, and frequently visit schools to observe teachers in action (accompanied by local supervisors) and offer feedback and suggestions for improvement.
- Evaluation (both formative and summative): would be required, and would need to include both qualitative research (e.g. teacher interviews and classroom observations) and quantitative analysis (e.g. representative samples of student learning achievement on standardised, low-stakes diagnostics of language and math skills).



Noting the above, **costs for an expanded ABL approach at the KG and early primary levels would need** to include expenditures for:

- Teacher observation by other teachers
- Teacher professional development and training
- Teaching and learning materials (TLMs)
- District-level monitoring and coordination
- Formative and summative evaluations

8.2 Summary of Recommendations for Progressing ABL in Ghana

The following presents a summary of our recommendations for progressing ABL in Ghana.

Figure 8.1: Summary of Recommendations for Progressing ABL in Ghana

Problem in Ghana	Recommendations based on Ghanaian and International Successes
 "Rote" learning practices prevail - pedagogy and curricula in both CoEs and schools in need of reform 	 "Model" demonstration schools should be created, linked to CoEs where trainee teachers can gain essential "hands on" experience throughout their course – ideally they would then be posted to one of these schools after graduation to continue to build ABL good practice within the school and share knowledge with other teachers
 Teachers with ABL training fail to continue 	 Roll out of model ABL schools should be gradual, and scaled up over at least 5 years
to practice in sufficient numbers to create any impact, and lack "models" of best practice to learn from	 "Best practice" ABL teaching and approaches (including classroom set up, use of materials, small learning groups etc.) should be recorded on video and audio that can be shown to other teachers outside the model schools, and in the CoEs as examples of peer to peer learning in both PRESET and INSET – i.e. "if they can do it, I can do it too"
	Create teacher circles which allow teachers to share, observe and critique each other
 Good textbooks, syllabi, and TLMs have been developed on existing ABL 	 GES could create a project to collate all materials from previous ABL programmes which could be assessed and adapted for national use within the CoEs and at school level
programmes (i.e. NALAP, QUIPS, WSDP, EQUALL and IEQ) but have not been fully	 Ghanaian teachers should work alongside international experts to develop a Ghanaian pedagogy and curriculum with useful materials that is mapped onto the Ghanaian curriculum
snared or integrated into teacher training	 Teachers in model schools should create their own TLMs and share these with other teachers within the school who will critique and build on this work – this is a low cost and effective model – they should also help to co-author training materials for trainee teachers in the CoEs
	 Review and further develop policies on development and provision of TLMs
	 Develop inventory/costing of TLMs and innovative ways of reducing time teachers spend copying lesson plans
	 Ascertain which TLMs can be produced by teachers, which can be produced by Teacher Resource Centres, which can be produced by community members (e.g. parents with expertise), and which could be provided by GES/DPs?

Problem in Ghana	Recommendations based on Ghanaian and International Successes
	 Give training on development of teaching and learning materials (TLMs) and provide incentives for TLM development
	 Teachers and students should be given recognition as developers of TLMs
 Student outcomes remain low, especially in rural areas and the North ABL skills have not been sustainably 	 Recruit trainee teachers from rural settings and incentivise them to return to their communities to teach, e.g. housing or salary increments, bursaries for their own children's education etc. Ensure pedagogies and materials are tailored and made available to meet specific needs of rural
Integrated across all grades - ABL trained teachers are "trapped" in the lower grades	schools and teachers Ensure CoEs are designated to reach rural areas and linked to rural "model schools"
	 ABL needs to be a "Whole School Approach" – pedagogy, curriculum, environment etc. and be integrated throughout the whole system and at all grades, not just focussed at lower levels, it must start at Kindergarten and flow though to SHS – clustering model schools at differing levels around one CoE could help track and incentivise this and help measure impact if compared to similar non- model schools in the same area
	 Successful ABL programmes have benefitted from active engagement from parents: in helping with homework, reading, helping in classrooms etc. Tying classroom learning to the community i.e. local water monitoring has been beneficial in making learning "real" and in gaining community support ABL DRESET and INSET page proper coordination
	ABL PRESET and INSET needs proper coordination
 Very limited ABL in PRESET and INSET. Limited ABL training in schools - some 	 Mobile teacher trainer units have been successful in targeting trainee teachers who may not easy access to a formal CoE
demonstration lessons and some peer teaching, but no training on development	 Unqualified teachers should receive at least a 6-10 week induction programme focussed on ABL pedagogy
 of teaching and learning materials (TLMs) Continued reliance on high numbers of un/under-trained teachers 	 Ensure training and practice utilise a range of approaches which support multi-grade teaching/learning such as: small group work, student workbooks, individual flexible promotion through subjects based on mastery and determined by learners, peer and cross-age tutoring
	 Reform curriculum in the CoEs to ensure teacher training is not just based in the CoEs but in the school setting as well – from the first year - so trainee teachers can test theory against practice, discuss case studies and actual classroom events and realities – a mix of 2-3 days at the CoE and 2- 3 days in the school setting. Emphasis should be placed on "how to teach"
	 Focus on literacy, numeracy and science in early grades - Literacy materials from NALAP already have ABL embedded into methodology which could be adapted
	 Provide Technical Assistance to National In-Service Unit to infuse ABL into science and mathematics INSET
	 Embed ABL methodologies and concepts into UTDBE (Untrained Teacher Diploma in Basic Education) Program
 Unsuccessful and insufficient forms of INSET and mentoring Over-reliance on cascading from national 	 Qualified mentors should work with teachers in the model schools at least 1 day a week during their training and their first year of qualified teaching. Mentors should help in giving exemplary lessons, help prepare ABL materials etc.
trainers which risks transmission loss	 Mentors should work to build the capacity of others linked to the same model school including: Head Teachers, Circuit Supervisors, other District Teacher Support Team (DTST) trainers, District Education Officers (DEOs), and Girls' Education Officers (GEOs) from the GEU
	 Mentors should be external to ensure they have enough time and resource – internal mentors too often revert to their own teaching priorities
 Continuous assessment at all levels, (teachers, school performance and management, and learners) is lacking and pet tailored towarde API 	 Move away from pre-developed lesson plans which are time consuming and largely unsuitable for multi-grade teaching, and utilise grade and subject appropriate student workbooks which allow students to work individually or in small groups with continuous assessment built in
 Inconsistent teacher appraisal/observation instruments in PRESET and INSET. Limited incentive to practice ABL as not 	 Review current teacher appraisal/observation instruments and develop consistent instruments for appraisal of teachers' practices in PRESET and INSET. Design new forms of continuous assessment alongside new ABL pedagogies and curricula – CoE instructors, Mentors, Head Teacher and Circuit Supervisors should all be trained in their use
currently captured in observation instruments, nor tied to promotion. Incentives seem out of reach.	 GNAT (Ghana National Association of Teachers) should be involved in recognising teachers practicing ABL and in training activities - GES and GNAT publications should include success stories of teachers using ABL.
 Limited community recognition of teachers 	 Incentivise teachers through recognition of best practice – i.e. an award / accreditation feasible for them to attain (e.g. school and cluster-based, not just district/regional/national)

Problem in Ghana	Recommendations based on Ghanaian and International Successes
	 Through proper sharing of information and sight of improvements with communities, parents will help recognise high performing teachers – active monitoring of schools and teachers by the community should be strongly considered, and is already in practice in Ghana i.e. on Camfed's scholarship programme (see e.g. <u>http://www.ungei.org/news/ghana_3090.html</u>)
	 Incentivise and give rewards to schools where they have shown a willingness to change. "Accreditation" should be awarded where schools prove they are using and maintaining ABL practices which improve student outcomes –focus on "model" schools in the first instance which should have closer support and scrutiny
 Circuit supervisors overloaded and Head Teachers unable to lead on professional development / supervision of ABL practice 	 Head Teachers need to be trained in clinical supervision and academic instructional assistance to teachers through an in-situ mentoring programme linked to the CoEs and working collaboratively with DEOs, GEOs and Circuit Supervisors

9. Conclusions

This section will summarise concisely the main conclusions as they relate to the research questions, and methods undertaken

This report has provided:

- a synthesis of international and national research regarding ABL;
- new primary evidence on how far ABL is being implemented in Ghana already;
- an analysis of the key gaps in ABL in Ghana at present; and

recommendations for future implementation of ABL in Ghana, to inform and influence policymaking and delivery of early years and primary education in Ghana, to assist the Government of Ghana and it's Development Partners in the preparation of a strategy to improve teaching and learning in basic education in Ghana.

In doing so this report focused on two key research questions and hypotheses⁶⁴:



I) What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG and P1-3)?

Hypothesis: students from programmes with more characteristics of ABL have higher achievement than those from schools with less ABL characteristics.

- There has been success in aspects of ABL implementation at the school level such as: keeping students engaged and on task during classroom activities; in a nurturing classroom atmosphere.
- Successful characteristics of existing ABL programmes in Ghana such as NALAP, SfL and MASHAV should be combined into a national model through a pilot, using model schools linked to CoEs.
- INSET is an example of what is working in implementation of ABL. In both GES-MASHAV and SfL samples, the most highly rated ABL aspect was INSET. This was consistent with findings from teachers who had also participated in interventions such as NALAP and BTL / Molteno.
- School level assessments supporting teachers to understand the progress of their students could be developed from the materials being used in the ABL initiatives identified, including GES-MASHAV and SfL.
- Efforts at promoting teachers' recognition of equality and diversity seem to be paying off. Teachers sampled from the GES-MASHAV programme and SfL were rated highly on this ABL aspect from classroom observations and interviews. Additionally, sampled teachers were rated relatively high in their abilities to use ABL teaching methodologies.

⁶⁴ Specified and finalised in consultation with DFID and GES.



2) How could successful characteristics of ABL be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

Hypothesis: it is expected that for successful ABL to occur, where system level factors are successfully being implemented, school level aspects of ABL will also be successfully implemented, and there should be correlation between ABL implementation in both.

- Better system level ABL implementation is related to improved school level ABL implementation. For example, for the GES-MASHAV sample, a higher system level ABL rating was positively related to a higher school level ABL rating for teacher's promotion of equality and diversity in their classroom practices. Indeed, the positive relationship between system level ABL ratings and teacher's promotion of equity was the highest among the school level ABL aspects.
- By addressing gaps in system level ABL implementation, improvements in school level implementation may also be realised.
- Better school level ABL implementation is related to higher student achievement, as indicated by the SfL data.
- There is a lack of funding/resources at both system and school levels for ABL in Ghana affecting successful implementation, scale up
 opportunities and sustainability.
- More study needed of implementation at the system level.
- Insufficient evidence based feedback on a timely and continuous basis is a key reason why policies and teachers' behaviour do not change is because they lack the information on how students are performing.
- There are limitations with assessments including the National Education Assessment (NEA) because it is only useful for comparison at the regional level a better measure of individual student performance is the School Education Assessment (SEA), though this is largely financed through donor funding.
- Gaps in structural school level aspects such as classroom layout and student arrangement may be addressed by teachers and head teachers in the short-term, but reform will require long term efforts, particularly by the Colleges of Education (CoE), Institute of Education, University of Cape Coast, GES, District Education Officers, circuit supervisors etc.
- Strong professional development leadership from Head Teachers is required, preferably via school based coaching of Head Teachers as
 professional development leads for teaching staff in implementing the teacher professional development policy to promote based on
 merit and for ABL pedagogic approaches to be sustained and institutionalised.
- ABL must be started small i.e. 1 CoE, 1 University, 10 nearby schools and be scaled up over approx. 5 years to all schools
- Costs for an expanded ABL approach at the KG and early primary levels would need to include expenditures for: teacher observation by other teachers; teacher professional development and training; teaching and learning materials (TLMs); district-level monitoring and coordination; and formative and summative evaluations
- .ABL must be a holistic approach combining aspects from both System and School levels. It must be TOTAL school reform a whole school approach





1. International Programmes and Research on Effective Activity Based Learning (ABL)

1.1 Overview

This document provides a summary of the review of international literature on various child-centred and ABL interventions. The review informs the DFID-funded ABL study, and thereby ultimately contributes to addressing two research questions as set out in box below.



- 1) What education programmes in Ghana include characteristics of Activity-Based Learning (ABL) and demonstrate positive results, which are sufficient to justify their scaling up and / or the incorporation of their successful characteristics into formal early basic education (KG and P1-3)?
- 2) How could successful characteristics be combined into a coherent Ghanaian pedagogy, and in particular, what training and pedagogical support activities would be required to persuade and enable teachers to adopt ABL methodologies?

1.1.1 Audience

As with the overall ABL research study, the primary audience of this review is the Government of Ghana (GoG) and it's Development Partners (DPs). The study is targeted firstly for¹ policy makers in the Ministry of Education (MoE) and Ghana Education Service (GES), in addition to technical specialists within the Curriculum, Research and Development Department (CRDD) and the Teacher Education Division (TED). The findings should also be useful to Development Partners seeking to improve Ghanaian educational outcomes through the strategic, coherent and rational use of scarce educational resources. Although this research is focused on the Ghanaian context, it should be of interest to researchers and policy makers working in other regions, and educators facing similar challenges with regard to educational quality. It is hoped that the study will positively impact Ghanaian primary school children both present and future, and enable their teachers to better understand the value in adopting ABL practices.

The literature review indicates the following:

- Internationally, evaluations of ABL programmes, such as in the State of Tamil Nadu in India (National Council of Education Research and Training, 2011) and "Escuela Nueva" in Latin American countries such a Colombia, Guatemala, and Peru² (Mogollón and Solano, 2011; Kline, 2002), provide evidence to support the incorporation of their successful characteristics into ABL in Ghana. Case Studies 1, 2, and 3 (see boxes below) summarise some features of the interventions and related educational outcomes³.
- Experience from other countries suggests that the successful characteristics of ABL could be combined into a coherent Ghanaian pedagogy through pilot programmes that are then scaled up over 5-15 year timeframes (Chesterfield, 1996a; Mogollón and Solano, 2011; Kline, 2002; National Council of Education Research and Training, 2011; SSA, 2008). In the literature reviewed, such pilot programmes included system-wide changes to policies and practices that were then scaled up based on lessons learned, in particular, with continuous, school-based training and pedagogical support provided to enable and motivate teachers to adopt ABL methodologies. The most successful ABL programmes take a holistic, comprehensive and synergistic approach through which each aspect of the educational process (example. curriculum, training, teaching and learning materials, supervision, and assessment) reinforces the other.

¹ ABL interventions in Ghana and the related literature are being summarised, and lessons learned from their review will also be included in the Synthesis Report.

² As of 2012 the "Escuela Nueva" model has been adopted in 16 countries
1.2. Background

At the outset it is important to clarify what is meant in this report by the term "activity based learning", both what it is, and what it is not.

- What it is: active-learning (or "student-centred") pedagogies represent a model of teaching that highlights "minimal teacher lecturing or direct transmission of factual knowledge, multiple small group activities that engage students in discovery learning or problem solving, and frequent student questions and discussion" (Leu and Price-Rom 2006, p. 19; on student-centred instruction, see Cuban, 1984, pp.3-4).
- What it is not: active-learning pedagogies can be contrasted with "formal" or "direct instruction" approaches emphasising teacher lecturing or direct transmission of factual knowledge, coupled with "recitation and drill" (Spring, 2006, p. 6).
- In this regard, we can identify both behavioural and cognitive dimensions on which active-learning, studentcentred pedagogies can be contrasted with formal or direct instruction (see Barrow et al., 2007; Ginsburg, 2006; 2009; Mayer, 2004). The behavioural dimension of active-learning pedagogies focuses on the degree to which instructional practices enable students to actively shape their own learning through their verbal and physical class participation, while the cognitive dimension highlights the degree to which teaching strategies enable students to engage in various forms/levels of thinking.

The behavioural dimension of active-learning pedagogies is differentiated from direct instruction (example teacher lecture) in that it involves learning "by doing" or "through play", as expressed through action and verbal communication (Ginsburg, 2009). The behavioural dimension is articulated in classroom activities such as children working in groups and listening to each other, expressing themselves, learning to take turns, and playing games; as well as extra-curricular activities, such as children having leadership positions (example. as managers of school libraries, or keeping school grounds clean).

The cognitive dimension of active-learning pedagogies is reflected among the following kinds of "teaching talk" (Alexandre 2008, pp. 33-34), moving from talk that promotes lower to higher levels of cognition:

- rote, or the drilling of facts, ideas and routines through constant repetition;
- recitation, or the accumulation of knowledge and understanding through questions designed to test or stimulate recall of what has previously been encountered, or to cue students to work out answers from clues provided in the question;
- expository instruction, or imparting information and/or explaining facts, principles or procedures;
- discussion, or open exchanges between teacher and student, or student and student, with a view to sharing information, exploring ideas or solving problems; and
- dialogue, or using authentic questioning, discussion and exposition to guide and prompt.

ABL promotes the higher levels of cognition by promoting discussion and dialogue ABL promotes the higher levels of cognition by promoting discussion and dialogue.



Implications for Ghana: In the Ghanaian setting, lessons learned from the international experience on ABL provide an opportunity to improve education in the country. Lessons can specifically be learned from the literature on the educational outcomes of successful ABL, the common characteristics of successful ABL, as well as how best to implement and instil ABL into the way teachers teach and the way children learn. These are summarised in the sections that follow, with specific country examples described along with their literature source.

1.3. ABL Classification Framework for Literature Review

Through an iterative research process (i.e. Pettigrew, 1997), and emerging from our review of the literature on ABL, an ABL classification scheme has been developed to provide a framework for this study (see Appendix C for Classification Scheme)⁴. In addressing the research questions posed regarding the characteristics of successful

⁴ The ABL Classification scheme will be included in the Annex of the final report and referenced.

ABL and lessons learned from how they were implemented, the classification scheme focuses on *aspects* or *elements* of ABL at two levels: system- and school- level. The specific aspects at each level are set out in Table A3.1 below.

1	System-Level	2	School-Level
1.1	Policy Formulation	2.1	Classroom Furniture and Layout
1.2	Programmatic Development	2.2	Teaching Methodologies
1.3	Resource Allocation	2.3	Teaching and Learning Materials (TLMs)
1.4	Development of Teaching and Learning Materials (TLM)	2.4	Promoting Equality and Diversity
1.5	Pre-Service Teacher Training (PRESET)	2.5	Head Teacher Support
1.6	In-Service Professional Development (INSET / CPD)	2.6	Teacher Peer Support
1.7	Academic / Pedagogical Support	2.7	Student Arrangement
1.8	Teacher Assessment	2.8	Students' Time on Task
1.9	Student Assessment	2.9	Student Engagement
1.10	Community / Parent Engagement	2.10	Classroom Atmosphere and Student Interaction
1.11	Evaluation Feedback Loops	2.11	Student Continuous Assessment

Table A3.1: Aspec	ts of ABL at S	System and	School Level
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1.3.1. Assessment

According to the classification framework, at both levels each of the aspects of ABL interventions can be classified into four degrees or "intensities" of ABL implementation: Latent, Emerging, Established, and Advanced.

- Latent: indicates no significant implementation (much less impact) of the particular aspect of ABL.
- Emerging: indicates that an aspect of the ABL intervention has been introduced, but remains in the early stages, and has not yet taken root. Typically, there is a high risk of dissipation of the intervention at the classroom level if it is not reinforced.
- Established: indicates that the aspect of the ABL intervention has been introduced, understood, replicated and accepted by most schools and teachers into regular practice. Reinforcement of the intervention reduces dissipation. Sceptics remain however, and the intervention could ultimately fade away if policy, programmatic and financial support are not maintained.
- Advanced: indicates that the aspect of the ABL intervention has become the norm, embedded into policy, planning, resource allocation, MoE documentation, teacher training and behaviour, production of learning materials, design of assessment systems, etc. These different aspects are treated and implemented in a holistic, comprehensive and synergistic manner, with each aspect reinforcing the other.

For the system and school levels respectively, an overall assessment of ABL is based on assessing the multiple aspects of ABL observed.

In this review, we highlight ABL interventions deemed to be successful based on their *overall* degree of intensity at the system and school levels, respectively. Due to constraints, mostly related to time needed for iteratively reviewing literature and developing the classification scheme, the review does not include a more detailed analysis of each aspect of each of the ABL interventions based on the classification system developed.

1.4. Justification for Interventions Reviewed: Outcomes and Processes

Two factors provided the basis for this assessment of the literature reviewed on ABL interventions: the educational outcomes achieved; and the extent to which the characteristics and implementation of the interventions were consistent with the system and school level aspects of ABL in the classification scheme used for this study.

A review of the international literature on ABL for primary schools indicates that interventions progressed from "Latent" to "Advanced" ABL where both system and school level factors were addressed to improve educational outcomes. A piecemeal approach, such as offering a series of workshops on ABL to teachers, is insufficient to either change teaching behaviour, or improve student learning outcomes.

There are a number of "Advanced" programmes around the world that have transformed primary education at little or no extra cost, with teachers' utilisation of ABL techniques becoming the norm. These successful programmes have adopted an approach of reforms at system and school levels, affecting almost all aspects of the learning experience, including: teaching styles and practices; learning modalities; activity-oriented learning materials; classroom furniture modifications; head teacher and pedagogical supervisor training and support; student continuous assessment; incentives for teachers to adopt new practices; community sensitisation; and increased student leadership opportunities, etc.

Such ABL mainstreaming has shown that it is possible to improve student learning, raise attendance, lower teacher absenteeism and student dropout rates, improve parent participation, and reduce or eliminate achievement gaps between boys and girls and between rural and urban settings. Two key international primary school ABL models that progressed to Advanced ABL were identified for review, and are highlighted here:

- The ABL schools in the Indian State of Tamil Nadu (British Council, 2009; National Council of Education Research and Training, 2011; Indian Ministry of Human Resource Development, Sarva Shiksha Abhiyan (SSA), 2008); and
- The *Escuela Nueva* ("New School") model of Colombia, which was adopted in Guatemala (*Nueva Escuela Unitaria, NEU*) and Peru (*AprenDes*), and up to 16 other countries by 2012 (Kline, 2002; Kraft, 1998; Schiefelbein, 1992; Chesterfield, 1996a)⁵.

A number of other international ABL interventions were also reviewed, and lessons were drawn from the system and school level implementation of these interventions⁶. The interventions include the following:

- Pembelajaran Aktif, Kreatif, Efektif dan Menyenangkan/Managing Basic Education learning that is Active, Creative, Effective and Joyful in Indonesia (PAKEM/MBE); Creating Learning Communities for Children (CLCC) (UNICEF) - Indonesia;
- Bangladesh Rehabilitation Assistance Committee (BRAC) Bangladesh;
- Basic Education (BASE) Project I and II Nicaragua;
- Malawi Education Support Activity (MESA) Malawi;
- Education Reform for Knowledge Economy Project (ERfKE) Jordan;
- Basic Education System Overhaul (BESO) Project 1 and 2 Ethiopia;
- Friends in Village Development in Bangladesh (FIVDB) Bangladesh;
- Education Reform Program (ERP) Egypt;
- The Literacy Enhancement Assistance Program (LEAP) Nigeria; and
- Primary Reading Programme (PRP) Zambia

⁵ Lessons are also drawn from the implementation of the Escuela Nueva model in Bolivia and Ecuador.

⁶ Please note that in some cases not all aspects of information needed to fully analyse the interventions according to the classification scheme developed were available in the literature identified. However, lessons we present are drawn from the combination of interventions analysed.



Case Study 1: ABL in Tamil Nadu, India

The ABL initiative in the state of Tamil Nadu in India (population: 72 million) is implemented in Grades 1-4, in both single-grade and multi-grade classrooms. It has transformed teaching and learning across the state in just a few years, and is now being adapted/adopted by several other Indian states (National Council of Education Research and Training, November 2011).

For each subject, competencies are divided into learning units ("milestones"). Clusters of milestones are linked together into ladders, which indicate students' attainment. Each milestone has different steps of the learning processes broken into six types of implementable activities: introduction; practice; reinforcement; self-assessment; remediation; and enrichment.

Students are organised in small groups by learning levels and use a variety of learning materials (e.g. high-quality learning cards, learning ladders, science and mathematics kits, supplementary reading materials) to complete structured and logically sequenced learning activities. Student interaction is high. The teacher acts as a facilitator of learning, moving between groups and providing individualised attention as needed.

Supplementary learning materials include low-level blackboards on all classroom walls for students to practice their work, displays of student work, charts, puppetry, storybooks, and simple, movable class mats and writing surfaces. Children get support from peers, monitor their own learning and progress at their own pace. Support for teachers is provided by a trained head-teacher and sub-district teacher educators (1 for every 12 schools, 2 visits/month).

ABL was piloted in 13 city (Chennai) schools in 2003, then expanded to all 264 city schools in 2004, to 4,100 schools in 2007 (10 schools in each sub-District), and to all 37,500 publically-supported primary schools in the State in 2008.

Outcomes Attributable to ABL

Learning Outcomes: identical national (i.e. third-party) achievement tests in language (Tamil) and mathematics were administered in 2004 and 2008. Grade 3 language test scores improved from an average of 66% to 80%, while math test scores improved from 53% to 75%. Rural students outperformed urban students, and girls outperformed boys. Interestingly, longer school exposure to ABL did not improve average scores.

Other Student-Related Outcomes: teachers and parents reported that students have: no fear; higher levels of self-confidence; increased creativity; increased ability and desire to learn independently; increased self-motivation; and increased responsibility.

Teacher-Related Outcomes: while teachers reported a highly positive perception of ABL methodologies, on the negative side they mentioned: increased workload (checking each students' work individually), difficulty in providing individualised attention, and challenges with parents who want their children to have homework. More positively, teachers reported that their own involvement in student learning increased, and their relationships and cooperation with students improved.

Source: "Programme Evaluation Report of Activity-Based Learning, Tamil Nadu", National Council of Education Research and Training, November 2011.



Case Study 2: ABL in Escuela Nueva ("New School"), Colombia

The internationally recognised Escuela Nueva movement that begun in Colombia in the 1970s has improved educational outcomes, reduced achievement gaps between urban and rural youth, multi-grade and graded classrooms, and girls and boys. It has served as the example for similar programmes in countries throughout Latin America, the Indian Sub-continent, Africa, the Middle East, and the Central Asian Republics (Kline, 2002).

Escuela Nueva was initiated to address problems multi-grade rural classes faced: students only spent 50-60 percent of instruction hours engaged in schoolwork. In 1983, before Escuela Nueva expanded, only 20 percent of rural students completed primary school in five years and 35 percent of rural students were dropping out in the first grade. Internal efficiency of rural schools was also affected by frequent use of a curriculum geared toward urban students, a lack of instructional materials, school buildings in disrepair, and teachers who usually employed passive methods of pedagogy.

Parents and communities were rarely involved in these schools. Escuela Nueva was a refinement and expansion of the ideas from the UNESCO sponsored "Unitary Schools" project, designed in the 1960s to address the above-mentioned problems confronting rural primary schools.

Outcomes Attributable to ABL

Teacher support is the most crucial component of Escuela Nueva 's success: the government provided teachers with educational materials, resources, and opportunities for capacity building, and trained local supervisors to serve as pedagogical advisors to teachers.

Colombia's Escuela Nueva used seven basic components:

- flexibility in learning;
- active student participation;
- individualised learning techniques;
- students working independently in a discovery approach;
- formative evaluation of student learning;
- flexible promotion based on student self-guided workbooks;
- participation of parents in the school.
- developing flexible curricula and calendars;
- bolstering parent and community involvement; and
- generating public-private partnerships

Colombia's Escuela Nueva programme was scaled up over a 15-year time frame. It was piloted in a few schools in 1973, and expanded to 500 schools in 1976, to 2,000 schools in 1982, and then to 18,000 schools nationwide in 1989.

Sources: McEwan, P. J. (1998). The effectiveness of multigrade schools in Colombia. Stanford, CA: School of Education, Stanford University; McEwan, P.J. and Benveniste, L.A. (1999). Constraints to implementing educational innovations: The case of multigrade schools. Stanford, CA: School of Education, Stanford University; Rojas, C. (1994). The Escuela Nueva school programme in Colombia. In P. Dalin (Ed.), How schools improve: An international report. London: Cassel.



Case Study 3: Nueva Escuela Unitaria (NEU), Guatemala

Among the ABL interventions reviewed, one of the most relevant to the Ghanaian context was the One Room/One Teacher Schools (Nueva Escuela Unitaria or NEU) which was adapted from the Escuela Nueva (EN) model of Colombia (Mogollón and Solano, 2011). NEU in Guatemala is particularly relevant for Ghana, given their shared demographic diversity, where language, traditions and culture may be vastly different from town to town.

Despite the diversity of educational needs in Guatemala, a major reason for the NEU's success was the adaption of ideas from Escuela Nueva - Colombia to suit their local context, while respecting the fundamental principles on which Escuela Nueva was built. The Colombian Escuela Nueva put into practice many ABL ideas, often through trial and error, even before they were fully documented in the international research literature. The Guatemalan NEU provides additional evidence of how the Escuela Nueva approach works in difficult and poverty stricken rural, indigenous communities, and also provides some guidance on how to draw upon lessons learned in other contexts for implementing ABL in Ghana.

Escuela Nueva principles adopted included:

- Maintaining flexibility in the model so it could be adapted to fit the local area: maintaining flexibility was particularly important in Guatemala, with its diverse indigenous population.
- Basing change on knowledge and experience of teachers and communities: though Guatemala's Ministry of Education and foreign development agencies originally funded and initiated NEU, teachers' involvement in the fundamental planning and creation of the reform was a vital aspect of both Escuela Nueva's and NEU's success. Teacher and community input transformed both programmes into grassroots initiatives rather than imposed reforms.

Providing opportunities for learning and for locals to take ownership during scale up: incorporating the lessons learned from the Colombian experience with Escuela Nueva allowed Guatemala to scale up NEU over the period from 1992 to 1996, as opposed to 15 years in the case of Escuela Nueva. Guatemalan educators devised curriculum, learning guides, and teacher guides

based on their own experiences and knowledge. In addition, Guatemalan educators later created bilingual materials to use in multi-grade schools in indigenous areas, something that was not necessary in Colombia.

Among the many components of NEU reforms include specific aspects, such as:

- treating teachers as reflective professionals;
- creating teacher circles to discuss classroom and community partnership issues;
- encouraging collegiality and sharing of ideas;
- promoting active learning;
- initiating school-wide daily meetings;
- generating bottom-up school-based reform; and
- promoting national commitment.

Source: "Active Schools: Our Convictions for Improving the Quality of Education" by Oscar Mogollón, Marina Solano; edited by Ana Flórez, 2011.

1.5. The Educational Outcomes of Successful ABL

The goal of ABL is to improve educational outcomes. Improved educational outcomes have been achieved by some of the ABL programmes reviewed, particularly those noted in the previous section. International evidence points to the positive relationships between ABL and student achievement gains, as well as related benefits of greater group work among students, democratic behaviour, lower repetition rates, and narrowing of rural / urban and gender gaps. Table 5.1 below, summarises international research reviewed on ABL related interventions and their educational outcomes⁷.

Table A	5.1: ABL	Related	Interventions	and	Educational	Outcomes	

Outcome	Description
Achievement Goals	Tamil Nadu : Achievement in Tamil, Mathematics and English in grades 2 and 4 increased 25-29% in all three subjects from the baseline in 2007 to the end year study in 2008; achievement gaps between boys and girls, between children of different social classes, and between urban and rural children were lowered or eliminated; the numbers of low achievers were reduced by 30-40%; and the numbers of high achievers increased by 20-40% in all three subjects (SSA, 2008).
	Guatemala : As measured from national tests, achievement gains over the period 1998-2001 were greater (between 4.7-9.1 percentage points) for ABL programme students in areas tested ("concepts", "resolution of problems", "mathematics", "reading") than for students in comparison schools (ABL programme students had lower test results than comparison students in first year of testing) (Chesterfield et al., 2004; cited in Mogollón and Solano, 2011, p. 136).
	Peru : As measured from tests of first, third, and sixth grade learners, there was greater aggregate level of mastery in communication for ABL programme schools (AprenDes programme) compared to non-ABL programme schools over the period 2005-2008. In 2008 the aggregate levels of mastery of ABL schools was 5 five percentage points greater than for comparison schools (Cueto, Guerro, Sugimaru and Leon, 2009).
	Escuela Nueva, Colombia : In 1996, UNESCO found that Colombia was the only Latin American country where rural students outperformed urban students. In UNESCO tests in 2004-2005, rural children achieved the highest test scores in Spanish and mathematics (14% and 17% above national averages, respectively), and had 100% attendance (McEwan, 1998;

⁷ In the ABL classification scheme, ABL and educational outcomes are captured largely in "Student Continuous Assessment".

	McEwan and Benveniste, 1999).
Achievement and Group Work	Positive significant correlation between achievement at the end of 3rd Grade and participation in small-group contexts in ABL programmes in Guatemala and Peru (Chesterfield and Montane, 2005; De Baessa, Chesterfield, and Ramos, 2002; Mogollón and Solano, 2011, p. 128).
Achievement and Democratic Behaviour	Positive significant correlation between achievement and individual democratic behaviour (i.e. "directing lessons", "taking turns") in ABL programmes in Guatemala (De Baessa, Chesterfield, and Ramos, 2002; Mogollón and Solano, 2011, p. 130). No significant correlations between achievement and "helps others", or "expresses opinions".
Lower Repetition Rates	Higher rates of cohorts reaching 6th grade in 6 years for the ABL programmes in Guatemala (Nueva Escuela Unitaria, NEU) and Peru (AprenDes) as compared to non-ABL comparison schools (Mogollón and Solano, 2011, pp. 131-132).
Rural/Urban and Male/Female Gaps	ABL interventions have targeted the reduction of gaps in learning between boy and girls, as well as rural and urban children. ABL has been associated with equity in gender and rural- urban children's opportunity to learn, as well as equity in learner achievement, with some exceptions noted (Craig, H., Kraft, R, and du Plessis, J. 1998; Kline, 2002).
	In Tamil Nadu, after ABL, no significant difference was found in Tamil language achievement between rural and urban children and between children of different social groups; in English language achievement, there was no significant difference between rural and urban and among boys and girls; in Mathematics achievement, however, there was significant difference found between boys and girls and children of different social groups (SSA, 2008).

1.6. Successful ABL Characteristics and Implementation

The previous section summarised the literature reviewed on the outcomes of successful activity based learning programmes. This raises the issue of what are the aspects common across such successful ABL programmes, for incorporating them in programmes within the Ghanaian context.

In this section, we highlight the overall lessons learned about processes by which teachers change their practices for successful ABL to emerge. We then present the characteristics and implementation processes of ABL at system and school levels, drawing upon ABL literature from around the world, particularly those noted previously in the developing regions of Latin America, South Asia, and Africa.

1.6.1. Process of Teacher Change for Successful ABL

The processes of teacher change that allowed successful education reforms to emerge in other parts of the world, are particularly instructive for the Ghanaian context. Education reforms often fail because their theories of change differ from the actual processes by which teachers change their behaviours and attitudes (Guskey, 1986). Although few studies were identified that show the processes of teacher change for ABL to emerge, some evidence from the literature shows that significant change in teachers' attitudes and beliefs for changing their teaching practices occurs *over time*, primarily *after* they gain evidence of improvements in their teaching, and in student learning through their own observation, or through various forms of assessment. Through iterative processes that *may span multiple years*, teachers see and internalise evidence occurring at the system and school levels.

A number of key studies provided insights into the process of teacher change, including: Nicaragua's Basic Education (BASE) project: to improve student participation in classroom activities. Ethnographic studies of the intervention were conducted 1998 to 2004 (AED, 2003).

1.6.2. System Level

At the system level, changes in teaching practices occur: iteratively as teachers become involved in decisionmaking processes, and see consistent benefits of the practices; and, where previous experiences are adapted through evaluation and feedback loops. The following provides some examples of this:

- Where teachers are involved in policy formulation, programme development, resource allocation, and the development of TLMs, they simultaneously:
 - Influence the policies, programmes, resources allocated, and TLMs used in teaching and learning; and
 - Become more aware of the evidence on improved educational outcomes that emerge from system level and school level factors



Successful Examples of Changing Teacher Practice through Increased Involvement: in a comparative process study of curriculum reforms in Botswana and South Africa, teachers who were involved in reform committees and decision-making groups that developed policies and curriculum materials over a multi-year period in the early 2000s indicated how their engagement with national level data changed their beliefs and attitudes, and teaching practices (Addy, 2012). In a study of Nicaragua's BASE project, teachers who were involved in developing materials changed their practices from being teacher-led in the late 1990s, to child-centred by the early 2000s, despite having the same level of academic training from traditional teachers who were not in the programme (Kraft, 2004).

Teacher change also occurs as teachers in a system see consistent evidence of the benefits of teaching practices such as ABL in pre-service (PRE-SET) and in-service training (IN-SET), in teacher and student assessments, and in the type of pedagogical and academic support provided by district and school leaders, as well as by parents and their communities.



Successful Examples of Changing Teacher Practice through Increased Evidence of Effectiveness: in Nicaragua's BASE study, by 2003 it was found that the extent to which teachers were implementing student centred teaching was related to their academic backgrounds, with greater implementation by teachers with stronger academic backgrounds (AED, 2003). A comparative study of teachers from the same ethnic group who lived along the Botswana-South Africa border indicated that teachers trained as part of long-term, consistent teacher training reform processes on the Botswana side of the border provided students with greater opportunity to learn (as measured from student workbooks) than their counterparts on the South Africa side of the border, where teacher training reforms had been inconsistent due to political reasons (Addy, 2012).

Through evaluation and feedback loops, evidence from the system and school levels are disseminated, and bring about changes in teaching practices as teachers and other education policymakers and practitioners learn from previous experiences and adapt policies and practices. Evidence shows that teacher change processes are not linear events, in that whereas it is possible to change teachers' practices, unless interventions are sustained through the lessons learned in evaluations and feedback loops, such changes may not last



Examples of Changing Teacher Practice through Evaluation and Feedback Over Time: in Nicaragua's BASE programme, teacher practice in the late 1990s was focused on blackboard use, with teachers standing in front of the class dictating and the students copying down the teacher's utterances word for word. By 2001 and 2002, after the intervention, teachers' use of instructional materials that were developed peaked, but dropped off by 2004 (Kraft, 2004).

1.6.3. School Level

Evidence from the literature reviewed shows that changes to structural school level factors brings about changes in teacher practices. Teachers then internalise evidence about what works in day-to-day teaching and student learning, further bringing about changes in their long-term attitudes and beliefs and practices, as they see evidence of improvements in students' outcomes. Examples of such changes are listed below:

• Factors such as *classroom furniture and layout*, and *student arrangement* affect teaching practices; such structural factors further affect teachers' attitudes and beliefs as they see the effects of their practices.



Examples of Changing Teacher Practice through Classroom Furniture, Layout and Student Arrangement: Guatemala's NEU project is an example of an intervention whereby teachers were encouraged to use child-centred approaches. For example, blackboards were removed from school walls to prevent formal lecturing, and cut up into pieces that students could write on themselves, (Craig et al., 1998).

The support that teachers obtain from their peers and head teachers also lead to changes in their practices.



Examples of Changing Teacher Practice through Practice Peer and Head Teacher Support: by 2003 in the BASE study it was found that the extent to which teachers were implementing student centred teaching was related to how committed School Directors were to the reforms promoted by the Project, as they were providing support to their teachers (AED, 2003). Teachers studied in both South Africa and Botswana also indicated that one of the most important ways they learned to implement curriculum reforms were through knowledge from their peers (Addy, 2012).

Teachers may also change their practices based on the evidence they see from other teachers' teaching methodologies, their promotion of equality and diversity, their development and use of TLMS, and observing improvements in classroom atmosphere and student interaction, students' engagement and time on task.



Examples of Changing Teacher Practice through Peer Learning from Other Teachers: in Nicaragua's BASE project, it was found that by 2003, five years after the first annual study of the project was conducted, over three-quarters of the teachers interviewed, believed that small-group learning gives students opportunities to help and support each other in the learning process. One-quarter also commented that small-group learning makes learning more participatory and dynamic. All teachers interviewed thought that Teacher Resource Centres are extremely important as aids for planning and preparing instruction and making learning materials (AED, 2003).

As teachers see the benefits of changing their practices on *student continuous assessment outcomes*, they then become more open to the types of changes that are being promoted (Guskey, 1989).

Given the above knowledge gained about teacher change processes, focusing on the system and school level characteristics and implementation of successful ABL provides insights into the processes by which teachers change their practices, beliefs, and attitudes for Advanced ABL to emerge.

1.6.4. System Level Aspects of Successful ABL

Table 6.1 below, provides a summary of literature review findings organised by the ABL Classification scheme developed for this research project to demonstrate what, at the system level, do successful ABL interventions look like, and how are they implemented at that level?

The review highlights that at the system-level, achieving desired characteristics and implementation of ABL calls for formulating appropriate policies, developing and scaling up ABL programmes and projects, allocating resources to ABL, developing Teaching and Learning Materials (TLMs), integrating ABL in Pre-Service Teacher Training (PRE-SET) and In-Service Professional Development (IN-SET / CPD), and shifting towards continuous student assessment.

The review also shows how ABL has developed in other countries from various stakeholders: providing academic / pedagogical support; integrating ABL into teacher and student assessments and providing incentives for ABL; engaging communities and parents in ABL; as well as developing evaluation feedback loops in iterative processes; for ABL to become the norm in the educational system.

Table A6.1:	What are	the System	Level As	pects of	Successful	ABL?
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ABL Aspect	Specific Aspect	Description	References
Policy Formulation	Agreeing on purposes of education and ABL	Namibia, Nigeria, India: Policy dialogue led to agreement on purpose of education and ABL by all stakeholders-focusses on outcomes, future employment, academic learning and life skills, reading, writing and arithmetic, age-appropriate.	Barrow and Leu, 2006
	Developing and implementing an integrated curriculum	Clear guidelines provided for teachers to use integrated curriculum in practice, to improve student learning	Caskey, 2002; Daniels and Bizar, 1998; Pate, 2001; Stevenson and Carr, 1993
	Developing and implementing exploratory curriculum	Exploratory curriculum that allows students "to explore new arenas of interest, both as specific courses and as methodology within courses" (Bergman, 1992) responds to the developmental needs of students	Compton and Hawn, 1993
Programmatic Development	Integrating ABL into the education system	ABL is scaled up from pilot programmes or projects and incorporated into the education system, over multiple years.	Mogollón and Solano, 2011; Kline, 2002; NCERT, 2011
		For example, in the State of Tamil Nadu (India), ABL was expanded over a 5-year period from 13 city schools (Chennai) in 2003 to all 37,500 publically-supported primary schools in the State in 2008. This is considered very fast.	
		By comparison, "Escuela Nueva" in Colombia was piloted in a few schools in 1973, with step- wise expansion to 18,000 schools nationwide by 1989 (a 15-year time frame).	
Resource Allocation	Costing and providing funding for ABL	To promote ABL as a feasible alternative to traditional approaches, implementers highlighted the cost-effectiveness of the interventions, for obtaining and mainstreaming funding. In most settings, the costs of the Escuela Nueva were the same or lower as those of traditional classrooms (Chesterfield, 1996).	Bajpai et al., 2008; Chesterfield, 1996; Mogollón and Solano, 2011
		For example, in Guatemala, the Ministry of Education estimated that the cost at the margin of producing a male 6 th grade graduate in the NEU programme was 200 US Dollars less than that for comparison schools (Mogollón and Solano, 2011).	
		The costs of ABL in Tamil Nadu have been found to be only 5% more than that of traditional, teacher-centred classrooms (Bajpai et al., 2008), offset by major gains in student learning.	
Development of TLM	Teacher led TLM development	The act of educators creating teaching materials and then having other teachers review and critique them in teachers' circles empower teachers, helps them become invested in the implementation of the reform	Mogollón and Solano, 2011
Pre-Service Teacher Training	School based training	ABL programmes have found it of value to move the training directly into the schools. In one highly rated programme in the United States, teachers never met at the university.	Mogollon, 2011; Kraft, 1998

		but rather spent their mornings in classrooms and their afternoons in the school setting with pre-service training instructors and classroom teachers discussing case studies and actual classroom events (Kraft and Haas, 1988)	
	Videos of model ABL in training	Successful ABL programmes (e.g. Ethiopia) also use videotapes of model ABL teaching in training, so that teachers can observe best practice in each subject area at each grade level.	Kraft, 2011
In-service professional development	Professional development and active learning	Colombia, India, Jordan, Kyrgyzstan, Malawi, Cambodia, Egypt: local and state government and/or international organisations organised school-based continuous professional development (CPD) including workshops, supervised guidance, support for teachers, trainers, administrators, and/or supervisors on a regular basis (multiple times per school term), such that after teacher obtained training they were able to apply what they had learned in classrooms, and obtained follow-up training to reinforce what they had learned	Bunlay et.al., Megahed et.al. Roggemann et.al., Price-Rom et.al. Mizrachi, 2009
Academic/Pedagogical Support	Training local supervisors	Colombia (Escuela Nueva): Ministry of Education trains local supervisors to serve as pedagogical advisors to teachers. Such support was noted as "perhaps the most crucial component of Escuela Nueva's success".	Kline, 2002; Rojas, 1994
	Observing and providing teachers with feedback	Bangladesh: newly trained teachers are observed and obtain feedback from teacher trainers, head teachers, and mentor teachers	Hasan et.al, 2009
Teacher Assessment and Incentives	Regularly assessing teachers' practices	"On-going, useful feedback is provided to both students and teachers, on what students have learned" (Jackson and Davis, 2000), and guides instruction so that it addresses any gaps in teaching that are revealed.	Jackson and Davis, 2000; Sterbinsky and Ross, 2005
	Providing teacher incentives	Teachers in successful ABL programmes are involved in a range of mechanisms to empower them. They become co-authors of in-service and pre- service teacher training manuals; there are multiple award schemes at the local, district, regional and national levels for outstanding teaching	Mogollon, 2011
	Enabling factors for active learning	Jordan, Kyrgyzstan, Malawi, Cambodia, and Egypt: sustained training activities, supervisory support assisted project teachers. Incentives-increased salary, promotion prospects, recognition for engaging in reform teaching methods	Megahit et.al. Price- Rom et.al. Mizrahi et.al. 2009
Student Assessment	Conducting regular formative assessment	On-going student assessments are used address any gaps in learning that are revealed	Sterbinsky and Ross, 2005
	Varying assessments	Use a range of classroom assessments as well as a variety of assessment methods, ranging from informal (conversations with students) to formal (tests).	Stiggins, 2001; Wiggins and McTighe, 1998;
		reachers are trained in workshops and also by	

		providing them with guideline documents to shift their mind-set from seeing assessments as summative, but rather as means for them to understand how best to provide support to learners, based on what assessments show their needs to be	
	Conducting differentiated assessments	Traditional paper-and-pencil assessments are used to demonstrate factual knowledge; and open-ended, complex, and authentic performance tasks and projects are used to assess conceptual knowledge	Wiggins and McTighe, 1998
Community/Parent Engagement	Involving the community	Namibia, Nigeria, India: cooperative relationship of parents, teachers, other schools and community, invite parents to teach, tell stories, involve community in planning, reflection and evaluation, not just providing resources, school visits, help with lessons, check performance, change student attitudes and behaviours in the household, PTA meetings, parent visits, recruit girls, mobilisation activities	Barrow and Leu, 2006, Pilot Studies
	Involving parents	 Kenya: local committees raise funds, buy textbooks and supplement salaries, but teachers centrally appointed. Even with incentives for civil service teachers, joint LEA training and joint meetings, teacher attendance did <i>not</i> improve. Teacher behaviour and absences not discussed. Contract teachers had high attendance and civil service teachers more likely to attend than in schools without monitor. Students more likely to attend and math improved 0.18 SD. Overall mixed results from randomised control trial 	Banerjee, Banerji, Duflo, Glennerster, and Khemani, 2006; de Laat, Kremer, and Vermeersch, 2008; Duflo, Dupas and Kremer 2007
	Obtaining parental support	In successful ABL programmes, parents are actively involved in assisting children with homework, reading to their children, visiting and assisting in classrooms, positively monitoring teaching and providing more than just the usual financial support	Slocum, 2002
	Educating the community	Such activities as Service-Learning, Community-Based Learning, Civic Engagement and other things tie learning in the classroom to learning in the community, including such things as water monitoring, environmental clean-up, geography of the community, reading to illiterates in the community, etc.	Cairns, 1991; Carnegie, 1989
Evaluation Feedback Loops	Building in evaluation into initial plan	Guatemala: NEU. Evaluation was part of the original plan for the successful ABL intervention as part of <i>Basic Education Strengthening Project</i> (BEST). A series of indepth studies were conducted to inform adaptation and scale-up	Chesterfield and Rubio, 1995; 1996a; 1997a
	Improving school through self-assessments	Namibia: parents involved in School Improvement Program (SIP) rate teachers higher; SIP schools involve parents and community in planning and self-assessment.	Barrow and Leu, 2006

	Dialogue between stakeholders	
Monitoring progress and teaching practices	Tamil Nadu: a "learning ladder" is displayed showing the sequence of the curriculum and where each child is in each subject. Parents are encouraged to understand how to interpret the learning ladder for their child, and to observe classes in progress.	NCERT, 2011

1.6.5. School Level Aspects of Successful ABL

Table 6.2 looks at what successful ABL interventions look like at the school level, and how these are implemented at this level; summarised from the review of international literature, and organised by the ABL Classification scheme developed for this research project.

The review shows that in successful ABL there is the need for a clear understanding and specification of key school-level characteristics for implementation, including:

- teaching concepts and methodologies;
- head teacher support;
- classroom furniture and layout;
- student arrangement;
- teaching and learning materials (TLMs);
- promotion of equality and diversity;
- students' time on task;
- student engagement;
- student interaction; and
- student continuous assessment

Table A6.2: What are the System Level Aspects of Successful ABL?

ABL Aspect	Specific Aspect	Description	References
Teaching Concepts and Methodologies	Quality of teachers	Namibia, Nigeria, India: Teachers employ learner-centred approaches – using teaching aids and learning materials; planning lessons to promote active student involvement, group activities, questioning and discussion; having good subject-matter knowledge; being attentive to learners' special needs	Barrow and Leu, 2006, Pilot Studies
	Conceptualisation of ABL	Egypt, Jordan, Kyrgyzstan, Malawi, Cambodia: through project-related activities, otherwise abstract ABL concepts were made real for teachers, supervisors and administrators. They could then articulate at some level the rationales and strategies of active	Leu, 2004, Schwille et.al., 2007
		learning, and teachers involved made progress in implementing the ABL concepts they had learned	
	Behavioural and cognitive dimensions of ABL	Egypt, Kyrgyzstan, Malawi: teachers encourage learners to take turns, express themselves, listen during group work, discover knowledge, go beyond rote learning and memorisation, work in groups, play games, learn by doing,	Price-Rom et.al., Mizrachi et.al., Megahid et.al., 2009

		engage in critical thinking and problem- solving	
	Direct instruction	USA: particularly for low-achieving students, teachers provide direct instruction with a variety of prescribed, detailed teacher activities	Kirschner, Sweller, and Clark, 2006
	Action learning	Teachers allow all students to engage in developing personally and collaboratively negotiated meanings from the learning event (particularly when utilised in a Problem Based curriculum).	Harel and Papert, 1991; Kafai and Resnick, 1996
	Diverse teaching approaches	Teachers deal with a more diverse set of questions—potentially across disciplines; teachers do not forsake whole-group didactic instruction, but make careful use of it to address learning deficits, and function as a co-constructor of knowledge	Rosenfeld and Rosenfeld, 2006
	Encouragement of student autonomy	When teachers allow students more autonomy over what they learn, it improves motivation, and students assume more responsibility for their learning	Wolk, 1994; Worthy, 2000
Head Teacher Support	Modelled practice and support	Head teachers allow teachers and other school personnel to do their work independently, offer intellectual support to improve their work, and encourage teachers to exchange ideas on models of teaching. They also provide monetary and non- monetary incentives for teachers to collaborate and learn from each other during INSET	Clark and Clark, 2004; Sergiovanni, 1992
	Development, supervision, communication of shared goals	Leaders emphasise collaboration to develop shared goals, monitor organisational performance, and promote effective communication	Leithwood et al., 2004
	Instructional leadership	Supervisors do not focus on reading over previously copied lesson plans, but rather assist teachers in the day-to-day teaching	McEwan, 1998; British Council, 2009
	Multiple role of head teachers	Namibia, Nigeria, India: Head teachers support, guide, encourage and monitor teachers in following lesson plans and curriculum, using new methods, participating in professional development, providing positive role models, developing participatory relationships with teachers, and reaching out to community	Barrow and Leu (2006) Pilot Studies
Classroom furniture and layout	Learning circles	India (Tamil Nadu): rather than sitting at desks, teachers and children can be observed in learning circles using movable writing surfaces on floor mats or children writing on blackboards lowered to their level, rather than copying words from the "teacher's blackboard" or from textbooks into notebooks. Also, student work is displayed in the classrooms,	National Council of Education Research and Training (NCERT), 2011

		including on walls.	
Student Arrangement	Group seating	Students are seated in small groups and do varied work: individual, in pairs or groups, and sometimes as a whole-class	NCERT, 2011
TLMs	Self-instructional learning guides	Latin America (Escuela Nueva, EN): Self-instructional EN learning guides present information in such a way as to enable already-literate students to teach themselves the material and take pressure off teachers to constantly plan lessons for various grade levels, while also helping teachers make the material more interesting and relevant for the students' everyday lives.	Kline, 2002
	Variety of TLMs	Variety of TLMs used include high-quality learning cards, learning ladders, science and mathematics kits, supplementary learning materials (charts, puppetry, storybooks, and simple, movable writing surfaces) to complete structured and logically sequenced learning activities	NCERT, 2011
	Class library/learning concerns for TLMs	Supplementary instructional materials are housed in "class libraries" and "learning corners" where students use them. In Tamil Nadu, India, each classroom has a suggestion boy for students to give	Kline, 2002; NCERT, 2011
		input	
	Adequate resources and teaching aids	Namibia, Nigeria, India: adequate resources, effective use of teaching aids, sufficient textbooks, not mechanical use of aids, use of blackboards, chalk, writing slates, notebooks and textbooks	Barrow and Leu, 2006, Pilot Studies
	Availability of textbooks	General: non-teacher inputs (e.g. instructional materials) have a 10-100 times higher impact than teacher inputs. While most agree that textbooks promote learning, it is hard to prove.	Lockheed, Hanushek, 1988, Glewwe, Kremer, Moulin 2007,
		Kenya: textbooks do, however, appear to increase test scores of strongest students	
Promoting equality and diversity	Smaller gender, rural urban gaps	Girls and boys, rural and urban students get equal opportunity to learn.	Craig, H., Kraft, R, and du Plessis, J. 1998; Kline, 2002
Students' time on task	Activities related to everyday life	Fun activities related to everyday life (such as role playing as members in the community) encourage students to participate in class activities and attend school.	DFID/Zambia Ministry of Education, 2002; Linehan, 2004; Sampa, 2003
		For example, in the Primary Reading Programme (PRP) in Zambia engaging students in such activities was related to greater enrolment and reduced absenteeism as students were motivated to spend more time on task	
Student engagement	Multiple approaches for engagement	Multiple approaches for engaging students include teachers' having high expectations, clear and focused	Benbow et.al., 2007

		instruction, use of differentiated instruction to accommodate different learning styles, use of non-monetary incentives and rewards to promote teaching and learning, routinised classroom procedures (to avoid time- wasting during transitions), high standards for classroom behaviour and maintaining excellent personal interactions with students.	
	Student leadership	Successful ABL programmes involve students in a wide range of leadership roles including: running school/classroom libraries, running school/class councils, peer and cross-age tutoring, lunch or nutrition programmes, cleaning the schools and grounds, and numerous other tasks	Mogollon, 2011; Kline, 2002
	Students in charge of class/school libraries	In some successful ABL programmes worldwide, when children were placed in charge of the texts class/school libraries, they were better guardians of the material than the teachers, a librarian or other adults (Kraft, 1998). Children, even at the primary level, can be placed in charge of the library, with little or no loss of books.	Schiefelbein, 1991, Kraft, 1998, Mogollón and Solano, 2011
Student interaction	Group work	Students work together in groups to produce materials that are displayed in their classrooms. Between 25-50% of all student interactions occurred in small groups for the Nueva Escuela Unitaria (NEU), ApredDes projects, compared with 18% being the highest percentage of small group interactions in comparison schools	Mogollón and Solano, 2011, p. 126; Chesterfield et al., 2004; Chesterfield and Montane, 2005
Student continuous assessment	Individualised pacing	Each child moves at his or her own pace in each subject area, not being forced to repeat a grade for learning more slowly in one subject or another. The curriculum is carefully divided into milestones on a "learning ladder" so that each child knows where they are in each subject. Continuous assessment occurs at the end of each milestone so that children and their parents know of their progress in each cognitive skill area	World Bank, 2008

1.7. Conclusion: Lessons Learned from the Literature

In conclusion, this literature review of international ABL interventions has highlighted three key findings for incorporating into ABL in Ghana:

- educational outcomes of successful ABL;
- system-level characteristics and implementation of successful ABL; and
- school-level characteristics and implementation of successful ABL.

First, international evidence points to the positive relationships between ABL and student achievement gains, as well as related benefits of greater group work among students, democratic behaviour, lower repetition rates, and narrowing of rural / urban and gender gaps.

Second, as the review highlighted, at the system-level, achieving the desired characteristics and implementation of ABL in Ghana calls for formulating appropriate policies, developing and scaling up ABL programmes and projects, allocating resources to ABL, developing Teaching and Learning Materials (TLMs), and integrating ABL in Pre-Service Teacher Training (PRE-SET) and In-Service Professional Development (IN-SET / CPD). Additionally, the review shows how ABL has developed in other countries by various stakeholders providing academic / pedagogical support, integrating ABL into teacher and student assessments and providing incentives for ABL, engaging communities and parents in ABL, as well as developing evaluation feedback loops in iterative processes for ABL to become the norm in the educational system.

Third, as the review shows is the case in other countries, for ABL to be successful in Ghana, there is the need for a better understanding and specification of key school-level characteristics for implementation, such as:

- teaching concepts and methodologies;
- head teacher support;
- classroom furniture and layout;
- student arrangement;
- teaching and learning materials (TLMs);
- promotion of equality and diversity;
- students' time on task;
- student engagement;
- student interaction; and
- student continuous assessment.

All of these school-level characteristics need to be implemented in a holistic and sustained manner. Each characteristic should reinforce the other (or at a minimum, not contradict the other). Addressing only one, or a few characteristics and expecting real change may be unrealistic.

This literature review highlights the type of information that is needed from reviews of Ghana's ABL interventions, as well as where gaps in knowledge need to be filled for characterising and implementing ABL in Ghana to improve educational outcomes. Thus, the review sets the stage for the gathering of primary and secondary data in Ghana.

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1. Ghanaian Programmes and Research on Effective ABL

1.1. Introduction

DFID, Ghana's Ministry of Education (MOE) and the Ghana Education Service (GES) seek better understanding of how best the key elements of existing disparate methods and approaches to child-centred education might be combined to generate a unique Ghanaian approach that can transform teaching and learning for Ghanaian children. Over the past 15 years, Ghana has experienced many initiatives, often funded by donors, each of which aimed at improving pupil learning.

Understanding the nature, objectives and impact of such initiatives on learning will provide a means for identifying gaps in such initiatives. The gaps identified will provide basis for exploring ways of transforming teaching and learning in the classroom. This document maps out key initiatives that have been introduced in Ghana with the purpose of identifying successful practices and gaps associated with such initiatives within the context of activity based learning (ABL).

1.2. Matrix of Initiatives

The gap analysis, presented in the Matrix below, focuses on the following major initiatives in Ghana:

- School for Life (SFL)
- The Molteno / Break Through to Literacy (BTL) programme
- National Literacy Acceleration Programme (NALAP)
- Introducing change in Early Childhood Education in Kumasi Ghana/Israel Pilot Project (MASHAV),
- Leadership for Learning (LfL)
- GES School Based Assessment (SBA) Reform)
- JICA/GES Nationwide INSET Programme
- Untrained Teachers Training Programme: Untrained Teachers' Diploma in Basic Education (UTDBE)
- UCC/CoE Curriculum Reform
- Teachers for Africa (TFA) Programme
- Community Teachers for Ghana

Table B1.1: School for Life (SFL)

Initiative	School for Life (SFL)
Objectives	SFL works to get out-of-school children in deprived areas into formal school through a functional literacy programme. Life provides nine-month mother tongue literacy to out-of-school children between the ages of 8-14 years.
Related Interventions	SFL is replication of aspects of the Education Quality for All (EQUALL) Project. It evolved from a friendship between Northern Ghana community based organisations on the one hand and Danish development activists on the other. The Ghanaian development activists are organised under an umbrella organisation called the Ghana Developing Communities Association (GDCA)
	whereas their Danish counterparts are members of a Danish NGO 'Ghana Venskabsgrupperne in Denmark' (GV).

	In a holistic approach to solving the diverse peculiar problems of Northern Ghana, they ran together three programmes, Ghanaian Danish Community Programme (GDCP), SFL and Community Life Improvement Project (CLIP). Later a Community-Based Organisation Network was formed to empower local-based organisations in the programme area to drive development (http://www.schoolforlifegh.org)
Education system level targeted	Out-of-school children between the ages of 8-14 years
Implemented by	SFL
Project Contact	Prof. J.E. Opare, Director, Institute of Education, University of Cape Coast, Ghana)
Funded by	Danish/USAID/DFID
Costs/amount of funding	Not yet available
Unit costs	N/A
Time period of funding	USAID (One Year)/DFID funding on-going
Time line of intervention	The Programme began operation in 1995 in two pilot districts; Yendi and Gushegu / Karaga in the Northern Region, working in close partnership with the Ministry of Education (MOE) and the GES.
	The Programme later expanded to cover eight districts in 1999 and then to ten districts in 2004 all in the Northern Region.
	The programme has benefited over 109,000 children who would otherwise have had no access to education
Level of GoG involvement (high, medium, low)	Medium. The GES provides support for SFL operations by allowing SFL to use public schools for its classes. Being an NGO, SFL has not got a priority link to the MOE/GES.
Coverage/location of interventions	Operates in nine districts in northern Ghana: (Saboba / Chereponi, Nanumba, Tolon / Kumbungu, East Gonja, West Mamprusi, Jirapa / Lambussie, Nadowli, Central Gonja and Bawku West).
Inputs (resources, materials, provided)	Service delivery involving functional literacy to children, free books which can be taken home.
	Construction of classrooms and teacher accommodation and the provision of classroom furniture.
	Advocacy through its Learning and Development Centre (LDC). The LDC provides learning materials for student use
Processes (how it was rolled out key features of interventions (i) teacher training (ii) head teacher training (iii)	Implements community-based, culturally-relevant functional literacy afternoon classes for children between the ages of 8 and 14 years who for various reasons have not had access to formal education.
development of TLMs (iv) development of continuous/school based assessments	The programme started with service delivery; where functional mother-tongue literacy was offered to children, construction of classrooms and teacher accommodation, and the provision of classroom furniture. Use of phonic and syllabic methods was key in helping children break through to literacy quickly.
	Encouragement, patience and commitment by SFL facilitators were essential to motivate students.
	Later, focus areas like Mainstreaming, Advocacy and Replication became part of the programme strategy
Results/outputs	Has benefited over 109,000 children who would otherwise have had no access to education
Outcomes	SFL's graduates transit smoothly to the formal school. Over 90% of children between 8-14 who enrolled in the programme graduated, and 65% of enrolees were integrated into the formal system. At least 50% of students are

	girls (Casely-Hayford and Ghartey, 2007)
Impact	Success of SFL's programme led to the founding of Futures for Kids Ghana in April 2008.
	An Impact Assessment conducted in 2007 showed that between 1995 and 2006 about 85,000 children were enrolled in the SfL functional literacy programme
Sustainability	SFL has trained about 1,674 regular teachers and 7,000 community-based facilitators in the use of native language literacy methodology in the lower primary classes of the formal school and community-based literacy classes respectively.
	SFL has now transformed into a Learning and Development Centre. The organisation has positioned itself to provide technical services in education to Government, private schools and other organisations in Education
Relevant studies/references (meta- analysis)	The Leap to Literacy and Life Change in Northern Ghana: An Impact Assessment of School for Life", Final Report, Casely-Hayford and Ghartey, September 2007

Table B1.2: The Molteno/Break Through to Literacy (BTL) Programme

Initiative	The Molteno/BTL Programme
Objective	To improve mother tongue teaching and learning in early primary in two regions.
	Piloting of Molteno was done originally in 4 districts-in 2 regions with 50 schools
Related interventions	-/-
Education system level targeted	Early Primary (P1-P3)
Implemented by	The Molteno Project in South Africa – (Constance Zwane was the lead trainer in Ghana).
Project contact	Mr. Nii Dzani Bossman (0243019535).
	Mrs Shirley Banini, c/o Prof. Godsway Banini, Atomic Energy, Accra.
	The current representative of USAID working with Ghana Education Service is Mr. Chris Dowuona-Hammond (020-813-7981; cdoham@gmail.com)
Funded by	EQUALL and USAID/Ghana and the MoE / GES
Costs/amount of funding	Not yet available
Unit costs	Not available
Time period of funding	2003-06
Time line of intervention	All subsumed under NALAP
Level of GoG involvement (high, medium, low)	Level of MOE/GES involvement was high. MOE provided policy level support while GES actively engaged teachers in the project implementation
Coverage/location of intervention	Piloting of Molteno was done originally in 4 districts-in 2 regions with 50 schools: Northern: West Gonja, (13 schools) and Bole districts (12 schools), Volta: South Tongu (12 schools) and Ho districts (13 schools). At the second phase Suhum in the Eastern region was added
Inputs (resource materials, provided)	The BTL coordinators from South Africa provided quality literacy and language teaching and learning to children in P1-P3 in Ghana.
	Helped learners demonstrate proficiency in the language learning outcomes in the areas of listening, speaking, reading and viewing, writing, thinking and

	reasoning, language structure and use
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development	Engaged children actively in their own learning process, children create stories from looking at posters on the wall.
	Teachers use the Language Experience Approach in writing stories for the children.
assessments)	A learner – centred approach, recognising the learners' particular experiences and learning needs focus on teaching phonics in context.
	Co-operative leaning-promoting and encouraging pair and group work. Individuals are allowed to develop at their own pace.
	Training of teachers: Trainers demonstrated all the strategies for trainees
Results outputs	Students' overall literacy achievement was assessed by combining scores from all the subtests into three aggregate scores that reflect different "stages" of literacy development. The first stage was assessed using an aggregate score comprised of three Emergent Literacy Indicators—Name Writing, Alphabet writing, and Concepts of Print. The second stage is reflected in scores from two subtests measuring phonics and word reading abilities— Word Writing and Word Recognition. The third aggregate score is comprised of the Oral Reading and Comprehension subtests
	Pupils in the programme made excellent progress in reading the first language by the end of the first year through intensive teaching of phonics in context and word writing tasks. Transition to English in P2 was smooth with time spent on oral work through play and games, reading and writing.
	Teachers in the pilot schools were given training in the teaching and learning in the mother tongue BTL.
	Teachers receive training in making BTL classroom print-rich classroom with lots of environmental prints hanging everywhere
Outcomes	Most pupils were able to read and write the first language by the end of P1 (70% of learners made "good to excellent progress". But it is not clear exactly what that means.)
	Teachers and the learners in the programme were highly motivated in teaching and learning in the mother tongue and English
Impact	Significant impact on the teachers, learners and the community of the pilot schools. There was an attitudinal change on the part of pupils and teachers in the form of punctuality, regular attendance and increased enrolment in P1; and more active participation of pupils in lessons. The Breakthrough to Literacy (BTL) program had increased parents' interest in their children's schooling.
	BTL teachers indicated they enjoy teaching more, feel they are better teachers, teach differently than before, and that the children enjoy class more. Parents and community members asserted that the program was suitable because they liked the emphasis on the local language
Sustainability	Molteno / BTL successes contributed to the design of NALAP
Relevant studies/references (meta- analysis)	Lipson, M and Wixson, K, 2004 report to USAID Executive Summary of Evaluation of the BTL and ASTEP Programs in the Northern, Eastern and Volta Regions of Ghana, August 31, 2004 (Revised September 24, 2004)

Table B1.3: National Literacy Acceleration Programme (NALAP)

Initiative	The Molteno/BTL Programme
Objective	Ensure that at least 30% of the total number of pupils in KG 1- P3 would have acquired basic skills of literacy by the end of P3.
	To ensure the availability and use of literacy instructional materials in all KG 1

	to P3 classes at the end of the programme NALAP's objectives are to:
	Facilitate children's learning through reading in their mother tongue (Li); and also learn to speak English (L2) (Kay Leherr, 2009).
	Ensure that all children in kindergarten to P3 in public schools have quality literacy materials, effective instruction and public support to learn to read and write in the mother tongue and English. Following a two-year design and development phase, NALAP (although designed to cover all KG and lower primary schools in all 170 districts in Ghana) initially targeted 31 districts, 125 schools and 70,000 teachers (including head teachers, with concentration on 11 Ghanaian languages (Ash Hartwell, 2010).
	Improve mother tongue teaching and learning in Kindergarten through third grade with an early transition to English.
	Improve on the teaching skills of teachers particularly at the lower primary levels for the effective teaching of Literacy in schools
Related interventions	NALAP originated from Moteno / Breakthrough to Literacy/Bridge to English (BTL/BTE) program that had been implemented through the USAID-funded Education Quality for All (EQUALL) Project (Kay Leherr, 2009). BTL/BTE involves a lower primary bilingual transitional literacy program involving 12 districts in Ghana.
	Molteno / Break Through to Literacy (BTL) project (but with some differences) The development of NALAP was evidence-based. It was informed by a baseline study involving 247 teachers drawn from 94 schools and 6,079 pupils drawn from 222 schools in 118 districts in all 10 regions (Kay Leherr, 2009). It was also informed by the experiences of School for Life (SfL), although according to USAID (Marisol Perez) the intervention could have benefitted more if the SfL people had been included more in the technical assistance for developing the scale-up plan for NALAP.
Education system level targeted	KG-P3
Implemented by	Ministry of Education (MoE, Ghana/Ghana Education Service (GES), with financial support from USAID.
	Emerged from a 2006 National Literacy Task Force (NLTF) formed by Ghana's Ministry of Education (MOE) to explore ways of improving Ghanaian language literacy rate in the country
Project contact	Marisol Perez (mperez@usaid.gov); Emmanuel Mensah-Ackman ("NALAP man"), USAID (+233-264-77-44-95).
	Mr. Jacob Kor of CRDD (0244798521).
	Eric Johnson, USAID/Ghana.
	Another key contact is the current representative of USAID working with Ghana Education Service is Mr. Chris Dowuona-Hammond (020-813-7981; cdoham@gmail.com).
Funded by	Financial support from USAID; Technical support from USAID-funded Education Quality for All (EQUALL) Project (EQUALL).
Costs/amount of funding	Preparation of NALAP materials-\$15 million, Funding for training of trainers and teachers- \$7 million (8.6m GHc estimated based on 5 day locally based literacy training based on TOT model reaching 90,000 participants. Per diem, but does not include travel costs, (NALAP materials (AESOP 2011-2013, p. 22).
Unit costs	20 GHc / participant/day estimated (AESOP 2011-2013, p. 22) + 180 GHc / session estimated (from interviews).
Time period of funding	2006-2010 (the National Literacy Task force (NLTF) was formed in June 2006) and at the beginning of academic year 2009- 2010 NALAP was launched nationwide. USAID funding is for the period 2009-2011

Time line of intervention	Following a two year design and development phase, NALAP was introduced in primary schools nationwide during the school year 2009/2010.
	Baseline Assessment by: Kay Leherr, Education Development Center, June 2009.
	GES issued instructions to districts and schools to combine the English and Ghana Language periods into the single new 90 minute Language and Literacy Period as soon as they had the new materials and were able to begin NALAP in their schools. The first tranche of NALAP materials, for KG and P1, was sent to Districts in December 2009 and the final set of materials reached the Districts by March 2010.
	However, teachers and tutors reported that there was no follow up training (Task Order 7 NALAP formative Evaluation Report, Prepared by RTI International, RTI project No. 09354.007, April 2011 (p.10)).
Level of GoG involvement (high, medium, low)	High. National Literacy Task force members who initiated the NALAP programme were all Ghanaians. Ghana Education Service (GES) staff and personnel were also engaged in the following: training teachers; trainer of trainers; and training district facilitators
Coverage/location of intervention	KG and Lower primary Schools in all 170 districts of Ghana are targeted. There was no pilot testing as such. NALAP emerged out of success stories of the EQUALL / Molteno project
Inputs (resource materials, provided)	It is a bilingual (biliteracy) transitional "early exit" model and an instructional approach which provides teachers and pupils of the lower primary (KG 1-Basic school Primary 3) with quality literacy materials, effective instruction and public support to learn to read and write in their mother tongue and in English.
	It is supported by a high quality set of instructional materials developed in eleven (11) Ghanaian Languages, including Pupils Books, Teachers' Guides, Big Books, Readers, conversational posters, and Alphabet Cards.
Processes (how it was rolled out, key features of intervention (i) teacher	Provides school-based in-service training to teacher, head teachers and circuit officers.
training (ii) head teacher training (iii) development of TLMs (iv) development	Changes in the Ghanaian language school timetable, combining Ghanaian language and English into a 90 minute Language and Literacy block.
assessments)	Provides guidelines to teachers on how to use supplementary readers to ensure that pupils develop literacy skills in the mother tongue for a smooth transition to the English language as the Language policy of Ghanaian states.
	NALAP's continuous reading assessment activities include:
	Uses basic elements of phonetic analysis to decode words (L2).
	Uses a picture dictionary to determine sound and word recognition (L1,L2).
	Uses visual and verbal cues to comprehend words and stories (L1, L2, L3).
	Knows the sequence of events in a picture story (L1, L2, L3).
	Understands main idea and supporting details of simple expository information (L1, L2; L3) (EDC, Kay Leherr, 2009).
Results outputs	70,000 head teaches and teachers for grades K1-P3 received one-week orientation workshop.
	Teacher guides and instructional materials (including books, posters, alphabet cards and readers) received supplied to schools – though the majority of schools report that they received materials after the 2nd term was over (in April), and therefore only began to implement the program during the 3rd term.
	A cascade training model was used, whereby a National Resource Team trained approximately 6 'Master Trainers' in each of the 170 Districts (a total of over 1,000 Master Trainers). The National Resource Team, with staff drawn from GES, Universities and Teacher Training Colleges, had an eight day 'NALAP Trainers' workshop in July 2009, and they carried out the training

	of the Master Trainers during August 2009. The Master Trainers then carried out training for all primary school Heads and KG-P3 teachers within their districts in two stages: head teachers and KG-P1 teachers in November/December 2009, and P2-P3 teachers in February 2010.
Outcomes	According to the NALAP Formative Evaluation that was done a year after the start of the programme, the results show that:
	Although P2 pupils are still struggling to decode some words, scores for listening comprehension are very high.
	Pupils' understanding of the local language is quite high as shown by the listening comprehension scores.
	Majority of teachers observed spent significant time reading stories aloud to their children, the majority (more than 80%) of pupils have materials and books.
	EQUALL assisted with the development of over 500 titles of Ghanaian language and English language materials.
	Teachers who are reading stories aloud to children are helping improve pupils' listening comprehension.
Impact	Limited impact as it appears there was limited follow-up training. The following are prominent:
	Improved teachers' practices on arranging learners, use of TLMs, thinking skills and learner interactions;
	Activities such as read aloud, group work, role plays and by pupils' creative interpretation of pictures and text added value to children's learning;
	Strong positive response to the program from educators, trained teachers and community members. Although there was a small minority of voices from communities that argued for English Only in primary schools, the great majority welcomed a bilingual early grade literacy program that begins with the language that pupils understand and speak (Dowuona; Hammond, 2009).
Sustainability	Endorsement of NALAP by MoE / GES provides an avenue for sustainability. This is, however, threatened by limited follow-up training arrangements, NALAP trained teachers who move out of their schools are hardly replaced with other trained teachers, and with no further training opportunities, some claim NALAP has "died".
	Need to provide second round of training, replace instructional materials, ensure implementation of 90-minute language and literacy period and re- activate public awareness campaign
Relevant studies/references (meta- analysis)	NALAP Implementation Study, Ash Hartwell, EDC, EQUALL, August 2010; Task Order 7 NALAP Formative Evaluation Report, Prepared by RTI International, RTI project No. 09354.007, April 2011

Table B1.4: Introducing Change in Early Childhood Education in Kumasi – Ghana/Israel Pilot Project (MASHAV)

Initiative	MASHAV
Objective	This project is collaboration between Israel's Agency for International Cooperation Development (MASHAV), the Golda Meir Carmel International Training Centre (MCTC), the Millennium Cities Initiatives (MCI) and the Ghana Education Service (GES). Its objectives are to:
	Introduce change in early childhood education and development in the city of Kumasi.
	Improve Early Childhood Education teaching and learning in one district (out of the 170 districts) in Ghana: Kumasi Metropolis. It involves 10 schools and 50 teachers in the Kumasi Metropolis.

Related interventions	N/A
Education system level targeted	KG
Implemented by	Millennium Cities Initiatives (MCI) in collaboration with Kumasi Metro Education Directorate of GES
Project contact	Mr. Onyina, Regional Director, GES, Kumasi
	Aviva Ben Hefer, Project Director.
	Jannette Hirschmann, Director, ECD Programme, MCTC
	The Director, GES, Kumasi
Funded by	Israel's Agency for International Development Cooperation (MASHAV)
Costs/amount of funding	Not yet accessed
Unit costs	Not yet available
Time period of funding	2009-present
Time line of intervention	2009-present
Level of GoG involvement (high, medium, low)	Low. No evidence of enhancing engagement level of GoG.
Coverage/location of intervention	Kumasi Metropolitan schools KG1-2 classroom (Early Childhood Education). Commenced with a pilot group involving 5 schools, 25 classes and 25 teachers. It has now been extended to cover 10 schools and 50 teachers (Aviva Ben Hefer, N.D). It also covers 75 teacher trainees.
Inputs (resource materials, provided)	Capacity building: MASHAV provides in-service training to ECE coordinators, teachers and head teachers both in Haifa Israel and locally in Kumasi.
	Teachers are sent to Israel to visit MASHAV schools and get trained. Training has moved to the St Louis Training College to encourage pre-service training of teachers.
	A new concept of early childhood development and Learning through the integrated approach and Play introduced in KG classrooms. Monitoring and follow-up being done by the MASHAV team from Israel.
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based assessments)	It is Activity-based learning process.
	The changed role of the teacher is that of a facilitator. Teachers engage children in learning through play, and creative thinking is promoted.
	Teachers make teaching-learning materials and story books locally.
	Teachers are making games and playing with children. A stimulating environment is created in the classroom for experiential learning. The children are working in small groups and teachers are giving individual attention and support.
	Teachers are trained in planning integrated lessons and they do integrate all their lessons
Results outputs	The programme has produced a number of teachers (75 trainees) to date. Ten lecturers including the principal and the Deputy Principal of St Louis Teacher training college visited Israel for a specially designed workshop.
	Another workshop was held for 75 students and their lectures in St. Louis Training College
Outcomes	There is a significant change in the learning environment of the pilot classrooms in Kumasi.
	The new environment included activity corners for socio-dramatic play, a book corner, a corner for creative activities, blocks and table games, at different levels and which could be used in different teaching situations

Impact	Very positive impact on teachers and pupils:
	Teachers who were trained have adopted a new philosophy in teaching in ECD classrooms
	Children in MASHAV classrooms enjoy learning and demonstrate independent work attitude and creative thinking.
	Teachers now understand the importance of integrative planning for teaching in the kindergarten
	Teachers encourage children to work in small groups and give them more individual attention
	The classroom has become much richer learning environments
	Absenteeism (both children and teachers) has reduced
Sustainability	Difficult to assess as this in very early stages
Relevant studies/references (meta- analysis)	Aviva Ben Hefer and Jannette Hirshmann: 'Where there's a will there's a way' Ben Hefer A and Hirshmann J(2011) MASHAV : Introducing change in early childhood education in Ghana. Jerusalem: Shalom Magazine for Alumni of MASHAV. <u>http://www.mfa.gov.il/MFA/MASHAV</u>

Table B1.5: Leadership for Learning (LfL)

Initiative	LfL
Objective	The projected targeted 125 head teachers and 60 circuit supervisors. The first cohort for the LfL training was drawn from 60 districts in the ten regions (2 districts from each region). In each district, two schools were targeted making the total 120. These initial trainees have become transformational leaders within their communities and contribute towards scaling up of the LFL programme.
	levels. Its belief is that school-based leadership and classroom teaching activities are meaningless unless they are linked to the promotion of pupil learning.
	Its target, therefore, is to equip head teachers, circuit supervisors and teachers with requisite knowledge and skills for placing learning activities at the centre of leadership, administration, management, supervision and teaching.
Related interventions	LfL is an evidence-based programme, which emerged from a five-year DFID- funded project (EdQual – implementing quality education in low income countries) is funded by the Commonwealth Education Centre (CET) through the Centre for Commonwealth Education (CCE), Cambridge with partial contribution from the Ghana Education Service (GES).
	LfL emphasises five key principles which are very critical for activity based learning practices in schools: focus on learning, dialogue, shared leadership, shared accountability.
	In-service training of head teachers and circuit supervisors is delivered by a team of 15 professional development leaders (facilitators) drawn from the Institute for Educational Planning and Administration.
Education system level targeted	Basic education (kindergarten, primary and JHS).
Implemented by	The University of Cape Coast's Institute for Educational Planning and Administration (IEPA), with technical support provided by the Centre for Commonwealth Education, Cambridge
Project contact	Dr. Alfred Ampah-Mensah, Programme Coordinator, LfL (Ghana). Network, Institute for Educational Planning and Administration (IEPA, University of Cape Coast.

	Dr. George K.T. Oduro, Programme Director, LFL (Ghana) Network, IEPA, University of Cape Coast.
Funded by	Commonwealth Education Trust (CET).
Costs/amount of funding	Training (preparation and delivery): £85,000.00 Logistics: £37,000.00 Travel: £35,000.00 Total: £159,000.00
Unit costs	£46.77 GBP per year per participant. £93.53 GBP over 2 years: 159,000/1,700 (1,500 head teachers + 200 circuit supervisors).
Time period of funding	2009-13
Time line of intervention	Three years (2010-13)
Level of GoG involvement (high, medium, low)	The Ministry of Education / Ghana Education Service are highly involved in the implementation of the LFL programme in terms of policy support. Their financial contribution for the programme is however low
Coverage/location of intervention	The programme initially targeted 125 head teachers and 60 circuit supervisors drawn from 60 districts in all 10 regions. In collaboration the GES' Teacher Education Division (TED), over 1,500 head teachers and 200 circuit Supervisors have so far been trained.
Inputs (resource materials, provided)	Resources available for implementing the programme include:
	Human resources - there are 15 training facilitators (Professional Development Leaders) drawn from the GES, Colleges of Education and the Universities.
	Learning materials – training manuals, Laptops, projectors
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii)	The rolling out of the LfL programme started in 2011 when the GES integrated the LFL principles into the contents of the Head teacher Handbook to provide a framework for head teacher leadership training.
development of TLMs (iv) development of continuous school-based assessments)	The INSET unit of the Teacher Education Division has made LFL part of its training focus. Discussion is also in progress towards making the LFL an integral part of the teacher education programme
Results outputs	An interim evaluation of the LFL programme in the first cohort schools shows that the LFL intervention has reduced the level of teacher absenteeism in participation schools. Increased the awareness level of head teachers in terms of their capacity to initiate change at the school level, improving pupil learning through dialogue. Outputs include:
	A newsletter published on project experiences of head teachers 15 professional development leaders (facilitators) trained and equipped to support head teacher training
	125 school transformational leaders (STLs) trained to promote peer learning at the school level
	Delivery manuals developed to support LfL training activities
	Certificates awarded to participants
Outcomes	Over 2,500 head teachers and 200 circuit supervisors have been trained
Impact	LfL has made a very high impact on policy makers (MOE/GES) , head teachers and circuit supervisors:
	Trained head teachers and circuit supervisors have demonstrated positive orientation towards making LEARNING the central issue in all engagements of the school.
	Head teachers have utilised LFL's principles of Dialogue and Accountability to
	address challenges of teacher and pupil absenteeism.
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	The MoE / GES has integrated LFL's principles into the contents of GOG's Head teacher Handbook.
	LfL trained head teachers now see themselves not merely as school administrators but as Leaders for promoting learning.
Sustainability	LfL has been institutionalised and located in an academic institution (the University of Cape Coast's IEPA). Institutionalising the LfL programme gives an assurance of continuity of the programme after 2013 when the project ends. It has also been integrated in the overall head teacher and circuit supervisors training programmes of the GES
Relevant studies/references (meta-	IEPA (2011). LfL Ghana Newsletter.
analysis)	Macbeath, J, Swaffield, s and Oduro, G (2010). Developing leadership for Learning in Ghana, CCE.
	Southworth, G. (2002). Evidence-based Management and Leadership in the Primary School. London, Falmer Press.

Table B1.6: GES School Based Assessment (SBA) Reform

Initiative	GES SBA Reform
Objective	To reduce pressure on students that result from 'one-off' public examinations
Related interventions	Assessment in Ghana and England: putting Reform to the test of practice (Pryor, J & Akwerr, C, 1998).
Education system level targeted	Basic education (Primary and JHS).
Implemented by	Curriculum Research and Development Division (CRDD) in collaboration with Teacher Education (TED), Inspectorate and Basic Education Divisions of the Ghana Education Service (GES) and the West African Examinations Council (WAEC).
Project contact	Kor Jacob (incoming) (korjacob313@yahoo.com; +233-244-798-521). Also, Dr. M. Ato Essuman involved in developing textbooks, TLMs (0244-733-305; dr.essuman11@gmail.com)
Funded by	No information available
Costs/amount of funding	No information available
Unit costs	N/A
Time period of funding	N/A
Time line of intervention	On-going
Level of GoG involvement (high, medium, low)	High, because it is a GES innovation
Coverage/location of intervention	Nationwide. All primary and JHS level schools across the 10 regions and 178 districts in the country
Inputs (resource materials, provided)	Stakeholder input to develop class tests, class exercises; and projects: textbooks and teacher guides
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based	Development of SBA by key stakeholders over past few years. Project topics will be changed every three years and new ones supplied by CRDD

assessments)	
Results outputs	Developed handbooks to provide guidelines to help the teacher in writing school based assessment tasks.
Outcomes	NA. Implementation of Intervention yet to be evaluated
Impact	N/A
Sustainability	Previous experiences with continuous assessment indicated that WAEC was suspicious of the consistency, accuracy and reliability of continuous assessments from school (i.e. they believed some teachers make up the marks). It is not clear how the changes provide greater accountability
Relevant studies/references (meta- analysis)	N/A

Table B1.7: JICA/GES Nationwide INSET Programme

Initiative	JICA/GES Nationwide INSET Programme
Objective	Strengthen nationwide implementation of the INSET model, namely, quality of School Based INSET (SBI) / Cluster Based INSET (CBI), capacity of central and district officers, monitoring and evaluation systems and further institutionalisation
Related interventions	Emerged from Project of Improvement of Educational Achievement in Science, Technology, and Mathematics in the Basic Education Project (STM Project, 2000-2005), which was aimed at improving students' abilities and educational achievements in Science and Mathematics in primary and junior secondary education (now Junior High Schools) in three pilot districts. STM project developed the prototype of the need-based School Based INSET (SBI) model.
	JICA funded project to Support the Operationalisation of the In-Service Training Policy (INSET Project, 2005-2008) and developed the INSET model, which is applicable to all other districts, through pilot activities in ten pilot districts
Education system level targeted	Basic Education (KG, Primary, JHS)
Implemented by	GES/JICA
Project contact	Ms. Mama Laryea, JICA (+233-242 712 676; mamalaryea.gn@jica.go.jp). Tatsuya Nagumo (JICA Senior Consultant, tnagumo@padeco.co.jp). Evelyn Oduro, GES-TED (+233-208-179-896; evebed@yahoo.com).
Funded by	JICA
Costs/amount of funding	Not available
Unit costs	Not available
Time period of funding	2009-12
Time line of intervention	2009-12
Level of GoG involvement (high, medium, low)	High, because the Teacher Education Division (TED) of GES hosts the project and provides support in terms of venue and mobilising people to participate in training activities
Coverage/location of intervention	Nationwide. All basic schools (KG, Primary and JHS) are involved in the project
Inputs (resource materials, provided)	Technical and funding support provided by JICA.

	GES provided venue for training each teachers.
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based assessments)	GES introduced INSET to 57 districts as the first batch in 2009.
	JICA dispatched a JICA Project Team in June 2009 to roll out nationwide INSET.
	District level trainings: Orientation and Sourcebook training for Head teachers (HT) and Circuit Supervisors (CS); Curriculum Leader (CL) orientation; and CL Sourcebook Training, at each district
Results outputs	Various manuals and handbooks produced with guidelines on INSET, organisational structures, how often training sessions (Cluster based INSETBI and SBI) should be held, etc.
	INSET Sourcebook developed with 6 modules: District Guidelines; Operational Manual for District Level INSET; School Based INSET (SBI) and Cluster Based INSET (CBI) manual; General Pedagogy; Sample Lesson Plans in Mathematics; Sample Lesson Plans in Science.
	SBI/CBI lesson observation sheet developed for: Demonstration Lessons; Peer Teaching, and; TLM Preparation and Usage.
	Trainings held on INSET.
	Selected teachers sent to Japan for study tour to learn child-centred lesson planning (seen as a sign of recognition).
Outcomes	Initial surveys indicate that 80% of schools in the 10 pilot districts organised SBI/CBI at least twice a term (INSET brochure).
	Primary school teachers who underwent TLM training "seem" to have improved how they deliver mathematics and science
Impact	High. INSET programmes have impacted positively on participants.
	Continuous improvement is expected to lead to quality INSET and quality primary education in Ghana
Sustainability	It is yet to be seen whether the pilot schools will continue to implement INSET as found in initial surveys
	GES has established a Staff Development Centre in the country to support the TED's INSET activities as a way of sustaining the programme
Relevant studies/references (meta- analysis)	Padeco (2011). Project for Strengthening the Capacity of INSET Management: 3rd Sampling Survey Report (Annual survey is implemented by the National INSET Unit (NIU) of Teacher Education Division (TED) in the Ghana Education Service (GES), with support from the JICA Project Team, from 2009 to 2012)

Table B1.8: Untrained Teacher Training Programme: Untrained Teachers Diploma in Basic Education (UTDBE)

Initiative	UTDBE
Objective	To upgrade untrained teachers with award of UTDBE (KG: As of 2007, 80 per cent of teachers are described as "untrained" and most of the teachers described as "trained" would not have received training specific to the level at which they teach.
	Primary: Overall share of untrained teachers is 50 per cent. Of the 35,557 untrained teachers in Government primary schools, over 85 per cent are male.
	20,000 of untrained teachers are likely to be in the system for one year only as they are national service graduates; 12,000 are unlikely to be in the system for much longer than one year as they are national volunteers).

Related interventions	Teacher Education Division's INSET programmes/Standard teaching programmes of Colleges of Education
Education system level targeted	All basic education (KG, Primary and JHS).
Implemented by	Teacher Colleges of Education (TCE).
Project contact	Rev. Sister Elizabeth Amoako, Principal OLA TCE, President of TCE Conference of Principals of Colleges of Education. Principals Association (lizamoako@yahoo.com;+233-208-154-321).
Funded by	USAID
Costs/amount of funding	Not available
Unit costs	40 Ghana Cedis per participant per session (AESOP).
Time period of funding	2005-12
Time line of intervention	2005-12
Level of GoG involvement (high, medium, low)	Medium. Although the MoE / GES provided support for the project, placement of people who completed the project did not receive much support from the GES. Dialogue is in process towards attracting more GoG support.
Coverage/location of intervention	Project carried out in all 10 regions. The programme began in 2005 with an enrolment of 5,000 untrained teachers from the Northern Regions and continued to other regions in the years that followed: Three northern regions and Afram Plains District 2005 - 5,119 Ashanti and Brong Ahafo Regions 2006 - 7,627. Central, Western and Eastern Regions 2007 - 8,994. Volta and Greater Accra Regions 2008 - 5,439
Inputs (resource materials, provided)	Facilitators who support training. Training materials and handbook
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based assessments)	The programme uses mainly distance education methods with teachers continuing to teach in schools and provided with printed modules to study at the weekends and in the evenings Participants attend a one-week induction course and three 3-week residential courses each year Participants are also supported as they study by district support cadres who work with teams of 20 trainees holding tutorials at regular intervals Teachers' capacity for designing school-based assessments were developed through training
Results outputs	By end of 2008 programme reached nationwide coverage of 27,183 teachers. More information to be collected on percentage of teachers who began the course and finished it
Outcomes	Learning focused teaching skills and techniques developed in teachers Diploma certificates awarded to graduates
Impact	Some beneficiaries have taken up teaching appointments in their community schools; thus reducing the teaching staff pressure on schools
Sustainability	On-going. Colleges of Education are being brought on board to integrate programme into their curriculum.
Relevant studies/references (meta- analysis)	Education Sector Performance Report 2008; 2009 Teachers in Ghana, Summary and Observations (Unpublished document).

Table B1.9: UCC/CoE Curriculum Reform

Initiative	UCC/CoE Curriculum Reform
Objective	To equip tutors in Colleges of Education (CoE) develop skills and materials to facilitate the use of Activity Based Learning (ABL) techniques
	Five colleges which provide training in ABL are targeted. (OLA College of Education, Cape Coast; Tamale College of Education, Tamale; Holy Child College of Education; Akatsi College of Education, Accra College of Education)
	This is a planned intervention that is yet to be implemented. The information provided has been obtained from a resource person who also was instrumental in designing the intervention
Related interventions	Teacher Education in Sub-Saharan Africa (TESSA) Project. TESSA is a teacher professional development intervention that seeks to provide pedagogical support to teachers in sub-Saharan Africa.
	The development of teaching and learning materials (TLMs) used to be on the CoE curriculum in the mid- to late-1990s. However, when HIV/AIDS was included in the CoE curriculum, the course on the development of TLMs was taken off, given the limited CoE curriculum time.
Education system level targeted	Basic, with emphasis on Pre-school.
Implemented by	To be implemented by Colleges of Education.
Project contact	Mr Palmas Anyagre of the Department of Educational Foundations, University of Cape Coast (resource person).
	During a visit at the Institute of Education to ask about the current TTC curriculum reform, other contacts that were provided as having info were:
	Kofi Nti (0244-280-533; sekonti5@yahoo.com) Nii spoke with him briefly on phone but he was away at workshops on the days that tried to contact him. May be best for someone to sit with him and find out any other details.
	Mr. Kwaku Kutor (0244-86-71-87).
	Prof. J.E. Opare, Director, IoE.
Funded by	To be funded by MoE
Costs/amount of funding	The training is yet to be delivered and so no accurate information about costs can be provided about the amount of funding
Unit costs	The contact person, Mr Anyagre, has provided an approximate unit cost of 335.00 Ghana cedis. Estimated cost per trainee teacher per year of the programme.
Time period of funding	The Teacher Education Division of the Ghana Education Service is still negotiating with UNICEF for funding.
Time line of intervention	Training of the college tutors will last five days. Expected rollout period for the CoE curriculum reform to be finalised is September 2012
Level of GoG involvement (high, medium, low)	High. Government involvement. Revision is led by Institute of Education Board, set up by GoG. Government's elevation of teacher training colleges (TTCs) to CoEs makes the curriculum revision necessary.
Coverage/location of intervention	Five out of the 38 colleges of education are targeted. These are the colleges that offer training in pre-school teaching. Scale up will depend on the outcome of the training planned for the college tutors
Inputs (resource materials, provided)	Expert support from Institute of Education (IoE) Handouts will be provided. Trainers.

Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based assessments)	Training of tutors in colleges of education who will, in turn train teacher trainees. The training is expected to include development of teaching and learning materials and development of school-based assessment techniques.
Results outputs	Expected results are tutors with expertise to train pre-school teachers in the use of ABL methods. Expected outputs are prototypes of teaching and learning materials for use at the pre-school level.
	Expert support from the IoE.
	Logistics provided by National Council for Tertiary Education (NCTE).
Outcomes	Yet to be realised.
Impact	Actual impact can be determined when the outcomes are unknown
Sustainability	Will depend upon how the tutors trained can be utilised to train head teachers at the district level, with funding provided by the district, municipal or metropolitan assemblies.
Relevant studies/references (meta- analysis)	Impact Monitoring Team of teacher Education Division (1993) which was an evaluation of the Junior Secondary School Teacher Education (JUSSTEP) Project.
	Tetteh-Enyo, A., Jenkin, J., Quarm, A. and Garret, R.M.(1996). Learning and Teaching Materials Policies for pre-tertiary Education (MoE, 2010).

Table B1.10: Teachers for Africa (TFA) Programme

Initiative	TFA Programme
ABL team expert (primary person completing table)	Hope Nudzor
Objective	To: establish Teacher Resource Centres on campuses of teacher training institutions; (ii) teaching or child-centred approaches and preparation and use of TLMs from low-cost local resources
Related interventions	-/-
Education system level targeted	Primary, JHS, TTC, Universities
Implemented by	International Foundation for Education and Self-Help (IFESH).
Project contact	Kwesi Dzidzienyo, Country Director (ifesh@ghana.com; +233-277-615-353). Julie Ortsin, Program Officer (ifesh2@yahoo.com; majul69@hotmail.com; +233-246-860-001).
Funded by	USAID-Ghana; Global Washington; World Cocoa Foundation
Costs/amount of funding	To be completed later.
Unit costs	N/A
Time period of funding	To be completed later.
Time line of intervention	1994 (same as above)
Level of GoG involvement (high, medium, low)	Medium. GES provided programme access to schools
Coverage/location of intervention	All regions, except Upper East and Upper West.

Inputs (resource materials, provided)	IFESH volunteers (trained teachers). Resource centre space. TLMs
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development of continuous school-based assessments)	IFESH volunteers train TTC tutors and teacher trainees in developing and using TLMs from low-cost local resources. 114 IFESH volunteers placed in 4 universities, 24 TTCs, 3 SHS, and 3 INGOs
Results outputs	Established 24 Teacher Resource Centres (TRCs) in 24 TTCs and provided training that built the capacity of 5,000 university students, 8,000 TTC tutors, 50,000 teacher trainees, 7,500 serving teachers in basic schools, and 3,000 secondary school students
Outcomes	Resource centres provide TLMs and training
Impact	Improved ABL teacher training
Sustainability	TRCs are still being used in some TTCs, even where there are no IFESH volunteers (e.g. Accra College of Education). However, the resource centre was taken off the TTC curriculum to make way for HIV/AIDs.
Relevant studies/references (meta- analysis)	USAID evaluation (need to obtain copy).

Table B1.11: Community Teachers for Ghana

Initiative	Community Teachers for Ghana
ABL team expert (primary person completing table)	Kafui Etsey
	Hope Nudzor
Objective	To improve the quality of, and access to, quality basic education in Ghana.
Related interventions	N/A
Education system level targeted	Primary
Implemented by	International Foundation for Education and Self-Help (IFESH).
Project contact	Kwesi Dzidzienyo, Country Director (ifesh@ghana.com; +233-277-615-353).
	Julie Ortsin, Program Officer (ifesh2@yahoo.com; majul69@hotmail.com; +233-246-860-001).
Funded by	USAID Ghana
Costs/amount of funding	N/A
Unit costs	N/A
Time period of funding	March 2009-11
Time line of intervention	N/A
Level of GoG involvement (high, medium, low)	Low. There is no evidence of GoG involvement
Coverage/location of intervention	No information
Inputs (resource materials, provided)	Two experienced volunteer educators from the United States with advanced degrees and backgrounds in teacher development, educational capacity

	building, or teaching English.	
	Five retired educators with advanced degrees	
	15 community based tutors who are retired teachers	
Processes (how it was rolled out, key features of intervention (i) teacher training (ii) head teacher training (iii) development of TLMs (iv) development	Recruit, train and place 260 uncertified Ghanaian community teachers into rural primary schools over a period of two years.	
	The U.S. volunteer educators and the retired Ghanaian educators provide extensive training for the community based tutors.	
assessments)	The 15 community based tutors train the 260 uncertified community teachers in nine modules covering topics such as classroom management, multi-grade teaching, interactive learning, learner-centred methodologies, gender equity, HIV/AIDS awareness and prevention, educational services for orphaned and vulnerable children, guidance and counselling, and educational psychology and sociology.	
Results outputs	258 of the 260 uncertified teachers were trained, thereby improving the quality of instruction provided to 4,300 primary students in rural and underserved areas	
	Two of the 260 gained admission into a teacher training college to receive a Diploma in Basic Education	
	Additional results included increased abilities in reading and math for primary school aged children	
Outcomes	Teachers trained in use of ABL.	
Impact	Improved teaching and learning in rural areas	
Sustainability	Was done on relatively small scale due to funding. Evaluation report not yet available to determine sustainability	
Relevant studies/references (meta- analysis)	USAID evaluation report (not yet available)	



1. ABL Implementation Classification Framework

1.1 Classification Tool for Assessing Implementation of ABL Interventions

ABL focuses the educational process on the learner, and on the learner's "construction" of knowledge and skills through learning activities. Pedagogically, ABL represents a model of teaching that emphasises multiple small group activities that engage students in discovery learning or problem solving, minimal teacher lecturing or direct transmission of factual knowledge, and frequent student questions and discussion. ABL pedagogies can be contrasted with "formal" or "direct instruction" approaches emphasising teacher lecturing or direct transmission of factual knowledge, coupled with recitation and drill.

This Classification Tool was developed as a guide for policymakers, pedagogical specialists, teachers, teacher trainers and development partners to assess the degree to which activity-based learning is being implemented, at both systemic and school-levels. In addition, it places the implementation of ABL along a spectrum and provides a vision for what movement along that spectrum towards deeper implementation of ABL would look like1. The Classification Tool has two sections, one for systemic-level implementation of ABL and one for classroom-level implementation. For each level, aspects (or elements) of ABL are described and analysed. Both levels use a simple classification of conditions observed into four degrees or "intensities" of ABL implementation: Latent, Emerging, Established, and Advanced.

- "Latent" indicates no significant implementation (much less impact) of the particular aspect of ABL
- "Emerging" indicates that an aspect of the ABL intervention has been introduced but remains in the early stages, and has not yet taken root. Typically, there is a high risk of dissipation of the intervention at the classroom level if it is not reinforced.
- "Established" indicates that the aspect of the ABL intervention has been introduced, understood, replicated and accepted by most schools and teachers into regular practice. Reinforcement of the intervention reduces dissipation. Sceptics remain, however, and the intervention could ultimately fade away if policy, programmatic and financial support are not maintained.
- "Advanced" indicates that the aspect of the ABL intervention has become the norm, embedded into policy, planning, resource allocation, MoE documentation, teacher training and behaviour, production of learning materials, design of assessment systems, etc. Moreover, these different aspects are treated and implemented in a holistic, comprehensive and synergistic manner, with each aspect reinforcing the other.

Table C1.1: System Level Assessment

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
I.A. Policy Formulation	 No written or stated Ministry-level policy with respect to ABL, nor any MoE document which describes what ABL means and 	 Official policy decision taken in support of piloting of an ABL-type intervention, but no agreement taken to go beyond pilot stage. 	 Official MoE policy decision taken to expand / replicate ABL pilots to system level in at least 3 grades, based on initial 	 ABL philosophy, concepts, financial requirements, support systems, etc. are embedded into regular MoE policy, planning,

¹ It is worth noting that movement from one category to another is a multi-year process, not something which happens in six months or even one year.

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I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
	looks like MoE policymakers not exposed to ABL concepts or methodologies, nor able to verbally articulate what a classroom implementing ABL would look like.	 Vast majority of senior policymakers unable to articulate what ABL means in the classrooms, and still focused on improving outcomes through traditional lecture-style teaching and learning methods, as assessed by traditional examination system. 	 monitoring and third-party evaluation of ABL pilot. Senior policymakers familiar with ABL concepts and methodology, willing to invest resources over multi-year time frame to transition from traditional to ABL approaches in multiple aspects (teacher training, TLMs, supervision, classroom environment, student assessment, etc.). Policies with respect to traditional examination system which rewards factual memorisation and recitation unchanged. 	 budgeting, curricula development, learning materials production, student assessment, school oversight and communication functions. Commitment in place to sustain and continually enrich ABL methodologies, emphasising comprehensive, holistic and synergistic combinations of different aspects of ABL. High-stakes examinations system evolves to assess deeper understanding of language skills, problem-solving skills, and logical thinking.
I.B. Programmatic Development	 No elaboration or implementation of either MoE programme or project document in support of introduction of ABL methodologies in classrooms, even on a pilot basis. 	• Existence of a MoE programme or project document describing a pilot ABL intervention: objectives, justification, description of content and activities, implementation milestones, evaluation criteria, budget required, etc.	 Existence of second-generation programme or project document describing system-level expansion of ABL pilot, based on evaluation of ABL pilot and incorporation of lessons learned, with articulation of expected links between ABL methodologies and system-level educational outcomes. Incorporation of Colleges of Education (CoE) into ABL programme, as both observers and replicators. 	 ABL no longer considered a programme or project but rather as standard practice requiring support through traditional MoE departments for curriculum development, teacher training, educational materials, teacher assessment, student assessment, school supervision, etc. ABL fully incorporated into Colleges of Education curricula and training programmes.
I.C. Resource Allocation	 No allocation of either external or domestic resources to enable piloting of ABL methodologies. 	Initial, one-time commitment of either external or domestic resources to enable ABL-type	Official MoE commitment of either external or domestic resources to expand pilot to	 Incorporation of financial requirements for ABL into national recurrent education

APPENDIX C	

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
		pilot.	system level over multi-year time-frame, including for teacher training, production of teaching and learning materials (TLM), classroom furniture, pedagogical support, with an additional round of baseline / end-of-project third party impact evaluation incorporated.	 budget following standard MoE budget line items. Resources flow through normal MoE and Ministry of Finance channels to the schools.
I.D. Development of Teaching and Learning Materials (TLM)	 No TLMs developed, produced or distributed which reflect ABL concepts or methodologies. Classroom-level TLMs are composed primarily of the blackboard and student notebooks, with some textbooks available for students. 	 TLMs produced as part of ABL pilot which reflect ABL concepts and methodologies. TLMs enable structured, sequenced classroom activities which facilitate student learning in groups and pairs, and an individual basis, and include self-learning exercises. Work begun to identify which TLMs can be produced at school and which need to be produced by TLM experts. 	 ABL TLMs are reviewed based on feedback from teachers, students and training materials experts regarding the pilot TLMs. Revision by TLM development experts in collaboration with classroom teachers who have demonstrated understanding and skill implementing ABL. TLMs produced and distributed to all schools / grades to be included in the ABL scale-up. TLM production also encouraged with teacher training (at which examples of locally produced materials are shared and teachers practice making these themselves) and head teacher support (e.g. encouraging parents and children to gather materials needed to make TLMs, or providing very small amounts of funding to purchase additional needed supplies). 	 ABL TLMs revised again, based on feedback from teachers, students and training materials experts regarding the materials distributed for the expansion phase. MoE has written policy defining which TLMs are to be produced by MoE and which should be produced at school level. Final version of ABL TLMs are produced and distributed to all schools using national recurrent budget for learning materials, with annual production runs to replace TLMs used during academic year. Materials are colourful, durable, easily handled by students. School-based TLM production regularly undertaken.

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
I.E. Pre-Service Teacher Training (PRESET)	 No reference or use of ABL concepts of methodologies as part of pre-service teacher training. 	 Brief reference and introduction to ABL theory, concepts and practices during pre-service teacher training, but traditional teacher lecture-style methodologies prevail as both the form of pre-service training and the expected form of classroom instruction post- training. Some pre-service trainers are aware of ABL, but most remain sceptical and noncommittal. There is a lack of in-depth knowledge and/or expertise about ABL, and pre-service instructors lack incentives to change their content and methodologies. 	 CoEs have accepted ABL as a regular practice, based on observation of ABL pilots and initial evaluation of shared findings. Trainees are fully exposed to all ABL aspects (curriculum design, physical classroom arrangement, active learning styles, teaching methodologies, use of teaching and learning materials, pedagogical support, student assessment, etc. CoEs initiate their own research activities comparing ABL with traditional learning methodologies, to inform future pre-service training policies and practices. 	 CoEs present ABL as the preferred approach to teaching and learning. All teaching staff at CoEs are trained and experienced in ABL, and use it themselves as part of their training. CoE curricula and learning materials reflect full integration of ABL concepts and methodologies, so that students graduate with understanding of constructivism, child-centred teaching and developmental psychology. Training in student assessment also reflects ABL principles. CoEs have published their own research on ABL effectiveness.
I.F. In-Service Professional Development (INSET / CPD)	 Regular MoE INSET programmes do not incorporate or promote ABL concepts, methodologies or techniques. Typically training involves the traditional "cascade" model which often results in transmission loss of both content and methodology each time the training is repeated at the next (lower) level. Teachers usually removed from school / classroom environment from training, which reduces 	 ABL pilots include introduction to ABL concepts, methodologies and techniques for in-service training for teachers engaged in pilot. Training includes awareness of individual learning styles, changing role of teacher from lecturer to learning facilitator, development and use of ABL TLM materials, and teacher demonstration of how they might use TLMs as part of their 	 Expansion of ABL to system level includes iterative national-scale INSET programmes, which model ABL methodologies, supervision by MoE teacher support staff of these programmes, and regular evaluation of these programmes. Programmes include use of revised TLMs (see above), small group discussions, teachers' demonstrations of ABL methodologies and peer 	 All MoE INSET trainers are fully versed in ABL concepts, methodologies and techniques, and apply these in their ABL INSET programmes (financed by national budget). INSET programmes incorporate all aspects from "established" stage. Teachers have structured opportunities at school level for action research: planning, action, observation and reflection. MoE has conducted evaluations

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
	realism, relevancy and applicability of training.	teaching.	 feedback. Following training, teachers are able to articulate the key principles and methodologies of ABL. Teachers are encouraged to reflect on their practice with peers. Head teachers also participate in training. 	of ABL INSET programmes and made revisions based on findings and recommendations.
I.G. Academic / Pedagogical Support	 Head teachers and Curriculum Leaders are unfamiliar with ABL concepts and methodologies, and do not encourage teachers to apply them. 	 Head teachers and Curriculum Leaders in ABL intervention area have received training in ABL concepts and methodologies, understand what to look for during classroom observations to assess teachers' mastery of ABL, and encourage teachers to strengthen their knowledge and skills related to ABL. 	 Curriculum Leaders nationwide (at least those covering grades where ABL is to be expanded) and Head teachers are all trained in ABL concepts and methodologies, able to demonstrate ABL techniques, provide constructive feedback to teachers to enable them to use ABL more effectively in their classrooms. Head teachers and Pedagogical Supervisors encourage teachers to deepen their understanding and skills with ABL. 	 Regular MoE training programmes for Head teachers, Circuit Supervisors and Curriculum Leaders (financed by national budget) include written and practical exercises to understand and apply ABL concepts and methodologies (i.e. they model the ABL desired in the classroom as part of their training). Supervisors are exposed to evaluations which link improved educational outcomes to ABL methodologies, and are able to demonstrate ABL to teachers, and use supervision/classroom observation data capture formats which include extensive review of observed ABL practices.
I.H. Teacher Assessment	 Teacher assessment does not identify teachers' ability and application of ABL concepts and 	 Teacher assessment includes teachers' ability to articulate and apply ABL, as well as traditional 	 Teacher assessment emphasises teachers' ability to apply ABL in their classrooms as 	 Annual written teacher assessments emphasise teachers' ability to apply ABL in

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
	methodologies as criteria.	teacher assessment criteria (attendance books, lesson plans, student examination results, etc.).	 a primary (high priority) criteria. High-achieving teachers receive positive feedback and recognition, while low-achieving teachers are encouraged to improve their understanding and use of ABL techniques, and offered additional training / professional development opportunities. 	 their classrooms as a primary (high priority) criteria. Assessments result in rewards / incentives for high achievement (e.g. public recognition, provision of financial or in-kind rewards, preferential access to training, study tours, additional TLMs and / or career advancement opportunities) and remedial measures for low-achievers (e.g. mandatory additional training, enhanced pedagogical supervision, probation and / or freezing of career advancement).
I.I. Student Assessment	Student assessment emphasises and rewards rote learning and factual recitation, and is primarily summative in nature.	 Student assessment in pilot areas includes multiple formats: continuous assessment, self- assessment, peer assessment, student presentation / demonstration of knowledge, and summative assessment. Questions probe deeper language skills, problem-solving skills and logical thinking. 	 Student assessment guidelines nationwide include multiple formats: continuous assessment, self-assessment, peer assessment, student presentation / demonstration of knowledge, and summative assessment. Class participation, ability to work individually or in groups, student portfolios of work all used as criteria. 	 MoE assessment policy and written instructions to teachers and Head teachers emphasise testing students using of multiple formats: continuous assessment, self-assessment, peer assessment, student presentation / demonstration of knowledge, and summative assessment. Class participation, ability to work individually or in groups, student portfolios of work all used as assessment criteria. National examination items probe deeper language skills, problem- solving skills and logical thinking.
I.J. Community /	 Parents are not integrated into 	 Parents are exposed to active 	 Parents are able to articulate 	Parents understand and support

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
Parent Engagement	 classroom activities or student learning. School is perceived by parents to belong to the government, not to the community. Parents are hands-off. 	 learning concepts and methodologies, although many still prefer traditional methodologies. Some help their children with learning activities at home. 	 basic concepts and methodologies of active learning, and accept ABL as primary modality in classroom. Some parents visit classrooms and help students with active learning ideas and projects, and individualised attention. 	 ABL as the norm in the classroom, and regularly participate in their child's learning activities at home and / or in school. All parents feel comfortable visiting their children's classrooms; some engage as tutors or teaching assistants. Teachers welcome the support from, and interaction with, parents. Parents are recognised as resources, and invited to share their expertise. Parents with craftsmanship skills help in producing local TLMs.
I.K. Evaluation Feedback Loops	 System-level diagnostics do not include use of ABL in the classroom as criteria, and provide no feedback as to extent and / or effectiveness of ABL in improving educational outcomes. Emphasis is placed on standardised testing. 	 In ABL pilot areas baseline and end-of-pilot evaluations of the extent and effectiveness of ABL methodologies, and their correlation with student educational outcomes are conducted, providing feedback and lessons learned to pilot administrators and policy- makers, particularly with regards to replicability / scale-up and potential sustainability. 	• At the national level a representative sample of schools are included in baseline and end- of-pilot evaluations of the extent and effectiveness of ABL methodologies in classrooms, including their correlation with student educational outcomes, providing feedback to programme administrators and policy-makers.	 Periodic system-level diagnostics of the education system (financed by national budget) include representative school sampling and student assessment which links to school and non-school factors, and identifies key explanatory variables of student achievement, which could be used to improve ABL in the future, and decisions are based on these data.
Overall System- Level Assessment				

I. System Level	1. Latent	2. Emerging	3. Established	4. Advanced
(based on average score of these 11 criteria)				

Table C1.2: School Level Assessment

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
II.A. Classroom Furniture and Layout	 Furniture is not adapted to needs of ABL. Typically, this means desks and / or benches aligned in rows, facing teacher and front of class. Often, not all students have adequate seating and / or writing space. 	 Pilot ABL schools have movable furniture (e.g. height-appropriate desks and chairs), which facilitates student group work, but may be still arranged in rows as opposed to circles. All students have adequate seating and writing space. Pilot classrooms have lockable cabinets for storage of high-value TLMs. 	 All ABL schools / grades involved in ABL expansion receive height- appropriate movable desks and chairs. Teachers are encouraged to organise students in small groups; students begin to self- organise in learning circles. All students have adequate seating space and writing surfaces. Students have adequate space to move around classroom. Classrooms have lockable cabinets for storage of high-value TLMs. 	 All ABL schools / grades involved in ABL expansion receive movable desks and chairs, which are organised so as to facilitate small group work. All students have seating space and adequate writing surfaces. Students have adequate space to move around the classroom to access TLMs and change groups. Organisation of the classroom furniture in rows facing the teacher is considered deviant from the norm.
II.B. Teaching Methodologies	• Teacher stands at front of class and lectures, children repeat what teacher says, teacher perhaps write on the blackboard, does not encourage questions or create opportunities for self- learning by students.	 Teacher circulates more through the classroom, and uses a mix of traditional (i.e. lecture-based) and ABL teaching strategies. Teachers encourage students to ask questions if they do not understand. 	• Teachers in all schools where ABL is being implemented actively flow from group to group, facilitating students' engagement and completion of learning activities, reviewing students' work, answering students'	 ABL teaching methodologies are fully understood, absorbed and demonstrated by teachers. Facilitation of student learning through their engagement in groups, individually or as a whole class in sequenced, practical

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
	 When not lecturing, teacher instructs students to simply copy down information in their notebooks or read quietly. Teacher frequently blames and / or criticises students for mistakes and a failure to learn is considered the students' fault. 	 Teachers and students begin to use TLMs on a regular basis. Teacher only occasionally reprimands students for mistakes. Teacher is aware of need to involve boys and girls equally for class participation. 	 questions, providing guidance for students to move on to the next learning activities after demonstrating mastery of current lesson. Very little time spent lecturing. Students are not criticised for wrong answers, but rather praised for good work. Equal participation of boys and girls is emphasised. Teachers demonstrate experiments and encourage students to replicate them. 	 learning activities is the dominant mode of teaching, the norm. Lecture-based teaching is considered deviant from desired methodologies. Teachers help students to recognise their mistakes and provide effective positive feedback to individual students or students in groups, indicating whether their work is adequate or not.
II.C. Teaching and Learning Materials (TLMs)	 No TLMs are displayed in classrooms, nor are they available to students. Student work (e.g. writing, posters, and art) is not displayed in the classroom. Primary TLMs remain the blackboard, student notebooks and some textbooks. 	 TLMs developed and distributed to pilot ABL classrooms, in at least math and language. The TLMs are displayed in the classroom, along with student work (writing and art), and available on shelves or tables. TLMs include self-instructional activities, and structured, sequenced group learning activities. Evaluation and teacher feedback of TLMs conducted. 	 Revised ABL TLMs distributed to all classrooms participating in ABL expansion, in math, language and sciences. The TLMs are displayed in the classroom, along with student work. TLMs include activity books or cards which structure self- and group learning via practical exercises which can be quickly reviewed by the teacher. TLMs may also include learning corners, math kits, simple science materials, lesson plans and suggestions for student assessment. 	 Finalised ABL TLMs available and displayed in all classrooms along with student work, covering all subjects of grade level. Students and teachers demonstrate knowledge of how to use TLMs effectively for individual, small group and whole class learning. TLMs include learning corners, lesson plans and suggestions for student assessment. TLMs are colourful, durable and easily handled by students.

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
II.D. Promoting Equality and Diversity	 Lecture-style teaching assumes students are homogeneous in terms of learning levels and learning styles. Teacher may show preference in engaging students (e.g. only call on students who sit in front rows, or who raise their hands or shout out). Girls are often ignored by teachers, and / or feel uncomfortable participating and speaking out. 	 Teaching style still treats all students as homogenous learners, but teacher does provide some individualised attention to students who request it, and ensures that all students participate equally in Q&A. Girls participate equally in responding to teacher questions. 	 Students are organised in groups which reflect their actual learning levels, allowing each student to progress as his / her own pace (acknowledging diversity). Teacher moves from group to group, reviews each student's work and provides feedback, and provides whole group guidance / instrument as needed. Boys and girls work together, frequently "peer teaching". 	 Similar to "established" but, in addition, students' different talents are honoured, through classroom artwork, performances, science exhibitions, math projects, poetry / writing samples, etc. There are no distinctions between boys and girls in terms of teacher attention, and student participation.
II.E. Head Teacher Support	 Head teacher is unfamiliar with ABL concepts and methodologies, and does not encourage teachers to apply them. 	 Head teacher in ABL intervention area has received training in ABL concepts and methodologies, understands what to look for during classroom observations to assess teachers' mastery of ABL, and encourages teachers to implement ABL (even if remaining somewhat sceptical). 	 Head teacher has participated in at least two trainings related to ABL concepts and methodologies, is able to demonstrate ABL techniques with his / her teachers, and observes and provides both encouragement and constructive feedback to teachers to enable them to use ABL more effectively in their classrooms. 	 Head teacher has participated in training offered through regular MoE training programmes (financed by national budget), which includes written and practical exercises to understand and apply ABL concepts and methodologies. Head teacher is able to describe basic characteristics of an ABL learning environment and pedagogy, to model the ABL desired in the classroom, and is aware of research which links ABL with improved educational outcomes.
II.F. Teacher Peer	 At school level (or among 	 With support from the Head 	 All schools have formalized 	 All schools have formalized

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
Support	neighbouring schools) teachers do not have opportunities to share and discuss their respective pedagogical strategies, lesson plans, ABL methodologies, TLMs or assessment practices with fellow teachers.	 Teacher, teachers organize into peer support groups (referred to here as "learning circles"), which allow them to share and discuss their respective pedagogical strategies, ABL methodologies, TLMs or assessment practices with fellow teachers. Learning circles discuss and agree on how they will function: frequency and duration of meetings, facilitation/ leadership of meetings, topics to be discussed, materials and resources which need to be mobilized, etc. If school is too small for a functional peer support group, neighbouring schools will collaborate and form a multischool learning circle. Project financial resources might be used to support snacks and/or teacher transportation to neighbouring school. 	 learning circles, which meet on a periodic basis, during or after regular working hours, which enable and encourage teachers to share and discuss teachers' respective pedagogical strategies, ABL methodologies, TLMs or assessment practices with their peers. Meetings may be led by teachers or facilitated by Curriculum Leaders and/or Circuit Supervisors, who may have prepared specific topics for discussion (not instruction). Brief summaries of the meetings' discussion topics and conclusions are prepared and submitted to Circuit Supervisors. School-level learning circles interact with those from other schools at least once per year. Project financial resources may support these activities with small grants. Teachers may observe each other's teaching and discuss afterwards. 	 teacher "learning circles" (or peer support groups), which meet at least monthly for at least two hours during teachers' regular working hours, to share and discuss teachers' respective pedagogical strategies, ABL methodologies, TLMs or assessment practices with their peers. Curriculum Leaders and Circuit Supervisors may attend but do not dominate the discussion; rather they listen, identify and record issues raised by teachers they may subsequently address. At least twice per year, schoollevel learning circles interact with teacher learning circles from other schools to share experiences and content. Teachers observe each other's teaching and discuss what they observed afterwards, using formal or informal classroom observation frameworks as guides.
II.G. Student Arrangement	 Students sit in rows facing the teacher. They are not grouped in any way, except perhaps by gender 	 Students sit in groups but primarily work as a whole class or individually. 	 Students sit in groups during the lesson and work in groups, pairs, individually and, rarely, as a whole class. 	 Student arrangement is flexible to accommodate different teaching styles and methodologies, acknowledging

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
	or grade level (in case of multi- grade classrooms).		 Student interaction is frequent. A student may shift groups to ensure alignment between the students' learning level and the subject / lesson. 	 different requirements of students in terms of materials, syllabus etc. Students typically self-organise into their appropriate groups. There is a great deal of student interaction.
II.H. Students' Time on Task	 Many students are off-task, not paying attention, not doing what teacher expects, except perhaps choral recitation, chatting with peers, resting. Teacher occasionally attempts to get them on-task. 	 In ABL pilot schools, most students are on-task, engaged in individual, group or whole class learning activities. Some students remain off-task, but teacher recognises them and attempts to get them on-task. 	 Almost all students are on-task, engaged in individual, group or whole class learning activities. Only a few students are off-task. These are noticed quickly by the teacher who effectively gets them on-task. 	 All students are on-task, actively engaged in practical learning exercises and frequently self- directed. Teacher does not need to re- direct students' attention to do what teacher expects. Students often engage to get their peers on-task and focused on their group work.
II.I. Student Engagement	 Students sit passively and listen to the teacher, and do not ask questions. Students rarely speak or even engage in choral answers. Students involved only in teacher-directed activities. 	 In ABL pilot schools, most students are engaged in learning activities, but not all. Some students actively participate and ask questions, while others mainly watch, listen and imitate. Student oral engagement may be within the group or as part of whole class choral answers. 	 In schools where ABL has expanded, most students actively participate in learning activities, whether individually, in a group, or as a whole class. Only a few students simply watch and listen. Students frequently ask questions of teacher and of their peers, with and without teacher's encouragement. Students have leadership opportunities. 	 All students actively participate in learning activities, whether individually, in a group or as a whole class. Students frequently engaged in problem-solving or creative activities. Students have structured leadership opportunities, often related to classroom or school management.
II.J. Classroom	 Teacher shouts, gives stern 	 In ABL pilot schools, students 	 Teacher is warm, friendly and 	 Teacher is warm, friendly and

II. School Level Assessment	1. Latent	2. Emerging	3. Established	4. Advanced
Atmosphere and Student Interaction	 looks, punishes learners for talking and/or learners seem afraid of the teacher. No interaction among students, nor is such interaction encouraged by the teacher. 	 are encouraged to interact and learn with each other. In non-pilot ABL schools, students occasionally interact with their peers as part of group work, but much of the time they sit quietly listening only to the teacher. Teacher is neither stern nor friendly. Learners do not appear to fear the teacher. 	 approachable, and positively responds to students. All students are encouraged to interact and learn with / from each other. Often, students working in groups will be asked to share knowledge or ideas with peers (teach), mentoring other students who have yet to grasp the concepts or learning objectives. 	 approachable; teacher interacts with learners and encourages them to participate. All students interact and learn with and from each other, encouraged to do so by the teacher. Students share ideas, knowledge and learning materials among themselves, on a self-directed basis or as instructed by the teacher.
II.K. Student Continuous Assessment	• Teacher does not provide regular feedback to enable students (or parents) to recognise what they have learned and what they have not learned, or gives feedback which criticises mistakes and discourages further effort.	 Teacher in ABL pilot school provides regular individual constructive feedback to students on adequacy of work (indicating correct and incorrect responses) for each learning activity. Teacher is thus aware of each student's learning level with respect to the learning objective and can take remedial measures. 	 All teachers in ABL schools conduct continuous student assessment so as to ensure mastery of lesson before moving on to the next lesson, and enable flexible promotion. Teachers provide individualised feedback on adequacy of work in a manner which encourages further student effort. 	 All teachers have and use continuous student assessment materials and guidelines, which enable flexible promotion. Teachers provide individualised feedback on adequacy of work in a manner which encourages further student effort, and which includes remedial instruction and activities so as to facilitate students' mastery of lesson.
School-Level Assessment of ABL Implementation (based on average score of these 10 criteria)				





1. What Works/Does Not Work and Addressing Capacity Gap Analysis

For each system and school level aspect of ABL, we discuss what currently works and does not work in the contexts that were studied in Ghana, as well as the capacity gaps.

1.1. System Level

1.1.1. Policy Formulation

At the system level, the Government of Ghana, its DPs, as well as communities around the country have been working together in advancing policies on quality teaching and learning, which includes aspects of ABL. The Ghana Education Service (GES) is the key agency concerned with policy formulation in education, including on ABL. Within the GES, the Teacher Education Division (TED) and the Curriculum Research and Development Division (CRDD) have central roles in the development of policy and implementation of ABL. Organisations implementing ABL, such SfL, all exert some influence on policy formulation, as their successes have led to the adoption of interventions such as NALAP at the national level.

- **Teacher attrition and deployment**: A key policy challenge faced in the embedding of ABL is that teachers who are trained may not remain in the service, or may be deployed to other schools where they may not obtain the support needed for them to successfully implement ABL and internalize lessons they learn. There is no coordinated policy to retain teachers trained and experienced in ABL methodologies, or to employ them (and compensate them) as model teachers and trainers for other teachers.
- **Policy Dialogue**: Recent work done as part of the Global Partnership on Education (GPE) has further developed policy dialogue among government and development partners regarding ABL. Whereas such high-level dialogue is key, there are significant gaps in educational dialogue regarding ABL between the different departments and levels of GES in order to develop a common understanding and policy consensus of how to move ABL forward in a coordinated fashion. In addition, is how such dialogue occurs at the school level is also crucial. For example, dialogue between head teachers, teachers and parents regarding ABL was evident in GES-MASHAV and other ABL intervention sites, but it was largely absent in the "regular" schools we visited.

1.1.1.1. Moving Forward

Explicit policies are needed for ABL in Ghana to move from Emerging to Established stages. This study of ABL exemplifies the attempts by GES and development partners at better understanding how ABL is being implemented in the country, for generating conversations at the national and school levels that inform policymaking, so that consistent ABL policies are developed and implemented to promote it.

1.1.2. Programmatic Development

A number of governmental agencies, DPs, and non-governmental organisations have developed useful documentation related to ABL: objectives, justification, description of content and activities, implementation milestones, evaluation criteria, budget required, etc. For example, CRDD and TED have worked extensively with UNICEF, USAID, and JICA to develop interventions such as Child Friendly Schools (CFS), NALAP, and Nationwide INSET, respectively, through which an extensive set of documents has been developed. But despite the development of documents from various interventions, weak document management and accessibility (example through web-based systems) in the Ghanaian system has not allowed for as much knowledge sharing as could be possible. Any attempts to promote ABL on a large scale would have to address this challenge by developing a system in which documents can be archived electronically and easily accessed by others.

1.1.2.1. Moving Forward

It would be useful for the expertise that programme officials have gained from the various ABL-related interventions to be shared with other organisations and the education community at large. This study represents an explicit attempt to specify a pilot ABL intervention that draws from the disparate attempts made to promote ABL.

1.1.3. Resource Allocation

Resource allocation was highlighted as a key challenge to the successful adoption of education reforms, including ABL. The GoG, particularly the Ghana Education Service (GES), communities, and development partners, such as DFID, Israel's Agency for International Development Cooperation (GES-MASHAV), JICA, UNICEF, and USAID have been sources of domestic and external resources to enable ABL pilots, including the GES-MASHAV and SfL programmes.

Noted here are specific discussions about what works and does not work among key entities in the education system.

- **Teacher Education Division (TED)**: The Teacher Education Division (TED) has benefitted from financial and technical assistance from various collaborators over the years. For example, over the past decade, the human capacity of TED has been developed through collaborations with JICA, UNICEF, and DFID. The Nationwide INSET programme has been developed during a period spanning over a decade, and the approach exemplifies how the experiences and capacity of TED can be used in promoting ABL.
- District Education Offices (DEOs): Decentralisation has been a feature that has been promoted for the Ghanaian education system for years. District Education Offices (DEOs) have been tasked to obtain funding to implement educational ventures. Notably, DEOs oversee how Capitation Grants are distributed to schools. Under this system, schools obtain capitation grants dependent on their enrolments. Additional sources of funding, sometimes including discretionary funds from donors, are also made available to schools. The schools submit a work plan that triggers the disbursement of funds.

However, delays in the transfer of funds, as well as a lack of knowledge by school and district officials about what activities are eligible for funding, result in funds sometimes not being utilized to promote quality teaching and learning. Fieldwork indicated that the capitation grant arrives late to the schools. By the third term, when teachers were interviewed, only 1/3 of the grant has been distributed (corresponding to the first term, out of three).

Even where funds arrive on time it was noted that the current student capitation grant is simply insufficient to meet all teaching and learning material demands for a comprehensive ABL approach. To compensate, teachers and Head Teachers frequently have to pay from their own pockets for TLMs, such as cardboard, markers, sketch paper, glue, and other materials. This is insufficient relative to needs, probably unsustainable, and possibly inappropriate. Fieldwork confirmed that some (not all) parents have contributed to the classroom learning corners with donated, discarded items (such as old TV sets, clothing for dress-up, plastic bottles, etc.), but have not made financial contributions for TLMs.

1.1.3.1. Moving Forward

The decentralisation of the education system is expected to address some of the challenges faced, for example, by allowing districts greater flexibility in allocating resources to ABL. However, for decentralisation goals to be implemented successfully, greater attention must be paid to lessons learned by different types of districts (i.e. urban, peri-urban, and rural) that have demonstrated greater success in obtaining and utilising resources for ABL. Such districts may be chosen as pilot districts to ensure that they receive support to reinforce their efforts at improving the quality of teaching and learning in Ghana. The districts that were sampled from this study have already demonstrated some success in allocating resources to ABL, and national pilots could build upon what they have achieved.

1.1.4. Provision and Development of TLMs

The GES is the key actor in the production of TLMs, with support provided by development partners. As part of interventions such as NALAP, GES and USAID produced several posters that teachers use in illustrating everyday objects and activities to students during lessons to make them more interactive. Additionally the Textbooks and Learning Materials Program (TLMP) has developed various textbooks and posters that are used in class activities.

Organisations such as the International Foundation for Education and Self-Help (IFESH) have established Teacher Resource Centres (TRCs), where teachers are trained to identify which TLMs can be produced using low-cost local materials, as well as how to use them in ABL. Teacher trainers and teachers who had received training in the development of teaching and learning materials (TLMs) indicated that sometimes they had been unaware of how they could use local materials until they had undergone training.

Some teachers also indicated that sometimes it was not clear what teaching and learning materials they could obtain from their districts, and what they could produce on their own. Further, they indicated that for some materials, such batteries, it was necessary that they were provided.

1.1.4.1. Moving Forward

Hence, teachers asked for some clarification and guidance on the provision and development of TLMs. Such clarifications can be developed as part of district-level guidelines.

1.1.5. Pre-Service Teacher Training (PRESET)

Interviews of teachers during fieldwork indicate that the CoEs have been promoting ABL to some degree, although teacher trainers in the colleges are sometimes not experienced or familiar enough with ABL to train their students to practice it.

Challenges in the training of teacher trainers need to be addressed for successfully embedding ABL in Ghana. Divergences in PRESET and INSET have meant that teachers are unable to receive consistent training to enable them internalize what they learn over time. Additionally, various interventions that have attempted to change teacher behaviour have not sustained the training of teacher trainers, and as a result they have been unable to sustain training of teachers, who in turn have not been able to internalize approaches that were being promoted.

1.1.5.1. Moving Forward

For teachers to receive consistent training, their trainers in Colleges of Education (CoEs) and in District Education Offices (DEOs) should also receive sustained training on ABL, with a focus on providing them with models of successful ABL practices that they can use. Through Cluster-Based INSET (CBI), PRESET and INSET trainers can work together to align ABL practices for teacher trainees to learn from the experience of practising teachers, and vice-versa.

The Institute of Education (IE) at the University of Cape Coast (UCC) will have to play a central role in developing ABL in PRESET. IE develops the curriculum for the Teacher Colleges of Education (CoE). Additionally, the University of Cape Coast and the University College of Education, Winneba (UCEW) provide diploma and degree programmes for training teachers.

For further embedding ABL in the PRESET curriculum and practices, reforms that are being undertaken by the Institute of Education will benefit greatly if it is informed by the lessons learned in Ghana and internationally about advancing ABL.

1.1.6. Development of INSET with Peers Supporting Each Other in ABL

Interviews and observations from our fieldwork show that in the Ghanaian, communal context, some of the aspects of ABL that work include the development of INSET with systems designed to enable peers to provide pedagogical support to each other.

The Teacher Education Division (TED) and District Education Offices (DEOs) play a central role in INSET/CPD. Additionally, Ghana's development partners provide financial and technical support for INSET/CPD. For example, TED and JICA have collaborated over the past decade to develop Ghana's Nationwide INSET Programme, which teachers indicated during fieldwork as the most institutionalized way in which they are receiving school-based training on ABL. JICA's provision of financial and technical assistance over the decade to gradually pilot and scale up the INSET programme represents a model similar to processes that were adopted in embedding ABL in other countries, such in Colombia's Escuela Nueva.

- **Teaching by teachers trained in ABL**: As observed from fieldwork, the teachers involved in the GES-MASHAV pilot program at the KG level showed without a doubt their capacity to fully grasp and implement ABL concepts and practices. The combination of training, teacher observation, monthly supervision, weekly meetings with fellow teachers and their own personal commitment to the learning of their students strongly demonstrated the possibility of significantly improving teachers' attitudes and practices. In almost all classrooms observed, students were engaged, on-task and actively participating in their learning, etc. In short, human capacity constraints CAN be overcome in Ghana.
- Teaching by teachers trained "traditionally": Although the GES-MASHAV teachers observed were
 practising ABL, the vast majority of teachers in neighbouring schools who had not benefited from the GESMASHAV program were following a very traditional model of teaching, which included simple lecture, "echo

instruction" through which students simply repeat over and over what the teacher says, close-ended questions posed by the teacher and students' choral answers, and very little opportunity for students to ask any questions or learn in groups or independently. Furthermore, several teachers taught with a switch or cane in their hand at all times and were observed both threatening and physically hurting students (e.g. cuffing student on the head or twisting the ear sharply) for perceived misbehaviour (standing up, talking, not paying attention). This indicates the challenge ahead in the implementation of ABL.

1.1.6.1. Moving Forward

To move forward, greater attention must be paid to understanding the process of change in teacher behaviour. First, for teachers to understand ABL they need to observe ABL in action, as practiced by an experienced teacher in a classroom similar to theirs, and they need to interact with that experienced ABL teacher to understand that teacher's own journey from traditional to ABL pedagogy. Secondly, teachers need to review and discuss whatever evidence or information exists which indicates that ABL leads to improved learning outcomes and student progress through the educational system. Thirdly, as part of their professional development and training, teachers learn specific sets of classroom practices, which are based on what they see working for them or other teachers, and try them out in their classrooms, under close supervision and monitoring of head teachers or other mentors. Fourth, supervisors and head teachers need to observe teachers in the classroom, using transparent ABL assessment instruments, and provide positive, constructive feedback for teachers to improve their practices. Finally, when teachers see improvements that result from changes that they have made in their classroom practices, and when they find them to be aligned with how their teaching is being assessed, and the incentives provided them, then they do internalize the new behaviours and come to a new set of beliefs and attitudes, beginning a **sustainable change of teaching behaviour**.

1.1.7. Academic/Pedagogical Support

Evidence from fieldwork showed that head teachers who had also participated in the GES-MASHAV training were extremely enthusiastic about the ABL approach and the difference it has made in both teaching and learning. They highlighted the fact that P1-P3 teachers were initially sceptical of what the KG teachers were doing, and even said they were "wasting their time" with the ABL approach. But now, having seen the KG students enter and succeed in P-1 and beyond, they are very supportive of the GES-GES-MASHAV/ABL project. Perhaps most importantly, they indicated that their own participation in the GES-MASHAV training was absolutely essential to their understanding and support for what the KG teachers are doing, and to their ability to provide constructive feedback to existing teachers and orientation to ABL methodologies for new teachers who arrived after the GES-MASHAV training. Unfortunately, with rare exceptions, such training for head teachers is not being provided at the systemic level.

Teachers indicated that those supervisors who had participated in district-sponsored observations of GES-MASHAV kindergarten classrooms were generally supportive of ABL methodologies, although they had not had enough training themselves to provide any technical/educational feedback to the KG teachers. At a minimum, they did not discourage the KG teachers. At the same time, most teachers indicated that supervisors are primarily interested in seeing the "work output" of students as reflected in their exercise books and exams, and in ensuring that all teachers were following the syllabus and up to date with their topics and lesson planning. This placed teachers in a conflicting situation, trying to please their supervisors while adhering to the GES-MASHAV approach which focuses on a much wider range of student activities and learning "output". In summary, supervisors need more opportunities to observe experienced ABL teachers and participate in ABL-oriented training themselves in order to fulfil their pedagogical supervision functions.

1.1.7.1. Moving Forward

While changes in the beliefs, attitudes and behaviour of Head Teachers and Circuit Supervisors have their own specific challenges (for example, less opportunity to actually experiment with ABL approaches), in general the same Theory of Change for teachers would apply to these roles, as well. In addition, more emphasis would need to be placed on their responsibility to align (i) their forms and practices of teacher assessment with ABL and (ii) the incentives/recognition they can offer to teachers successfully implementing ABL.

District Education Offices (DEOs) and the Institute for Educational Planning and Administration (IEPA) are key actors in training administrators to provide academic and pedagogical support for ABL. Through programmes such as Cluster-Based INSET (CBI) and Leadership for Learning (LfL), DEOs and IEPA can provide head teachers and Curriculum Leaders with training in ABL concepts and methodologies, enabling them to support teachers.

1.1.8. Teacher Assessment

During interviews with teachers, teacher trainers, and education officials in the various regions, teacher assessment was consistently raised as a key reason why teachers do not practice ABL. It was noted that teacher assessments and appraisals are not aligned with ABL methodologies and may, in fact, contradict them.

CoEs and DEOs are the key actors when it comes to teacher assessments. Given the inadequate understanding and promotion of ABL among the CoEs (cited above) and limited exposure of DEOs to ABL methodologies, this is not surprising. However, it is important to recall the theory of change in teacher behaviour discussed earlier and the importance of teacher assessments to reinforce (not discourage) progressive teaching methods.

1.1.8.1. Moving Forward

Changing the system of teacher assessment will require a focused effort to learn how assessments have been changed in other parts of the world. Research capacity and assessment development capacity will need to be strengthened to ensure that lessons learned from Ghana and other parts of the world are translated into strategy, and actually implemented.

1.1.9. Student Assessment

In Ghana the focus on summative student assessment, notably written examinations, poses a challenge to the implementation of ABL. Such exams typically reward memorization and recall of facts and figures, as opposed to broader development of reading and writing skills, problem-solving skills and "learning how to learn". The West African Examinations Council (WAEC) plays a critical role in student assessment, as teachers and students (and parents) focus on the high-stakes Basic Education Certificate Examination (BECE) that is taken at the end of the third year of Junior High School (JHS 3).

At the early primary level, the Assessment Support Unit (ASU) of the Curriculum Research and Development Division (CRDD) of GES plays a key role in student continuous assessment, which currently is the most feasible means for capturing students' activities in the classroom, as its objective is to help teachers ascertain student levels and adapt their lesson design and delivery.

Additionally, ASU manages two other bi-annual assessments: the National Education Assessment (NEA), administered to a 3.5 percent sample of schools in English Language and Mathematics at grade 3 and 6, and the School Education Assessment (SEA), administered by schools across the nation at grade 2 and 4 to ascertain student achievement levels and ascertain their needs. District Education Offices (DEOs) play a key role in administering the SEA.

Other key role-players in student assessment include development partners. For example, USAID has provided financial and technical support for student assessments such as SEA and NEA. USAID and other development partners are also developing rapid low-stakes early grade literacy and numeracy assessments which can be cheaply and widely administered.

CRDD is currently in the process of revising and implementing a School-Based Assessment (SBA), which is ABLfocused. A challenge in its implementation will be to avoid what some informants described as "theoretical exams of practice", in which teachers are made to write about practice, rather than assessed on actual practice.

1.1.10. Community/Parent Engagement

In relating ABL with the everyday lives of students, local communities and industries potentially play a key role. Parent Teacher Associations (PTAs) and School Management Committees (SMCs) are the key entities through which parents and communities for provide support to teachers, including in their practice of ABL.

Evidence from fieldwork and secondary data indicated that the involvement of parents and communities in supporting teachers and monitoring and evaluating their classroom practices is a key factor in motivating teachers to use ABL. In Ghana, attempts to involve parents and communities in providing support to schooling are exemplified by the GES' School Report Card programme, funded by USAID over the period 2009-2011. Through the programme, community members in each school were to participate in School Management Committees (SMCs) and Parent Teacher Associations (PTAs).

In such groupings, parents and community members were to participate in School Performance Appraisal Meetings (SPAM) to discuss the school's performance, for developing a School Performance Improvement Plan (SPIP). Parents and community members were to contribute to a simple report card that provided a snapshot of schools'

performance in (i) teacher attendance and performance, (ii) pupil attendance and achievement, administrative support and supervision by District Education Offices (DEOs), and (iv) community engagement in SMCs and PTAs.

Funding was provided to DEOs for SMC and PTA activities, with the expectation that results from the School Report Cards would inform DEOs and GES, and schools in adapting their practices to improve overall student outcomes.

However, a number of challenges have been faced:

- Due to weak financial systems at the level of DEOs, information that was to be provided to USAID was
 often late, resulting the programme breaking down.
- Communication challenges between GES and the DEOs also resulted in confusion about the types of
 activities that were to be funded under the programme (example. head teacher training, data collection),
 and the timelines for obtaining funding and reporting.
- Consequently, delays in developing and presenting the School Report Cards meant that results were often too old to be useful for parents and communities to discuss and use in developing School Performance Improvement Plans (SPIPs).

1.1.10.1. Moving Forward

Despite the challenges faced, GES is seeking to expand the School Report Card programme to gather data on schools two times a year. A review and redesign of the School Report Cards has been proposed. The incorporation of ABL in a redesigned School Report Card would go a long way in embedding ABL into the mind of parents and communities.

1.1.11. Evaluation Feedback Loops

The multiple groups of actors noted above play key roles in evaluation and in informing feedback loops that promote ABL. PTAs and SMCs particularly play a critical role in the continuous monitoring and evaluation (M&E) of schools and their practices, including implementation of ABL. DEOs also play critical roles in periodic M&E, which are to be conducted a number of times during each school term, as part of INSET, as well as during evaluations of teachers for promotion, etc. At the national level, research studies commissioned by government as well as development partners also provide feedback that can then inform policymaking on ABL, and iteratively affecting classroom practices, teachers' beliefs and attitudes, and student outcomes.

1.2. School Level

This study finds that at the school level there has been success in aspects of ABL implementation, such as keeping students engaged and on task during classroom activities, within a nurturing classroom atmosphere. Also, efforts at promoting teachers' recognition of equality and diversity seem to be paying off. Teachers sampled from the GES-MASHAV programme and SfL were rated highly on this ABL aspect from classroom observations and interviews. Additionally, sampled teachers were rated relatively high in their abilities to use ABL teaching methodologies.

However, challenges remain, particularly in assessing ABL and developing incentives for teachers and students to practice it in classrooms.

Gaps in structural school-level aspects such as classroom layout and student arrangement may be addressed in the short term, while challenges such as the reform of assessment to encourage ABL practice will require longerterm efforts. We discuss what works and does not work for each of the school-level ABL aspects below, and where relevant, what capacity gaps need to be addressed.

1.2.1. Classroom Furniture and Layout

From the SfL data, a higher ABL rating in classroom furniture and layout was positively and significantly associated with higher learner score in numeracy (Appendix F: Regressions). Indeed, the magnitude of the positive relationship between classroom furniture/layout was the strongest among the ABL aspects linked to student outcomes. This is simply because appropriate classroom furniture and layout allows for more interactive small-group and individualized learning activities.

School administrators and teachers themselves play a key role in determining the classroom furniture and layout of classrooms in their schools. Hence, changes to classroom furniture and layout can be made quickly and easily in the short term to allow for improved ABL implementation.

1.2.2. Teaching Methodologies

Teachers who had been trained as part of GES-MASHAV, SfL, NALAP, BTL/Molteno, and other interventions (e.g. Culture of Reading) indicated that seeing "good" teaching practices as part of such trainings was helpful in their adoption of child-centred teaching methodologies, as opposed to traditional lecturing.

The data analysis did not indicate statistically significant relationships between teachers' reports of training and ABL ratings, given that most teachers had been trained in the same programmes (i.e. all GES-MASHAV teachers had received GES-MASHAV training, but the type or intensity of the training was not measured or analysed).¹

Moving forward, it will be helpful for ABL interventions to provide visual tools for trainers and evaluators as ABL develops in Ghana. TED has played a key role in the development of tools for Cluster-Based Inset (CBI) and School-Based INSET (SBI), and will have to play a key role in developing visual training tools, while shaping teacher policies that promote or discourage ABL practice.

Teacher trainers, head teachers, and teachers themselves in ABL interventions will also continue to play key roles in determining that visual tools for ABL are developed and used in classroom practice.

1.2.3. TLMs

During fieldwork teachers cited lack of TLMs (and lack of funding for TLMs) as one of the biggest challenges they faced in implementing ABL. Additionally, they noted that they sometimes did not know how to use TLMs effectively, highlighting the critical role of training teachers in the use of TLMs for promoting ABL.

At the school level, teachers have to develop and use TLMs given what resources are available. The TLMs available are often a function of the resources provided from GES and DEOs, which are also critical role-players.

1.2.4. Promoting Equality and Diversity

The promotion of equality and diversity was positively and significantly linked to higher system-level ABL ratings, indicating that system-level factors such as policy have been translating into school-level ABL.

Moving forward, the Gender Education Unit (GEU) of GES continues to play a critical role in promoting equity in the opportunities that girls get for learning, relative to boys.

1.2.5. Head Teacher Support

During fieldwork, teachers cited head teacher support as one of the key factors for successfully implementing ABL in their schools. In turn, head teachers indicated that the support they obtained from their DEOs enabled or constrained them in providing support to their teachers.

Our analysis further indicated that head teacher support was a school-level factor with one of the highest magnitudes in terms of the strength of its positive relationship with system-level aspects of ABL.

To this end, programmes such as Leadership for Learning (LfL), have been developing the capacity of head teacher and administrators to provide support to teachers. As with teacher training, it will be useful if such programmes enable hands-on, school-based training of head teachers within the contexts that they will be working.

1.2.6. Teacher Peer Support

Teachers participating in the GES-MASHAV program reported that their weekly (sometimes monthly) meetings with fellow teachers implementing ABL were extremely helpful in that (i) they provided substantive ideas and practices which they could use in their own classrooms and (ii) they enabled sharing of positive and negative experiences in an informal setting which ultimately encouraged them to deepen their understanding and implementation of ABL. More generally, teachers indicated that peer support typically occurs informally, as they sometimes "steal ideas" or discuss teaching approaches with their colleagues that they perceive to be good teachers. As part of the

¹ However, it should be noted that among the SfL teachers sampled, the sole female teacher who had undergone an additional training to promote equity and diversity had students with significantly higher scores on average. While the small sample size weakens any claims of generalisation that can be made, it suggests that further exploration of the content of trainings may yield insights about the relationships between teaching methodologies and training.

nationwide INSET programme, such peer support is being institutionalised as schools have Curriculum Leaders who provide support to their peers as part of School-Based Inset (SBI).

1.2.7. Student Arrangement, Time on Task, Engagement and Classroom Atmosphere and Student Interaction

Generally, the aspects of ABL that were rated relatively high from analysis of GES-MASHAV and SfL teachers sampled included student time on task, student engagement, and classroom atmosphere and student interaction. However, among the student-related ABL aspects, student arrangement was rated low for both GES-MASHAV and SfL.

Teachers particularly play a key role in classroom dynamics, and must continue to do so for moving ABL forward along these aspects. How students are arranged in class, the time they spend on task, their engagement in productive classroom work, and classroom atmosphere and student interaction are functions of teachers, who are "key" in the success or failure of reforms (Kilpatrick, 2009), which ultimately occur at the classroom level.

1.2.8. Student Continuous Assessment

A key challenge faced in the Ghanaian context is that even prescriptive assessments, such as continuous assessments and the SEA, which are designed to guide teaching practices, are often perceived as "high stakes" tests. Rather than focusing on using such assessments for identifying students' strengths and weaknesses, which can then lead to revised teaching and learning practices, teachers become concerned about having their students pass the tests.

1.3. Conclusion

More in-depth, and pointed analysis will be needed of the various institutions that are involved in improving Ghana's education system, including the promotion of ABL. Limited as this study has been, given constraints faced, it provides a building block for additional work to be conducted to address what works and does not work in the Ghanaian context, and the capacity gaps that must be bridged for improving ABL implementation.





1. Classroom Observation Instrument

School code (assign unique school codes prior to field work if possible)		
Teacher code (leave blank for person entering data)		
Researcher doing observation		
School name		
Teacher name		
Subject observed		
Standard/level		
Total number of learners:	#Enrolled:	
	#Present:	
	#Girls:	
	#Boys:	
Language of instruction (circle one)	Mostly English Mostly Ghanaian Language Both (mixed)	
Start time of observation		
End time of observation		

1.1. Classroom Environment (Tag: II.A____)

Write Yes or No, but give details when necessary_____

- Adequate seating space for all students_____
- Adequate writing surface for pupils_____
- Chair and table/desk for teachers_____
- Adequate space for movement_____
- Friendly environment; act naturally, not intimidated_____
- A little student original writing/art work displayed on wall or other ways_____
- A lot of student original writing/art work displayed on walls or in other ways_____
- Both learners' work and TLMS are present and attractively displayed_____
- Classroom corners: reading, art, science, mathematics, English, etc.____

Comments

1.2. Classroom Resources (Tag: II.C____)

[Code: V=visible, but not used; N=not visible, but available; U=Used in this lesson; NA=Not Available]

- Prescribed Textbooks____
- Teacher Guide(s): Specify which subject area(s) _____
- Subject Syllabus: Specify which subject area(s) or other curriculum materials_____
- Student Workbooks and/or Learning Guides_____
- Wall Charts____
- Writing Board, duster and chock_____
- Audio-Visual teaching aids_____
- Children's reading books, classroom library, learning materials, games, drawings etc.____
- Programme Materials (NALAP, SfL, MASHAV, Breakthrough to Literacy) _____

Comments

1.3. Teaching Methodology (Tag: II.B____)

What form of teaching is occurring? Check all that apply.

During the time spent observing the class in session, put the approximate percentage of time spent by the Teacher doing each activity (in addition to the check):

- Lecture, teacher talking____
- Teacher using materials, including textbooks_____
- Having pupils work in groups____
- Teacher marking books/papers at his/her desk_____
- Teacher marking books/papers at the pupils' desks_____
- Demonstrating experiments or role playing in front of the class_____
- Working with individual pupils_____
- Answering pupil questions_____
- Question and answer_____
- Transition time between topics or lessons_____
- Other, please list____

1.4. Teaching Children of Different Educational Levels (Tag: II.B____)

- Does the teacher teach as though all students are at the same level? _____
- Does the teacher sometimes work with one group of students at one level, while the other students sit
 around? _____
- Does the teacher sometimes work with one group of students at one level, while other students are working on their own learning tasks? _____
- Does the teacher sometimes work with one group of students after providing students of other levels with meaningful learning tasks? _____

1.5. Learner Engagement and Participation (Tag: II.I____)

What are the pupils doing? Please put a "check" next to each pupil activity observed, and a "star" next to the three most frequent student activities (in addition to the "check").

- Writing____
- Listening____
- Drawing____
- Doing math problems_____
- Giving choral answers_____
- Reading out loud_____
- Reading silently_____
- Asking questions of the teacher_____
- Group recitation_____
- Answering teacher's questions_____
- Working in groups with other students, on-task pupil talk_____
- Students working individually at their desks_____
- Misbehaving, discipline problems, disruptive behaviour or not participating/day-dreaming.
- Students working with/manipulating materials If students are using any materials, what are they doing with them?____
- Other, please list_____

1.6. What Kinds of Questions Does the Teacher Ask (Tag: II.B____)

- Teacher asks no questions: _____
- Teacher asks simple recall questions only, or close-ended questions: ____
- Teacher asks mostly close-ended questions and 1 or 2 open-ended questions: _____
- Teacher asks a variety of questions, including open-ended questions that probe for learners' understanding and feeling: _____

1.7. How does Students Respond to the Teacher's Questions (Tag: II.I____)

- Students do not respond____
- Students respond in a chorus_____
- Students are alert, responsive and interact with teacher_____
- Students interact with teacher and each other about lesson/content in a relaxed manner _____

1.8. Does the Teacher Tell Pupils how well they are doing in their work during the Lesson (Tag: II.K____)

- a) Please answer the following questions with:
 - Yes_____
 - No____
 - Occasionally_____
- b) If Yes, please describe how the teacher corrects learners' answers:

- Does the teacher correct the error herself/himself?___
- Does the teacher ask other students to provide the answer?_____
- Does the teacher rephrase the problem for the same learner?_____

1.9. Describe the Teacher's Interaction with the Students (Tag: II.J____)

- Teacher shouts, gives stern looks, punishes learners and/or learners seem afraid of the teacher_____
- Teacher is neither stern nor friendly. Learners do not appear to fear the teacher_____
- Teacher is warm, friendly and approachable, and positively corrects learners_____
- Teacher is warm, friendly and approachable; teacher interacts with learners and encourages them to participate_____

1.10. On the Back of this Sheet, Draw the Classroom Arrangement of Students (Tag: II.G____)

- Students are not grouped _____
- Students sit in groups but work as individuals _____
- Students work in group learning activities, but only a few interact _____
- Students work in groups, discuss, and there is a lot of interaction _____

1.11. Classroom Arrangement

Using the drawing of the classroom arrangement of students, for the next ten minutes, put a tick by each pupil each time the teaching provides some attention to an individual student (e.g. asks the pupil a question, calls on a pupil, praises a pupil, disciplines the pupil.). (Tag: II.I_____)

1.12. Are Some Pupils Getting More Teacher Attention than Others? (Tag: II D____)

- Yes_____
- No_____

If Yes, what types of pupils get the attention?

Comments:

1.13. Gender Issues

Describe any incidents which indicate gender sensitivity or insensitivity by the teacher or pupils. (Tag: II.D_____)

Comments:

1.14. Does the Teacher Praise the Pupils? (Tag: II. D____)

- Yes____
- No____

If Yes, how does the teacher praise the pupils? How does s/he appear to select students for praise? Comments:
1.15. What Types of Pupils Get the Most Praise? (Tag: II. D____)

Please check one of the following:

- Boys_____
- Girls_____
- Best Students_____
- Weakest Students_____

1.16. Does the Teacher Discipline or Control the Pupils? (Tag: II. J____)

- Yes___
- No____

If Yes, why (for what behaviour)? How does the teacher discipline the pupils? Comments:

1.17. Are Students Doing What the Teacher expects them to be doing at the Time? (Tag: II. H____)

- Many students are off-task, daydreaming, not doing what the teacher expects _____
- Some students are off-task. Teacher notices and tries to get them on-task_____
- Few students are off-task. Teacher notices and tries to get them on-task_____
- All students are on-task, doing what the teacher expects_____
- 1.18. Describe the Students' Behaviour: What are the Students Actually Doing Most of the Time? (Tag: II. I____)

Comments:

1.19. When the Teacher is not Teaching, What are the Students Doing? (Tag: II. I____)

- Sitting in silence____
- Fooling around_____
- Working on anything
- Working unaided with independent reading materials, workbooks or other constructive task _____

1.20. Describe any Student to Student Interactions, Either Between Individuals or in Small Group Settings? (Tag: II. J___)

Comments:

1.21. Describe any ABL that you Observe in the Classroom? (Tag: II. J____)

What was the subject matter, what activities did the students participate in, what was the reaction of the students to the activity, and how did the teacher use the activity to teach a particular concept or idea? How well did students appear to understand the purposes of the activity?

Comments:

2. Teacher Interview Form

School code (assign unique school codes prior too field work if possible)	
Teacher code (leave blank for person entering data)	

Researcher conducting interview	
Date of interview	
Time	FromTo
Location	

2.1. Contact Details for Teacher/Official

Name	
Institution/school	
Title/position	
Division/department	
Mailing address	
Mobile phone	
Other phone	
Email	

2.2. Demographic Characteristics of Teacher

Gender		
Age		
Primary language		
Teacher college of education attended and year (if applicable)		
Training programmes teacher/official has participated in (circle)	NALAPSfIM to literacy/Molteno	ASHAVBreakthrough Other (please specify)
First date of service		
Qualifications (circle one)	MSLC/BECE Tech/Vocational O Level/SSCE	Diploma in basic education HND Degree

A Level	Other (please specify)
Certificate A (4 year)	
Cert A Post Sec	

Overarching questions guiding the interview items:

- How do teachers conceptualise Activity Based Learning (ABL) and how do they describe their primary teaching methodologies?
- How does ABL reveal itself in classrooms?
- What support do teachers receive to implement ABL in their classrooms?
- What challenges do teachers identify with ABL practices in their classrooms?

Note: Each question is "tagged" to the ABL Classification Tool and a specific characteristic of ABL, so that responses may be coded according to the ABL characteristic and its degree of implementation. Referring to the ABL Classification Tool, there are two sections, Section I is for "System Level" and Section II is for "School Level". Within each section there are specific ABL characteristics (11 for system level, and 10 for school level), each of which has a corresponding letter (e.g. "I.F" refers to System Level In-Service Professional Development, while "II.A" refers to School Level Teaching Methodologies). AFTER THE INTERVIEW, the interviewer may classify the response next to the Tag, using the scale developed for the ABL Classification Tool: "Latent" = 1; "Emerging" = 2; "Established" = 3; and "Mature" = 4.

2.3. Teaching Methods

- Which teaching method(s) do you use most? (Any reason?) (Tag: II.B _____)
- What is your understanding of the words "activity-based-learning (ABL)"? (Tag: II.B _____)
- Would you agree, somewhat agree or disagree that your primary teaching method is "direct instruction", in which you stand at the front of the class, lecture and teach, perhaps write on the blackboard, and ask children to repeat or recite answers? (Tag: II.B _____)
- In your classroom, can you cite examples of "activity based learning" practices you use? (Tag: II.B
 ____)
- What role do you play in activity-based learning sessions in the classroom?
- (Tag: II.B _____)
- In your classroom, which of the following activities do students engage in most frequently? (Please rank the top 5 most frequent activities, with 1 being the most frequent activity):

(Tag: II.B ____)

- Students write in their notebooks as they listen to the teacher _____
- Students write on the blackboard answers to questions asked by the teacher _____
- Students call out answers to questions posed by the teacher, individually or as a whole class _____
- Students read from their textbooks, aloud or silently _____
- Students ask questions/seek answers from the teacher ______
- Students engage in lesson-related play _____
- Students read and tell stories _____
- Students ask questions/seek answers from their peers _____
- Students play with toys and games in the classroom _____
- Students work on lessons in small groups _____
- Students work with learning materials with little teacher intervention ______

Students learn independently _____

2.4. Classroom Furniture and Layout

- How are desks and seating arranged in your classroom? (Tag: II.A _____)
- Does your classroom have sufficient seating and writing space for all students?
 (Tag: II.A____)
- Does your classroom have sufficient space for children to work in small groups if you chose to arrange them that way? (Tag: II.A_____)
- In your opinion, what aspects of your school and classroom physical conditions and class sizes hinder or promote the greater use of ABL? (Tag: II.A____)

2.5. Teaching and Learning Materials

- What kinds of teaching and learning materials do you have in your classroom? For example, blackboard, textbooks, math kits, workbooks, science charts, etc. (Tag: II.C____) Please list.
- Which teaching and learning materials do you and your students use most? (Tag: II.C)
- Did you, your students or anyone in the school community make any of these teaching and learning materials? (Tag: II.C _____)
- Yes _____ No _____ If so, which ones?
- Do you like to display these materials in the classroom, or do you keep them in a cabinet? (Tag: II.C
- Are there any teaching and learning materials in your classroom which you do not use? If so, what are they and why are they not used? (Tag: II.C_____)

2.6. Teacher Training and Peer Support

- To your knowledge, how is ABL taught in the pre-service teacher training programmes of colleges of education and universities? (Tag: I.E_____)
- Did your pre-service teacher training help you in any way to understand and use ABL in your classroom? If so, how? (Tag: I.E____)
- Has in-service training helped you to implement ABL in your classroom? (In what way?) (Tag: I.F_____)
- Do teachers in your school meet periodically to share teaching practices, lesson plans, teaching and learning materials, etc.? (Tag: II.F____)
- Yes____ No____
- If yes, how often do you meet, and would you agree, somewhat agree or disagree that these meetings are worth your time?
 - Frequency_____
 - Agree____
 - Somewhat Agree_____
 - Disagree_____
- In your opinion, to what extent are teachers prepared to utilise ABL methodologies for teaching pupils? (Tag: I.F____)
 - A Unprepared____
 - Somewhat prepared_____
 - Sufficiently prepared_____
 - Well prepared_____

2.7. Benefits and Indicators of Successful ABL Practice (s)

- For each indicator below, do you perceive the effects of activity-based learning as "Positive", "Negative", or "Indifferent" (i.e. neutral)? (P=positive; N=negative; I=Indifferent) (
 - student manners and behaviour: _____
 - student learning outcomes: _____
 - student confidence and attitude about school: ____
 - teaching behaviour: ____
 - use of teaching and learning materials: ____
 - student dropout rate: ____
 - completion of 6th grade: ____
- Do boys and girls learn the same in your class, or are there differences in their participation and learning? (Tag: II.D ____)
- How do you assess pupils' learning? How do you know if they have learned their lessons? (Tag: II.K
- How often do you assess your pupils' learning? Daily? Weekly? Monthly? Other? (Tag: II.K _____)

2.8. Challenges Associated with ABL Utilisation in Schools

- In your opinion, does the primary curriculum enable or constrain the adoption of ABL? (Tag: I.B_____)
- In your opinion, what is the attitude of other teachers and circuit supervisors towards the practice of ABL in your school? (Tag: I.G _____)
- Does your head-teacher encourage utilisation of activity-based learning approaches in all subjects taught by teachers? (Why or why not?) (Tag: II.E _____)
- Does the current supervision you receive from head teachers and supervisors promote or hinder the adoption of ABL in the schools? (Tag: I.G_____)
- In your opinion, do the parents of your students understand and support activity-based learning approaches? (Tag: I.J _____)
- What economic realities inhibit the adoption of ABL in Ghanaian classrooms? (Tag: I.C _____)
- Are there any other factors do you consider as limiting the adoption of ABL in Ghanaian schools? (No Tag)
- Does the current examination system promote or hinder the adoption of ABL, and how? How might it be changed or improved? (Tag: II.K_____)
- What would you need as a teacher to be able to more effectively use ABL methodologies in your classroom? (No Tag)

3. Teacher Community Assistant Initiative (TCAI) Diagnostic Tools

The Teacher Community Assistant Initiative (TCAI) Diagnostic Tool is in both English, Ghanaian languages, as well as in Mathematics. The tool is mainly to determine the skill level of children.

The instrument is adapted from a previously validated version that was used for the ASER study in India. For more information on sample ASER instruments, instructions on their use, etc. see: <u>http://www.asercentre.org/ngo-education-india.php?p=Tools</u>

TCAI has granted the ABL study team permission to develop its own versions.

TCAI notes that oral tests are much more sensitive than written tests. Because the skills levels are so low, and also because of the focus on lower primary, to be able to actually get at what a child can do, it is better to use an oral test.

Below are the instructions for use of the diagnostic tool, which are usually shared with teachers, mainly to help them select their remedial class, but also to provide information on how to use the tool.

3.1. How to Identify Pupils' Level

3.1.1. The Testing Tool

A simple testing tool is used to determine pupils' level in class.

Objectives of the testing tool:

- Easy and rapid to administer by anyone (Regular teachers or Teacher Assistants)
- Results are easy to understand by everybody.
- Allows teachers to distinguish learning levels at low levels (e.g. letters, words, etc.).
- Makes goals easy to understand and clearly identified.
- If can read letters, needs to learn how to read words, etc.

The testing tool allows you to divide the level of the child into five main levels, as follows:

3.1.2. Literacy Levels (both English and Local Language)

- Beginner level (the child cannot recognize letters)
- Knowledge of letter or sound level.
- Knowledge of word level.
- Ability to read paragraphs.
- Ability to read stories.

3.1.3. Numeracy levels

- Beginner level (cannot recognize even single digit numbers)
- Can recognize only single digit numbers
- Can recognize double digit numbers
- Can do subtractions of two digit numbers with borrowing
- Can do divisions (3 digits by 1 digit)

The graphs below describe how to administer the testing tool.

Use of Testing Tool

How to Test Literacy



APPENDIX E



3.2. How to Identify the Pupils Who "Lag Behind"

A child who lags behind is a child who has not achieved the skills he or she was supposed to achieve in a given grade. So, in the third term of the year, the following children lag behind:

3.2.1. Literacy

	P1	P2	P3
Level 1	Yes	Yes	Yes
Level 2	Yes	Yes	Yes
Level 3	Yes	Yes	Yes
Level 4		Yes	Yes
Level 5			Yes

3.2.2. Numeracy

	P1	P2	P3
Level 1	Yes	Yes	Yes
Level 2	Yes	Yes	Yes
Level 3	Yes	Yes	Yes
Level 4		Yes	Yes
Level 5			Yes

In the first term of the year, the following children lag behind:

3.2.3. Literacy

	P1	P2	P3
Level 1	Yes	Yes	Yes
Level 2		Yes	Yes
Level 3		Yes	Yes
Level 4			Yes
Level 5			

3.2.4. Numeracy

	P1	P2	P3
Level 1	Yes	Yes	Yes
Level 2		Yes	Yes
Level 3		Yes	Yes
Level 4			Yes
Level 5			

3.3. Literacy (English) Student Diagnostic Instrument (Use One Form for Summarising Results for Each Class)¹

School code (assign unique school codes prior to field work if possible)		
Teacher code (to be entered by person entering data)		
Student code (to be entered by person entering data)		

Researcher conducting assessment		
Date of assessment		
School name		
Teacher name		
Class/standard/grade		
Diagnostic results	Literacy diagnostic level	
	(indicate L1-L5 and include any comments for student)	
Student 1		
Student 2		
Student 3		
Student 4		
Student 5		
Student 6		
Student 7		
Student 8		
Student 9		
Student 10		

¹ This instrument is from the Teacher Community Assistant Initiative (TCAI).

Figure E3.1: English Testing Tool 2



3.4. Literacy (Dagbani) Student Diagnostic Instrument (Use One Form for Summarising Results for Each Class)²

School Code (assign unique school codes prior to field work if possible)		
Teacher code (to be entered by person entering data)		
Student code (to be entered by person entering data)		

Researcher conducting assessment	
Date of assessment	
School name	
Teacher name	
Class/standard/grade	
Diagnostic results	Literacy diagnostic level
	(indicate L1-L5 and include any comments for student)
Student 1	
Student 2	
Student 3	
Student 4	
Student 5	
Student 6	
Student 7	
Student 8	
Student 9	
Student 10	

² This instrument is from the Teacher Community Assistant Initiative (TCAI).

Basic 2 Story L 5						ĺ
Dawuni mini Amina bela yili yini.		Basic 1	Parag	rapn L	4/L2	
Bâ nyâla nira mini o nyâli.		Napari c	hani s	hikuru.		
Bâ yino kam malila tuma tumda.		O shikur	u waê	a pam.		
Amina n-yoori napôêu asiba kam.		Napari c	hanila	tiåa.		
Buhi mini piâri m-be di ni.		O bi bari	chech	ne.		
Dawuni n-kooni napôêu maa puuni.	Wo	ord			L 3	
Binkôbiri maa ka bâ laamba kôhiri n-yori bâ						ľ
shikuru yôri.	ma	ka	ta	za	lo	
Amina mini Dawuni bi naêiri shikuru.	za	bo	fa	ku	ba	
Lala zuêu bâ karimbanima yuri bâ yâla pam.						1
Bihi ayi maa zaa bôri ni bâ ti leegi dôêitenima.	Le	tter			L 2	
	h	t		7		
	f	, k		2 a		

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1		 Basic 1	Ра
	Basic 2 Storv L 5		
1	Yiå bingula mali anfaani pam.	Naporo	nyá
	Nôhi gulibu viâli pam	O chani	pu
	Mâmi napôêu ka da nôhi niå di ni.	Naporo	kôr
	Timi nôhi maa bindirigu biâêukam.	O kôrila	ny
	Kawana mini chi tiri nôhi alaafee pam.		
	Ti nyari nogala nôhi wubisibu ni.	Word	
	Ti kôhiri gala maa n-nyari liêiri.	pam	
	Nogala che ka bihi zoori yom.	lim	
	Ti mali nôhi n-suhiri tim.	zim	ta
	Nogal tiri bihi alaafee.		
		Letter	

Basic 1	Paragra	aph	L 4 /	L 2				
Naporo nyâla pukpara.								
O chani puu ni biâêukam.								
Naporo	kôri parr	۱.						
O kôrila	nyuya, z	za ni (chi.					
Word				L 3				
Word pam	tim	:	sam	L 3				
Word pam lim	tim garr	1	sam øim	L 3				
Word pam lim zim	tim garr tam	dim	sam øim dam	L3				
Word pam lim zim	tim gam tam	dim	sam øim dam	L3				

	Letter			L 2
1	р	t	S	Ι
	n	d	z	
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L4/L2

L 3

L 2

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Basic Story	L 5	Basic 1	Paragra	ph	L4
Adam bela shikuru ni.		Fati kôh	irila øiâgl	bana.	
O bela duranahi.		O kôhiri	mana, na	aanzua ni	zahin
Adam karimba yuli Napari.		Fati øiâ	gbana viâ	ili pam.	1.1
Adam tiri o karimba jilima pa	am.	Sokam	ori Fati 🤅	ølagbana	daba.
O lahi tiri o taba jilima.					
Adam bôri karimbu pam.		Word			
Karimbu saha Adam bi yôri	vuri.	vuri	bôri	taba	
Karimbu saha o labisiri bôhi	si pam.	lahi	tiri	bela	
Adam lahi bôhiri karimba bô	hisi pam.				
Adam kpaådi o maåa shikur	u ni pam.	saha	yôri	yuli	kali
		Letter			

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3.5. Literacy (Gonja) Student Diagnostic Instrument (Use One Form for Summarising Results for Each Class)³

School code (assign unique school codes prior to field work if possible)	
Teacher code (to be entered by person entering data)	
Student code (to be entered by person entering data)	

Researcher conducting assessment	
Date of assessment	
School name	
Teacher name	
Class/standard/grade	
Diagnostic results	Literacy diagnostic level (indicate L1-L5 and include any comments for student)
Student 1	
Student 2	
Student 3	
Student 4	
Student 5	
Student 6	
Student 7	
Student 8	
Student 9	
Student 10	

³ This instrument is from the Teacher Community Assistant Initiative (TCAI).

Figure E5.1: Gonja Testing Tool

START HERE **Basic 2 Story** L 5 Basic 1 Paragraph L4/L2 Amati nâ koji nde. Mbia na bee pel nna Baa shuå laåto be ashuå wurbi nna. Bede bee ju abar akulti. Koji bee for asôyurpi to. Beko malâ bee åmia bôôl. Amati malâ yaa buwi mboe nâ nkoshi. Epel bee bra bumo abarso. E sa bumo ajibi nâ nchu. Amati naå fuwe kuluu na to. Word L 3 Mmu mboe-bin n wurwe kambol to. Koji malâ naå fuwe laå na. fo ma уô sa Mmu epi na n yaa lâ kemuni so. nu tô ta la

LetterL 2duolzhkwgrkwgrt

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Basic 2 Story	L 5	Basic 1	Paragra	ph	L 4 .	/ L 2
Kabre nâ Biba yô sukuru.		Shaka i	mo tuto s	hi ndôtô a	a ba.	
E nya beteri damta sukuru to.		E birto	n shâr mo	o to ekpa	to.	
Mo nâ bumo a ji ajibi.		E churĉ	o mo, ans	aå dô tot	0.	
Loå nâ bu naå pel nkulti.		N shin s	sô mobe	esulô n s	ulô.	
Bu keta Biba nkulti.						
Nâ e pin sukuru na nânâ.						
E wu sukuru na be kibâ.		Word				L 3
Bu yô sukuru na be paaki to.		malâ	bige	piåi		
Loå nâ e wu nwol be kaboå.		åini	fanâ	daga	a	
Sukuru na wôrô Biba ebel ga.				5		
		tama	fute	kama	nânâ	

Lette	er			L 2	
g	ô	k	S	n	
f	å	р	i	â	

						<u> </u>	·		-
Basic 2 Story	L 5		Bas	ic 1 P	Parag	graph		L 4	
Kasôbla kô tônô damta ga.			Nchu lubi bee bra alô.						
Adaga anye ka bee bla.			Epa	wô n	chu l	ubi to	•		
Nkshi, mboe, mbulpô nâ alôåâ.			Ada	ga ke	daåâ	à nchu	ı lubi to).	
Epe be asôbôaya ere bee sa anye.			Ngb	o amo	o to p	bôâ n	nuu.		
Asô damta ashi kachinato.									
A bee sa anye eblaå, afule nâ ndarbi.			wor	ď				LI 3	
A bee kuå anye kachako be awurfoå to.			teå	kil	tir	far	pur		ľ
Amoso a maå daga.			for	pôr	lor	kur	maå		
Anye ka bee yiye amo.									
Nâ a bee nite akulti kaplâkama kadeto.			Letter L 2		L 2				
Anye a baa kuå amo jimanâ kikâ.			â	å		d	t	0	
			•						
		<i>'</i>	0	m	р	:	S	t	

Basic 2 Story	L 5		Basic	1 Pa	ragrap	bh	L4/L2	2
Kaboå farfarbi walâ ga.			Amati nâ Amôma la beteri nna.					
Ku bee bra alemfia.			Baa b	a aba	arso n	na a yô	sukuru.	
Åele nkulti fobe laå,			Loå n	â baa	a yô ek	poåto gl	ba.	
Kebuse nkulti bee ju apini.			Amat	i nâ A	môma	a bee sh	na abar ga	
Anye a baa tise.								
Akoåkoå nâ a kô nchu a puli.								
Kumobe loå bee kuå fiiba.								
Nâ fo yô dôshi mba.								
Adaga fo kaa for fobe enô.			word					
A naå daga anye ka bee fâ ndibi.			Keni	kı	le	Pul	kini	
Ndibi bee kuå afuu be jârbi.			Åini	tiç	ge	konô	åele	
Loå nâ a naa sa ayoyul wushiso.					•			
				Kur	nu	pulô		
		Γ						_
			Letter				L 2	
			I	k	У	t	ô	
			0	i	D	d	f	
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3.6. Mathematics Student Diagnostic Instrument (Use One Form for Summarising Results for Each Class)⁴

School code (assign unique school codes prior to field work if possible)					
Teacher code (to be entered by person entering data)					
Student code (to be entered by person entering data)					

Researcher conducting assessment					
Date of assessment					
School name					
Teacher name					
Class/standard/grade					
Diagnostic results	Mathematics diagnostic level (indicate L1-L6 and include any comments for student)				
Student 1					
Student 2					
Student 3					
Student 4					
Student 5					
Student 6					
Student 7					
Student 8					
Student 9					
Student 10					

⁴ This instrument is from the Teacher Community Assistant Initiative (TCAI).













1. Terms of Reference

1.1. Objective

DFID and Ministry of Education in Ghana wish to appoint a consultant(s) to undertake research on how best the key elements of existing disparate methods and approaches to child-centred education might be combined to generate a unique Ghanaian pedagogy that can transform teaching and learning for Ghanaian children.

The purpose is to:

- consolidate the learning from the various initiatives on activity based learning that have been undertaken by both government and donor partners;
- leverage the existing knowledge and experience with new pedagogical approaches; and
- use this as the basis for making an informed and strategic decision about how to systematically improve the quality of teaching and learning in basic education.

1.2. Recipient (s)

The main users of the research would be policy makers in the Ministry of Education and Ghana Education Service. The curriculum development department, the teacher education authorities, and the MoE's Office of Donor Relations are the main interlocutors.

Secondary users would be development partners seeking to improve Ghanaian educational outcomes through the strategic, coherent and rational use of scarce educational resources.

Additional users would be researchers in UK and Ghana involved in improving educational outcomes in Ghana, and DFID education advisers in the region facing similar challenges with regard to educational quality.

The primary beneficiaries of the research would be the majority of Ghanaian school children, who are unable to learn in the current system. (High enrolment rates, but exceedingly poor performance on basic literacy and numeracy tests at Grade 6.)

1.3. Scope of Work

The activity management and processes should be integrated with, and to the extent possible, implemented through the Ministry of Education and Ghana Education Service systems. The consultant team will be required to work closely with MoE / GES staff to:

- review international literature of various child-centred and activity based learning pedagogy and grey literature and data sets on teaching and learning methods in Ghana over a specified time period;
- develop an analytical tool to be used to as the basis for analysing the work on pedagogy and learner centred development;
- undertake primary research through interviews and field visits. The evidence generated from the research would form the basis for policy development and development of a costed action plan for the implementation of a unique Ghanaian pedagogy; and
- support the GES to develop a costed action plan.

1.4. Outputs

The consultant(s) will deliver:

- A 'What works' synthesis paper on teaching and learning initiatives introduced in Ghana since 1990. This paper will be the basis for outputs 2-4 and is expected to elicit research and evaluation questions. The paper will include six parts:
 - mapping of the different initiatives (location, unit costs, funding source, level of GoG involvement, key features of intervention, materials and other inputs provided);

- analysis of the technical strengths and weaknesses of the various approaches (drawn from test-based data, qualitative interviews, written records, field work if appropriate);
- a tool to assess 'what works' in the Ghanaian context;
- analysis of what works in the Ghanaian context (institutional, cultural, financial);
- a capacity gap analysis of current human, financial, institutional capacity gaps (example materials production) to meeting KG needs and emerging ABL vision; and
- a literature review (as an annex) of international best practice with regard to child-centred teaching and learning approaches.
- A draft aide memoire (to be developed with GoG) stating Government's policy on the development and dissemination of an ABL approach / framework relevant to basic education.
- A detailed costed action plan produced by the GES to roll out the proposed package. As noted earlier: it is
 expected this effort will provide the evidence base that Ghanaian leaders require to develop a truly
 'Ghanaian package' of teaching and learning materials and approaches. This document would be a
 blueprint (or alternatively, a menu) guiding investment decisions aligned with the ABL framework. As such,
 it would be the main reference for procurement officials within the GoG, for teacher training institutions, and
 for development partners supporting the education sector.

1.5. Methodology

The methodology used should include the following:

- International literature review of teaching and learning child-centred and activity based learning pedagogy.
- Survey of existing grey literature and data sets on teaching and learning methods and programmes of the past 10-15 years (GoG reports, donor reports, extrapolations based on National Educational Surveys and EMIS).
- Political economy analysis (preliminary) of pedagogy to ensure sustained funding and political support in Ghana including an assessment of the implication of the cultural 'distance' of methodologies on use in the classroom.
- Development of a 'what works' analytical tool with researchers who have been engaged in the work on pedagogy and learner centred development in Ghana. This needs to include the degree to which the approach varies from the existing cultural norm.

Primary research which will include:

- Key informant interviews with researchers, policy makers and teachers involved in curriculum development, teacher training, and procurement of teaching and learning materials in Ghana.
- A selection of field visits to assess the effectiveness and sustainability of a sample of GoG and cooperating
 partners' investments in child-centred methodologies including NLAP, UNICEF child centred methods, SFL
 and Wing Schools. The field research will necessarily involve children, both in the formation of research
 questions, in the selection of informants, and in the analysis of results.
- Learning Materials Fair to present and facilitate 'key stakeholder' dialogue on currently used teaching and learning materials, and to present 'new model' learning materials for discussion on opportunities / areas for future investment.
- Validation of results facilitated debate on the outcome of the research with debate on the robustness and validity of the analysis. In particular with the implementers and assessors of the previous initiatives incountry. The final research findings would be informed by the proceedings of the debate.
- Supporting the pedagogy committee to develop a detailed costed action plan to roll out the proposed package. This would be based on the evidence and discussion generated by the PRF-funded research.
- Dissemination workshops with ministry officials and other key stakeholders. The workshops purpose will be the dissemination of the research findings, and facilitated discussion among key stakeholders on what the elements of a 'Ghanaian pedagogy' would include.

 The team – managed by the lead consultant will be required to submit all documents and references used. The lead consultant will be responsible for ensuring these documents are provided to DFID. The documents should be ideally organised as electronic files, but where hard copies exist, these can also be submitted. The documents should be grouped together according to appropriate classifications (example, government documents, and donor projects).

1.6. Time Frame

The consultants will be contracted for a period of 4 months commencing in January 2012 and finishing in September 2012.

1.7. Skills Required

The consultant team would consist of:

- One Lead Researcher/Team Leader: This individual will lead and be responsible for completion of PRF activities and outputs. The candidate will have a PhD. in Education, Curriculum and Pedagogy or commensurate experience and country specific experience. This individual shall be a Ghana National.
- One International Researcher to support literature review. This individual may be a junior researcher who will work with MoE / GES to conduct a background literature review. Country presence not required.
- One International Experts in Pedagogy to provide feedback/critique on intermediate and final outputs. At least one expert shall have Africa-specific experience. Country presence not required.
- Research Assistants to support primary research activities.
- One Administrative Assistant to support field-work logistics.

1.8. DFID Co-ordination

The consultant team will be responsible for the timely delivery of outputs and advice on progress to Nicole Goldstein, Education Adviser, Rachel Hinton, Education Adviser, DFID Ghana and Enyonam Azumah, Programme Manager, DFID Ghana.

1.9. Ways of Working

The work will be based out of the Ghana MoE/GES and integrated with government systems to regularly and substantively engage MoE/GES personnel.

The consultant team will use their own computing and internet facilities and will be responsible for own logistics, transport and setting up of meetings. The consultant will provide a detailed work plan in advance, including dates, activities, formats for data collection.

1.10. Background

In the past decade, Ghana has made significant strides in improving access to basic education; pupil enrolment rates and teacher numbers are high by regional standards. Even so, the quality of basic education in Ghana, as measured by standardised test scores measuring proficiency in key subject areas, remains extremely low. Teachers' salaries command 90 percent of the education budget (ESPR, 2010); yet it is clear that a large number of teachers are not as effective in the classroom as they need to be. Less than 60 percent of the teaching staff in primary schools meets minimum standards for formal qualification (ESPR, 2010). Classroom activities depend largely on teacher-directed instruction and rote memorisation by students. Corporal punishment remains a widely used disciplinary practice. Further, while the official school year in Ghana has 197 days, a recent World Bank study found that in sampled schools students were engaged in learning activities for only 39 percent of this available learning time (Abadzi, 2007). This low 'time on task' often means that curriculum learning objectives are not fully covered, which in turn contributes to low learning outcomes. National test scores of Primary six students in 2009 show that only 36 percent were able to read at grade level, and only 14% were proficient in math (NEA 2009 qtd. in ESPR 2010).

Ghana has been the testing ground for many teaching and learning methodologies in the past 15 years. These initiatives, often funded by donors, have introduced and reinforced valuable skills, materials and methodologies, many of them child-friendly. Yet few approaches have been adopted nationwide. While new initiatives piloted in Ghana are varied, several promote increased use of child-centred pedagogical practices, and as such, include curriculum, teaching guides and other learning materials providing guidance on activity-based and/or active-learning approaches. The experience in Ghana may in part be attributed to the increased promotion of such approaches by international agencies over the past decade. The promotion of constructivist approaches (as opposed to positivist, or traditional approaches) has provided varied lessons relevant to specific subject-areas, age-groups, cultural contexts, budget constraints. Promotion and utilisation of these approaches and the effectiveness of these approaches in a developmental context remains a hotly debated topic in the international policy community (UNESCO 2004, qtd. Leu 2005).

In the midst of this debate, an emerging approach framed as 'ABL' has gained growing support from the MoE in Ghana. At present, ABL in the Ghanaian context is recognised as 'more than' a pedagogical approach. MoE seeks to develop a broad ABL framework to inform strategic operations and investments in basic education teaching and learning methods, materials, assessment, PST/INSET. Given the range and depth of country-specific experimentation with new pedagogical approaches, it is worth asking what elements of these methods are best-suited to the Ghanaian cultural and educational context, and, to what extent can they be sustainably financed within the GoG education budget?

The main research question that we seek to address is:

 What elements of existing disparate methods and approaches to child-centred education might be combined to generate a unique Ghanaian Pedagogy that can transform teaching and learning for Ghanaian children?

The key questions to be addressed will benefit from a newly established pedagogy team consisting of senior members of the Ministry of Education and the Ghana Education Service including the Director of Basic Education and the Director of Curriculum Development. Thus it benefits from detailed input of key Ministry of Education and Ghana Education Service staff, particularly those responsible for curriculum, teacher training, and donor relations. The questions below are indicative of the type of information and analysis of different approaches and experiences of child- centred education that is currently unavailable (or not easily accessible) – but much-needed -- in Ghana in order to derive new policy directions for improving learning outcomes:

What child-centred approaches have been piloted or introduced in Ghana since the 1990s? What
information do we have on their impact? Approaches to examine include – but are not limited to – USAIDfunded National Literacy Acceleration Program (NLAP); USAID and Chicago State University-supported
Textbooks and Learning Materials Programme (TLMP), School for Life Programme supported by multiple
donors; VSO-supported Tackling Education Needs Inclusively (TENI) Project; West Africa Montessori
Association (WAMA); UNICEF-supported Child-friendly School (CFS) Initiative; SNV-supported Child
Social and Financial Education programme (Aflatoun); and other initiatives supported by NGOs including,
Plan, World Vision, ActionAid, Care and IBIS.

Importantly, impact assessments of many of these programmes already exist. As such, central to this effort is pulling together already existing information on these programmes and pulling out elements that would fit into the broader ABL framework and investment package. For example: if, under the ABL framework, it is found that TLMP materials complement the NALAP methodology for KG1-P3 English language learning sessions, then the operational plan/ investment package can indicate the materials, INSET and other investment and program activities required to support implementation. This activity will also be enriched by the review of materials and products developed by locally operating Montessori and private schools.

- What do we know about impact on teacher motivation and learning outcomes of these approaches? What level of support is required to ensure the on-going implementation of the 'full child-cantered nature' of the approach?
- What do we know about the unit costs of these programmes? What is the value for money assessment of each approach in terms of impact on learning outcomes?
- What are the drivers of the change for a new pedagogy in Ghana? What approach(es) are most likely to garner the political and technical support of key departments and individuals in the Ministry and Ghana Education Service to ensure sustained funding and political support (Important stakeholders include the

Curriculum Department, Donor Relations, Teacher Training authorities and the trade unions)? What are some expected opportunities and challenges to integrating new approaches into teacher education (College of Education) curriculum? To what extent does the culturally acceptable nature of the approach impact on the sustainability? Why were certain initiatives sustained or not beyond the initial pilot phase? (Institutional and financial sustainability)

 What pedagogy (or range of approaches) will transform learning outcomes in Ghana? What are the critical human, financial institutional capacity gaps? What can the Ministry and GES commit to implementing nationwide? What cultural, contextual, geographic issues should be considered? What approach(es) will donors be asked to support in teacher training colleges, when procuring teaching and learning materials, and when supporting teacher in-service training?

This activity will be implemented during the same timeframe that MoE/GES is designing an investment programme for expanding KG in Ghana. The KG design activity includes a technical working group on curriculum and pedagogy; experts leading this activity are expected to engage with the KG TWG on curriculum and pedagogy.



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1. List of Stakeholders Interviewed

Name	Organisation	Position	Phone/Fax	Email
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Dr Newman	National Council on Tertiary Education (NCTE)	Head of NCTE	0208 459 912	
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