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Competency-Based Education and Training Delivery: Status, Analysis and Recommendations

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Preface

This document began as three separate papers – one to describe the new KBK system, one to respond to USAID’s request to organize DBE2’s understanding of training, and one to present to members of the DBE3 team concerning the new organization of education in Indonesia. As these papers evolved, it became apparent there was considerable crossover. Thus, the content of all three papers was merged into a single presentation related to education in Indonesia with the new competency based approach (KBK) within the decentralized environment. Since KBK and decentralization are the leading forces in Indonesia for educational reform, it is necessary to have a clear understanding of the current status of a system which is in significant transition.

This paper represents research conducted by representatives from DBE2 and DBE3; however, the conclusions and recommendations focus on the needs of DBE2. A separate paper has been prepared related to recommendations under DBE3. USAID is funding the DBE program; however, the content of this paper represents the observations and views of the authors and based on numerous interviews with staff at MoNE and MoRA.

Acronyms

ADB	Asian Development Bank
BSNP	National Standards Board
CAI	Computer assisted instruction
CDC	Curriculum Development Center
CLCC	UNICEF's Creating Learning Communities for Children Program
CLRC	MoRA's community learning resource centers
DBE1	Decentralization of Basic Education Project – Management Component
DBE2	Decentralization of Basic Education Project – Teacher Training Component
DBE3	Decentralization of Basic Education – Youth Formal and Non-Formal Component
DG	Director General
FKIP	Faculty of Education under the under a university structure (formerly IKIP)
ICT	Information and Communication Technologies
IDLA	MoNE's provincial-level non-formal training centers
KBK	Competency-Based Curriculum
KKG	Primary-level teacher clusters
KKKS	Primary and secondary school principal clusters
LAS	MoNE's district –level non-formal training centers
LPMP	Provincial-level quality assurance centers operated by MoNE
MBE	USAID's Managing Basic Education Program
MDC	Madrasah development centers
MGMP	Junior secondary-level teacher clusters (by subject)
MoNE	Ministry of National Education
MoRA	Ministry of Religious Affairs
MPR	Indonesia's national parliament
NTC	National Textbook Center of National Testing Center
OU	Open University
PAKEM	Student active learning model
PISA	Program for International Student Assessment
PLKJ	Local content curriculum used in Jakarta
PUSTEKKOM	MoNE's Center for Information and Communication Technologies
REDIP	JICA's Regional Education Development and Improvement Program
TTUC	MoNE's national-level Teacher Training and Upgrading Centers
UAN	National examination system for end-of cycle
UAS	School-based examinations
USAID	

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Competency-Based Education and Training Delivery: Status, Analysis and Recommendations

A. Introduction

Subsequent to decentralization, in 2003, the Ministry of National Education (MoNE) produced a new education law, and several regulations and instructions, which have and will have a profound impact on the delivery of education throughout the country.

One driving force that is designed to improve the quality of education is the new competency based curriculum [KBK]. It was originally designed in 2000 and was supposed to be implemented by all schools in Indonesia by 2004. Therefore, it is referred to as 'Curriculum 2004'.

The approach is a major shift in apportioning responsibility for the design and implementation of teaching and learning in the classroom. Whereas the previous curriculum of 1994 was a completely centralized function, the new curriculum divides the responsibility for development and implementation between MoNE and schools with some management oversight at the district level. Whereas MoNE is now responsible for the development of educational standards, the school is responsible for translating the standards into a meaningful school syllabus and instruction at the classroom level. The purpose is to provide the opportunity for nationally developed standards to be adapted to local community needs. This approach reflects current educational practices of G7 countries and if implemented properly, will improve dramatically Indonesia's educational system. KBK coupled with decentralization provide the twin forces designed to improve and assure the quality of education and schooling in Indonesia.

In past attempts at reform, insufficient resources have been available to rollout the reform to all parts of the country. Although well publicized, past reform efforts have been less effective because they lacked appropriate planning and resources allocation as well as lack of understanding about how the new reform should work. Consequently, appropriate structures and processes were not established to support reform. If not handled properly, KBK may result in a similar diminution in effectiveness.

The purpose of this paper is to provide an analysis of two dimensions – curriculum and training. Whereas KBK is the underpinning to all new educational reform for improving the quality of education, training serves as the means to ensure that all human resources know their roles and responsibilities and possess the skills to fulfill those responsibilities.

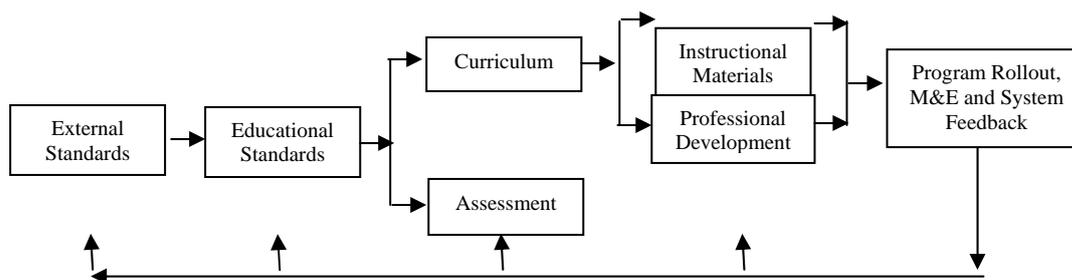
In the following sections, this paper will:

- Provide a conceptual framework for understanding the competency-based approach
- Look at the background to the Indonesian competency based curriculum
- Explain the Indonesian 'Competency based curriculum'
- Analyze the current situation related to KBK and how education has been and may be delivered
- Develop conclusions about the new system
- Offer recommendations as to how DBE can assist in creating an appropriate system for KBK and capacity building of the system for human resources development

B. Conceptual Framework for Competency-Based Curriculum:

Competency-based education is not new, the approach having been developed in the field of vocational training in the late 1970s. Competency may be defined as the ability to do a particular activity to a prescribed standard emphasizing what people can **do** rather than what they **know**. As a model for curriculum design and delivery, the approach is typically one, which controls and assesses learning through establishing preset objectives and outcomes, which might relate to skills, attitudes or values. The following diagram provides a model for the development of a competency-based approach to curriculum and instruction.

Model for Competency-Base Education



The technique for constructing a competency-based program involves backwards planning and asks the question, what do students' need to learn to become successful adults. The question is answered by convening meetings of those from the fields of business, politics, social, cultural and environmental sectors to define the criteria for success. These become **external standards** for success. Educators then take this information and convert it to learning outcomes or specific statements of behavior that students must perform that demonstrate learning which becomes the **educational standards** as well as defining when these standards should be mastered from kindergarten through year 12.

Such planning can work backwards starting with students in the final year of school, year 12. If it is known what students need to learn in year 12, then one can define what needs to be learned in year 11, and continue until the entire scope of the standards is determined. Since most schools teach subjects, specific outcomes need to be extracted from the external standards to define curriculum for a specific subject. This is one reason why some educators have supported inter-disciplinary curriculum since it can better align with real world outcomes. The definition of what is to be learned is in the form of statements of demonstrable behaviors.

With the creation of minimum performance standards, that is, standards that indicate the lowest level of performance acceptable, it is then possible to create a **curriculum** and the means to **assess** student performance related to the curriculum. Curriculum is defined in various ways. Some define it as the planned subject matter content and skills to be presented to students. Others say that the curriculum is only that which students actually learn. Still others hold the very broad definition that the curriculum is all experiences students encounter in school, learned or unlearned and out of school, taught and untaught.

The minimum standards also provide a framework for creating assessments. **Assessment** is much broader than testing. Whereas multiple choice tests, true/false, matching and other types of test items may be useful in measuring lower order learning, knowledge and some skills, other types of assessments such as report writing, presentations, debates, group problem solving are useful in determining higher order learning which demonstrates that students know when and how to use knowledge and skills in critical and creative ways to solve problems. What is key here is that assessments are **aligned** with the curriculum which, in turn, is aligned to the standards, and that they measure learning in terms of how

students perform using, as much as possible, a real world situation as possible. This approach is referred to as contextual learning in Indonesia and elsewhere.

To ensure that curriculum and assessment are implemented properly, educators must consider developing appropriate **instructional materials** to support learning activities including textbooks, workbooks, charts, three-dimensional models, simulations, puzzles, games, and many other items. In addition, teachers will need to be **trained** in how to use the new materials since the methodology of competency-based curriculum requires shifting from teacher-centered to student-centered approaches.

Thus **professional development** is a key component in achieving successful implementation. Once all components are completed, the program can be rolled out. If a national program, the rollout needs to be phased since there will not be enough trainers and resources to conduct a rollout nationwide. Also, as a new program, the first phase of the rollout should be a pilot program so the new materials can be tested and modified before final adoption is instituted. Professional development is systemic to the process so that educators can continuously improve in how they implement a quality educational system.

To determine effectiveness and to ensure that the rollout is being implemented properly, an **M&E system** is needed. Over time, the M&E system is used to provide **feedback** to different parts of the system so that adjustments can be made, whether changing standards and tests, or revising training modules.

This description is admittedly brief but sufficient to gain some understanding of what a competency-based curriculum should resemble. It is within this framework that the new national competency-based curriculum will be analyzed.

C. MONE's Competency-based Curriculum

The formal education system in Indonesia is currently in a state of great transformation. The new national education law of 2003 calls for an increase in quality and mandates that standards be developed and codified. This has recently been taking place.

The legal basis of the new KBK curriculum comes from the National Education Law No. 20, 2003. The MPR or *Majelis Permusawaratan Rakyat* and provincial representatives in Parliament promulgated a new state policy where the old education law of 1989 was revised. The law calls for national standards in education, including a new curriculum.

MoNE's Curriculum Development Center is responsible for developing a new curriculum to meet the national education standards. The new national curriculum guidelines were developed by 2003. The new curriculum is **competency-based**. By competency-based, it is understood that the objectives for every teaching unit or lesson is to be expressed in terms of students' behavioral skills. In the competency-based curriculum, *the students will be able to* know, demonstrate, comprehend, apply, analyze, synthesize and evaluate a particular topic of instruction in the curriculum.

To date, the 2004 competency based curriculum has been partially implemented and is now in use in some subjects, some provinces, some schools and grades. Therefore, at the current time in Indonesia, there are two curricular being used concurrently, curriculum 1994 and 2004.

Another legal basis for the curriculum is the Government Regulation of the Republic of Indonesia number 19 year 2005 on the National Standards of Education. As part of this regulation, the original Curriculum 2004 is being redesigned.

A Board for National Standards in Education [BSNP] was created in May 2005. Their mission is to develop, monitor the implementation, evaluate and report against the national standards of education. This covers all sectors [formal, non formal and informal] and all levels [from Kindergarten to University]. The board is responsible directly to the and alone make recommendations to the Minister. The membership of BSNP is between 11 and 15. They are members for a period of four years and are appointed and discharged by the Minister.

Standards address eight key areas, which cover inputs, process and outputs of the education system. The board will also assess textbooks and undertake the national examination.

Standards Cover Eight Key Areas

Input	Process	Output
1. Content	5. Process [teaching and learning]	7. Graduate competencies
2. Facilities and Infrastructure	6. Management	8. Evaluation
3. Teachers and Education staff		
4. Finance		

The Government Regulation of the Republic of Indonesia, number 19 year 2005 concerning the National Standards of Education does not actually contain the standards, but sets out the principles for the national education standards. The contents of the standards will be set by subsequent ministerial regulations within the next two two years. These standards are binding on all government and private, schools and Madrasah.

The current priorities for standards are the **curriculum** and **graduate competencies**. These form the basis of education. Once the curriculum and the outcomes have been

established, BSNP can then determine what teachers need to do and therefore what competencies they need. The timeframe for the finalization of the first two standards is December 2005. Once these have been established, all other competencies will be developed in parallel throughout 2006. To date, some of them exist in general form and others have not even been drafted. The transitional provisions state that existing institutions will continue to perform their duties and functions until the establishment of new ones¹.

Many of the principles for the standards are not new. They are simply a culmination of the way that education in Indonesia has been moving in recent years. The teaching and learning process for example, implies the active learning [Pakem/CTL] approach which teachers have received training on in recent years.

The BSNP is the final decision making authority in regards to the national education standards. They make recommendations directly to the minister. However, these standards will not be produced in a political vacuum, BSNP convene boards of experts and consult widely. For example, during the drafting of the curriculum, they consulted with more than 300 people, including staff from the curriculum development center.

Once the standards have been finalized, other directorate generals within MoNE are responsible for implementing them. However, at the moment, it is difficult for education directorates and departments to move forward with their plans as nothing has been approved. As a result of this state of change, the points made in this paper are accurate at the time of writing, but may change as soon as December 2005.

The final curriculum should be approved in December 2005. MoNE staff remain confident that this deadline will be met. The curriculum will be socialized from January 2006 and should be implemented in July of the same year. However, exactly how the curriculum will be rolled out is not yet apparent. It could be phased in gradually or all schools could be expected to implement it in July 2006. BSNP have expressed concern that there are currently two curricula being used in Indonesia and hope there is only one in July 2006. This suggests that all schools might be expected to use the new curriculum by next year. Nonetheless, it is unlikely that all schools will be ready to begin in July 2006.

1. Aims

According to the education policy, the curriculum must meet the requirements of national education², or as maintained by the Directorate General of Primary and Secondary Education, it must be directed towards developing not only the intellectual but also the moral, social and physical aspects of the participants. In other words, creating the wholeness of the Indonesian people', [Strategic Plan]. Therefore, education in Indonesia should contribute to:

- The improvement of faith and devotion
- The improvement of the noble character
- The improvement of the individual interest, skills and potential
- The various potentials of the region and the environment
- The demands of regional and national development
- The demands of the business world
- The development of science, technology and art
- Religions
- The dynamics of global development
- The national unity and the national values

² According to the 2003 law, National education refers to the education that is based on the Pancasila and the 1945 constitution and rooted in the values of religion, the national culture of Indonesia and is responsive to the demands of a changing era

It is clear from this that, as in most countries, education is not only seen as an academic process, but has important religious, moral and political dimensions to it. The curriculum is grouped into five areas of subject matter. The following are the subject areas and the aims of each:

Subject Areas of the 2004 Curriculum

Religion and noble character building	Physical, sport and health education	Science and Technology
<ul style="list-style-type: none"> ▪ The development of faith and devotion and spiritual potential; ▪ The introduction, understanding and cultivation of religious values ▪ The implementation of such values in the life of individuals or collective life of society ▪ Noble character, ethics, conduct of life, or morals as materialization of religious education 	<ul style="list-style-type: none"> • Development of a nation that is healthy physically • Improve physical potentials • Establish sportsmanship and life awareness. • The habit of healthy living, that is individual and collective within a society 	<ul style="list-style-type: none"> • Provide a basic competence in science and technology • Cultivate critical, creative and independent scientific thinking
Esthetics	Citizenship and personality	
<ul style="list-style-type: none"> • Full understanding, appreciation and expression of the arts • To improve the sensitivity, ability to express and ability to appreciate beauty and harmony. This should cover appreciation and expression 	<ul style="list-style-type: none"> • The awareness and perspective of students of their status, rights and obligations of life within a society, nation and state • Improvement of their personal qualities as human beings • Perspective of nationalism, the spirit and patriotism to defend the country • Appreciation of human rights • The plurality of the nation • The preservation of the life environment • The equalization of genders • Democracy • Social responsibility • Adherence to the laws • Adherence to pay taxes • Attitudes and behaviors that are against corruption, collusion and nepotism • An appreciation of literary works in Indonesia 	

2. Content

There are three component parts of the competency curriculum³:

- The core curriculum
- The local content curriculum⁴
- Activities for self development⁵

³ There are also extra curricular activities in schools, but they are not part of the compulsory curriculum

⁴ The purpose of the local content curriculum is to provide schools with the opportunity to include subjects, which are relevant to the local situation and which are not included in the core curriculum. The time allocation is 2 hours per week for the local content

⁵ The purpose of the self development activities is to provide students with the opportunity to follow something that they are interested in or good at. According to BSNP, schools should provide a range of activities, which children can choose from. The time allocation is two hours per week.

There are a number of subjects or activities in each component. Unless stated, these subjects are taught from grade 1-12:

- Religion [Islam, Catholicism, Buddhism, Hinduism and Christianity]
- Citizenship
- Indonesian language and literature
- English [From grade 4 to 12]
- Foreign Language [Mandarin, Arabic, French, Japanese and German grade 10 to 12]
- Mathematics
- Natural Science [Including physics, chemistry and biology taught as an integrated subject from grade 1-9 and separate from 10-12]
- Social Science [including: State structure, economics, history, sociology, anthropology and geography taught as an integrated subject from grade 1-9 and separate from 10-12]
- Art and Culture
- Physical Education and Sports
- Skills [Music, cooking, handicraft ⁶]
- Information and Communications Technology
- Local Content

At the first two years of primary school, these subjects are taught through topics. Each subject can contribute to the teaching of a group of subject matters and some subjects will contribute to more than one subject matter. According to the list provided by BSNP [see below] Citizenship for example, can contribute to the development of the competencies in religion and noble character building and citizenship and personality.

Potential Contributions by Citizens

Religion and Noble character building	Citizenship and personality	Science and Technology	Esthetics	Physical, sport and health education
<ul style="list-style-type: none"> • Religion • Citizenship • Science and Technology • Arts • Physical sport • Health affairs 	<ul style="list-style-type: none"> • Religion • Citizenship • Languages • Art and Culture • Physical Education 	<ul style="list-style-type: none"> • Languages • Mathematics • Natural Science • Social Science • ICT • Vocational Skills • Local content curriculum 	<ul style="list-style-type: none"> • Languages • Art and Culture • Skills • Local content curriculum 	<ul style="list-style-type: none"> • Sport • Health Education • Natural science • Local content curriculum

3. Curriculum load

At the present time, students in primary school spend a maximum of 30 hours a week in school for 38 weeks a year. This means that primary school children are in school for a total of 1140 hours a year. Students at Junior High school spend approximately 36 hours in face-to-face instruction on the curriculum. 34-38 weeks a year are included in the school calendar. There are two semesters in an academic year and each semester can last between 16 and 19 weeks. Therefore, students at Junior High school are currently in school between 1225 and 1370 hours per year.

⁶ The choice of the skill subject seems to depend on the resources available in the school

BSNP are reviewing the curriculum load and the amount of time that children are spending in school. The present thinking is that students in Indonesia spend too much time in schools and much more than students in other neighboring ASEAN countries. Furthermore, although the quantity of time spent in school in Indonesia is more than in other countries, the quality of instruction is lower. In results from the Program for International Student Assessment [PISA] in 2003 Indonesia was in the bottom four in reading, mathematics and science. BSNP are currently discussing reducing the number of hours spent in school to around 1000 hours so that it is in line with other countries at the same time as preparing national standards to improve the quality of education that children receive.

This may have implications on the number of subjects taught and how many hours they have per week. Some changes have already been made. In Junior High school, the natural and social science subjects have been integrated and are taught as one subject. It is possible that the number of hours of face-to-face instruction in other subjects may be reduced, excluded or integrated. It is not possible to say at the present time. The BSNP will make recommendations on the "learning hours, learning capacity, face to face learning hours and the percentage of the learning capacity per group of subject matters" by December 2005.

4. Competencies

An examination of the curriculum documents shows a series of **cross-curriculum competencies**, which should be developed in all subjects, as follows:

- Building confidence, knowing what is right and respectful, being secure in one's religious/secular beliefs,
- Developing community ideas and information on interacting with others,
- Choosing, applying, combining concepts, technology, structure, and relations to real life, and from various sources,
- Understanding, respecting, and conserving living creatures and using knowledge and competencies for making appropriate decisions,
- Participating interacting, and contributing actively in public and global culture bases on the understanding of cultural geography in historical context,
- Creating, respecting work of arts, appreciating the individual creativity and members of society
- Thinking logically, critically, and cooperatively in various endeavors of work, and
- Showing self-motivation and showing self-worth.

There are also competencies for each subject. These are divided into standard competencies and base competencies and are detailed in the curriculum documents for each subject. Standard competencies are standardized skills for learning and living that must be achieved by all students through their learning experience. Base competencies are more illustrative examples of the standard competencies.

There are guideline booklets for each subject. These include all the subject specific standards but they also offer teachers guidance on the subject specific recommendations for the teaching and learning process, assessment and the inclusion of life skills. At the moment, some schools are implementing the curriculum according to the 2003 guidelines. The new 2005 ones will be approved by December. However, an analysis of the draft 2005 documents shows that the following is included:

Contents of New Curriculum 2004 Standards Booklets

Section	Content
Introduction	Cover, table of contents, and introduction narrative.
Narrative	Explanation of the subject-specific approach being taken, and details about the standards in narrative format
Matrix Summary	A matrix summarizing indicators by grade level and indicating at which grade level indicators are covered. The matrix shows that the curriculum is circular in that the same indicators are to be covered in more than one year.
Standards	For the first three years of primary, the table shows two columns, the first containing each standard competency by grade level, and the second listing the minimum performance criteria. From the fourth year on a third column is added which indicates how much time is to be spent teaching a particular competency.

Also available are 'subject maps' illustrating how the subject competencies are taught across the levels of the formal education sectors. On page 15 is a map, which illustrates the Scope and Sequence Chart of the mathematics curriculum from the 2003 documents prepared by the CDC. It shows the logical sequencing of **knowledge**. There is some integration between the two themes and it will take an experienced teacher to see the places where contextualizing the strands can be translated into effective planning and delivery of the lessons

In the previous curriculum guidelines from 2003, there are also indicators, which were intended to support teachers to measure whether students had achieved the competency. The revised guidelines of 2005 **do not** include these indicators. The primary purpose for their removal was to give schools the opportunity to make the curriculum more relevant to their local situation and the life skills that students need to live and work in their local world. Therefore, MONE considers that the new curriculum developed in 2005 is more than 80% local content. The competencies have been developed by the CDC in collaboration with a wide range of other stakeholders. These include:

- University lecturers
- Teachers
- Principals
- School supervisors
- Some NGO's
- Education directorates

This list suggests that the only people consulted were educators and not other stakeholders, such as businessmen or members of the community members. Therefore, the competencies only reflect what educators think is important for children to be able to do. In order to achieve the standard and basic competencies, subjects will be taught around themes or aspects. These are also included in the curriculum guidelines.

5. *Syllabus*

According to the CDC, the new **curriculum** is mostly understood as a guide for teachers. This is reflected in BSNP documents, which state that schools are responsible for 'planning the learning processes' [National Education Standards: 2005]. This means they have to develop the syllabus [a summary of each course of study] and the learning plans based on the guidelines set down by the BSNP and under the supervision of the district education department and the department of religion. The curriculum guidelines suggest that schools include the following in their syllabus:

- Indicators
- Main subject matter
- Teaching steps including methods
- Time allocated
- Learning resources
- Assessment/Evaluation

MoNE is concerned about the ability of schools to develop syllabi. They consider that schools and teachers may not have the experience, capacity, confidence or mindset ⁷ to undertake and complete this task. The CDC plans to develop and make available to schools model syllabi for all subjects at all levels. Their syllabus is intended to give instructional support to the curriculum users. Other directorates may do the same. Hence, schools will have a choice of syllabi to use and may also realize that the national standards can be operationalized in a variety of ways. Nevertheless, while many schools will require this support, these syllabi will be generic and not relevant to the local context of the school, as the curriculum is designed to be. In **January 2006**, BSNP will develop a set of guidelines for schools to use to support them to develop syllabi. These will provide guidance to schools on how to develop locally relevant syllabi and to include life skills and ICT

6. *Cross-curricular competencies*

An analysis of the curriculum documents suggests that there are other competencies that should be developed across the curriculum these are life skills and ICT

Life skills. According to the National Education Standards the curriculum in formal and non-formal basic and intermediate includes life skills [article 13]. The aim of life skills education is to empower children to continue to develop knowledge and skills so that they can live everywhere and use other resources around them [such as technology] to support their lives and improve the quality of their lives. Life skills cover the following four areas and competencies:

Life Skills Areas Competencies

Personal	Social	Academic	Vocational
<ul style="list-style-type: none"> • devotion to the one and only God, • having noble morals, • understanding oneself, • believing in oneself, • self-study skills, • rational thinking, respecting oneself, • becoming a human who reflects the morals of God, • reaching individual optimal potential 	<ul style="list-style-type: none"> • working in a group, • demonstrating social responsibility, • being responsible, • managing emotions, • interacting with the community, • participate in local and global culture, • developing physical potential, • sportsmanship, • discipline, • co-operation • healthy living 	<ul style="list-style-type: none"> • having knowledge, • using scientific skills, • scientific attitude, • scientific thinking, • thinking strategically, • life long learning skills, • communication, • skills to further develop their scientific and technological skills, • critical, creative and independent thinking, • decision making, • problem solving skills of research and exploration • able to use technology 	<ul style="list-style-type: none"> • skills connected to a profession, which link with one specific area such as sewing, farming, raising animals, automotive, business skills, ICT skills, and industry • good attitude for the work environment.

⁷ Despite de-centralisation the mindset of many districts and schools is centralized and they still expect the central government to develop everything and give to them.

Personnel in the formal education sector of MONE believe that life skills are **not** an **independent** part of the curriculum, and they cannot and should not be taught separately but developed through the whole learning experience. All teachers have the responsibility to make sure that children develop life skills. The competencies cover the knowledge, skills and attitudes students need for life so when the curriculum is implemented fully and well then life skills will automatically be developed and not have to be extra or an add on. Students possessing life skills are supposed to be the end product of the whole formal curriculum. However, according to MoNE, the development of life skills is considered particularly important in JHS, as this is the end of the period of compulsory basic education and only around 32.2% of SMP students move onto intermediate education.

ICT. ICT is included in the competency-based curriculum both as a **subject** and as a **learning tool**. The phrase 'as a tool' means that students are expected to be able to use ICT to support their learning in other subjects. The aim is that students can learn 'thinking skills' in ICT meaning that they do not only learn to operate ICT equipment but learn how to apply technology to all life and work situations. This is considered the key life skill of the ICT curriculum.

The introduction of ICT as a tool for learning is considered by MoNE to be the principal challenge of the curriculum. In the past ICT equipment in the school and the use if it was considered the realm of ICT teacher so other teachers would never go to the room let alone use the equipment in their teaching. Encouraging all teachers to use ICT in their teaching will be a major hurdle. Not only do MONE require that all teachers use ICT in their teaching, but they hope in future that teachers are able to produce their own ICT materials for teaching such as CD ROMs.

7. The Local Content Curriculum

The curriculum may also include local comparative advantage or the local content curriculum. This curriculum is supposed to be used for some instruction based on the special needs, character and the potential of the region. The purpose of the local content curricular is to develop knowledge, skills and attitudes which are relevant to the local situation and which are not already addressed in other subjects. According to the national guidelines [1994]⁸, there are three subject areas schools for local content curriculum:

- Vocational skills [Relating to a profession specific to the regional]
- Local culture [Often the local language]
- Local art [Local arts and handicrafts]

The time set aside for local content curriculum is currently a minimum of 2 hours and a maximum of 6 hours per week. However, in reality, schools often only teach the local content curriculum for 2 hours due to the demands of the core curriculum. However, this can vary from school to school.

The policy states that schools can choose their own local content. They can do this in co-ordination with the head of the school committee and the district education office. The same is correct for Madrasah local content can be selected by the Head of the Madrasah in co-ordination with the head of the Madrasah Committee [Majelis Madrasah] and with Kandep or perhaps the Madrasah Development center.⁹

The reality is that in most areas it is the districts and/or province, which decide what schools will do. For example in Jakarta, [Daerah Khusus Jakarta] they have decided to deliver curriculum called Pendidikan Lingkungan kehidupan Jakarta [PLKJ], which focuses on the

⁸ To date, they have not been changed

⁹ Think tank for Madrasah education nearly one in every province

life environment in Jakarta. In Central Java, the province has chosen to teach 'bahasa daerah' [Javanese] as part of the local content curriculum. In Bali, schools are teaching English. In West Java, schools with ICT equipment have been teaching computers. Some schools use the local content curriculum to cover teaching in subjects, which do not have enough time in the core curriculum.

Consequently, there seems to be no firm principle that covers the way local content curriculum is implemented. The law under school/Madrasah based management is that schools can develop their own local content the reality may be different depending on the location, resources, interest, opportunity, capacity and mindset¹⁰ of the school to do so.

8. Activities for self-development

The third component of the competency-based curriculum is **Pengembangan diri** or activities for self-development. The aim of these activities is to **consolidate** the learning that has taken place in the core curriculum and in the local curriculum to "strengthen and enrich competencies, which is not obtained through the local content and the syllabus and provide students with the opportunity to pursue activities which they are interested in or have potential in. Activities for self-development include:

- Routine activities with the flag, activities on health and hygiene
- Non routine such as developing and implementing a code of conduct for environment
- Activities linked to neatness, vocational, discipline, politeness and dignity
- Activities consisting of training connected with values and broadening life insights, including skills and perceptions of success in life including visits, charities, information, career education and career days
- Activities for counseling students, in connection with the development and private problems, social, studying and careers.
- Other activities including sports or vocational skills

According to BSNP, these activities must be offered with the appropriate content and approach for the activities and the children in the school. There is no fixed time/schedule for schools to implement these activities, they can be done at any time, focus and approach the school thinks is necessary. However, the minimum amount of time the school should devote is 2 hours.

¹⁰ Meaning the mindset is still centralized and schools may often follow directives from district or province

D. An Analysis of The KBK

MoNE has taken steps to introduce KBK to the education system. The following paragraphs discuss the status of this introduction.

1. The Rollout

All provinces/districts/ schools are required to follow the national curriculum. In practice, implementation has been occurring in phases and only limited samples of schools are currently implementing the new curriculum. The term used by MoNE is ***implementasi terbatas***, meaning only schools assigned by the province or districts are using the new curriculum. When asked who made the choice and what criteria was applied in the decision, the answer is-- those schools that have high achievement scores were chosen to be part of the 1st cohort. As a result of this phased implementation, there are currently two curricula being used in Indonesia at this time.

Differences in curriculum between public and private schools are also present. Many private, religious schools have their own curriculum. However, some religious schools directly ask for the new curriculum document. For example, in Surabaya, some Christian schools and several Islamic schools follow the new curriculum. About 15-20 %, of these institutions asks for technical assistance to follow and implement the new curriculum, an encouraging sign.

There are many elements supporting the roll out of the competency-based curriculum in Indonesia. The following table identifies the various parts of the program that were developed to support teachers to implement the new curriculum

Elements Supporting the Competency-Based Curriculum

Element	Description
Legal and Regulatory Underpinning	<ul style="list-style-type: none"> National Education No. 20, 2003 Government Regulation No. 19, 2005: The National Standards of Education
Standards for curriculum	<ul style="list-style-type: none"> 4 Booklets of Competency Standards for 4 primary subjects 4 Booklets of Competency Standards for jr. secondary subjects Detailed book of primary and jr. secondary under preparation
Manuals	<p>Six documents produced in 2003 and 2004:</p> <ol style="list-style-type: none"> Kurikulum Berbasis Kompetensi [<i>A brief rationale for the new approach and a description of how it will be organized</i>]. Model Sistem Penyampaian Kurikulum (<i>A brief overview of KBK explaining its principles, how to implement, and how to evaluate performance. Serves as a companion piece to the above publication</i>). Pengelolaan Kurikulum di Tingkat Sekolah [<i>Guidelines for carrying out the KBK in schools</i>] Model Pelatihan dan Pengembangan Silabus [<i>A booklet providing guidelines for developing syllabi</i>] Kegiatan Belajar Mengajar yang Efektif [<i>Guidelines for developing effective learning activities</i>] Pedoman Penilaian Kelas [<i>Guidelines for class based assessment</i>]
Instructional materials	None developed
Training Modules	None developed (part of new directorate recently created)
Rollout Plan	None developed but rollout taking place

Some teachers have been trained to implement the competency-based curriculum. In the past, training primary and junior secondary teachers to implement the curriculum was the responsibility of the curriculum sub directorate under the directorates for primary and Junior High school. The sub directorate used a training of trainers approach. A central training team was created with staff from the sub directorate and personnel from the curriculum center, universities and with other experts¹¹. The central training team trained a 'National curriculum development team' in each province. This team consisted of provincial curriculum staff, instructors, and lecturers at local universities, school supervisors and selected key teachers. To date, these teams have been trained twice. The National curriculum development team, then worked through either the national standard schools¹² or through a co-ordination meeting with district education departments to socialize the curriculum and support them to train teachers.

To ease training, teachers were assessed and divided into four groups. The first group consisted of the most competent teachers and they received training for a week. The second group received two weeks training, the third group three weeks and the fourth group, which included the least competent received four weeks training. The sub directorate has not conducted training in all subjects, only Mathematics, Science, English and Indonesian. The extent and quality and success of this training has not been assessed, but according to the sub directorate there are many schools, which will not be ready to implement the competency based curriculum until 2011. It is not apparent whether these sub directorates and this process will be used to socialize the curriculum in 2006.

It is yet unclear how the new documents developed in 2005 will be rolled out. The competencies seem to be basically the same the biggest change is that schools are expected to develop their own syllabus. Rollout of any new reform depends on the delivery of education and training programs to build the necessary knowledge, skills and understanding among stakeholder audiences.

¹¹ Each central training team had a training coordinator frequently from a university

¹² Which are now supposed to become International Standard schools

Chart of the 2004 New Curriculum (mathematics)

Topics	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9
Mathematical Operations	<p>Simple math operations (+ -) with unit numbers</p> <p>Ordinal counting</p> <p>Telling time by the hour, half hour, Time by pagi, sore, siang</p> <p>Simple problem solving</p>	<p>Simple operations, (+, -) using 2 place numbers</p> <p>Interval counting by odd and even numbers</p> <p>Use of number lines or bigger than, smaller than</p> <p>Telling time using different forms.</p> <p>Time by part of day, am, pm meridians</p> <p>Simple problem solving</p>	<p>Simple calculations using (+ -) and 3 place numbers</p> <p>Borrowing or renaming place values of numbers</p> <p>Estimating answers</p> <p>Concept of more than (>) and less than (<) symbolic language</p> <p>Metrics and equivalents</p> <p>Two-step operations in problem solving</p>	<p>Math operations (+ - , x, ÷) with unit numbers</p> <p>Multiplication</p> <p>Long divisions, with remainders</p> <p>Fractions and Estimating</p> <p>Negative and positive numbers on the number line</p> <p>Telling time 24 hours, relation to degrees, use of roman num</p> <p>Metrics</p> <p>Roman numerals</p> <p>Problem solving using real life situations</p>	<p>Complex numbers, operations, (+, -) using</p> <p>Square numbers, cube numbers, Adding, subtracting, multiplying dividing fractions</p> <p>Greatest common denominator</p> <p>Least common denominator</p> <p>Common factor</p> <p>Several - step problem solving techniques showing solutions</p>	<p>Cube roots,</p> <p>Mixed fractions, multiplying and dividing mixed fractions</p> <p>Factorization</p> <p>Mastery of mathematical operations</p> <p>Statistics and probabilities</p> <p>Collecting data and making symbolic representations</p> <p>Problems solving skills sung real life situations</p>	<p>Rounding numbers</p> <p>Complex operations</p> <p>Properties of numbers, Estimation</p> <p>Discovering the properties of the operations, addition, multiplication, subtraction, division,</p> <p>Associative property</p> <p>Add the opposite property</p> <p>Problem solving</p>	<p>Inequalities equations</p> <p>Function tables,</p> <p>Venn diagram, similarity and differences</p> <p>Linear algebra</p> <p>Using mathematical symbols and mathematical languages</p> <p>Problem solving</p>	<p>Relating concepts learned on real life problems</p> <p>Probability, statistics</p> <p>Grouped data:: mean, mode, quartiles, percentiles</p> <p>Algebraic equations, Polyno9mials, Quadratic equations</p> <p>Exponents</p> <p>Square roots</p> <p>logarithm</p>
Geometry	<p>Simple shapes: square, triangle, circle, rectangle</p>	<p>Plane figures, (length, width, height)</p> <p>Understanding properties of solids)</p>	<p>Areas, measures of triangles, construction of shapes using a straight edge</p>	<p>Congruent angles, lines, areas, Properties of shapes: square, triangle, rectangle, circle</p> <p>Line of symmetry</p> <p>Constructions, using the protractor</p>	<p>Unit fractions in geometry</p> <p>Symmetry, reflections, and mirror images</p> <p>Relationships between different geometrical shapes</p> <p>Volume and property of solids (3 dimensional figures)</p>	<p>Cartesian coordinates</p> <p>Use of simple algebra in geometry problems</p>	<p>Circle measures, Circumscribing the circle, circumference</p> <p>Chords, segments,</p>	<p>Pythagorean theorem</p> <p>Different variables in a Cartesian coordinate</p> <p>Intersecting lines</p> <p>gradients,</p> <p>Linear equations</p>	<p>Logical proofs, statements, predictions, , concluding from proofs</p> <p>finding patterns</p>

2. The teaching and learning process

A competency-based curriculum derives from Bloom's taxonomy of educational objectives and his mastery learning approach. Competency-based instruction is designed around the inductive and experiential instruction and outcomes. This demands a different type of approach to teaching and learning. The new competency-based curriculum not only address the cognitive domain but a much wider scope in terms of the affective domain of teaching and learning. This forces schools and teachers to rethink the way **instruction** should be delivered to students. To date, in Indonesia, teachers have tended to opt for 'traditional teaching methods'. Traditional teaching is defined as teacher-centered, using direct instruction, typically using lectures, discussions, textbooks and worksheets. In the curriculum guide examined for this paper this is termed "classical" teaching. It comprises the lecture method followed by a whole-class question and answer method. Sometimes there is a group discussion. Indonesian teachers have long been exposed to the deductive way of teaching, which is highly teacher –directed. The new national education standards and the curriculum demand a very different approach to instruction from teachers. The national education standards request that the teaching and learning process is more *'Interactive, inspirational, challenging, motivating the students, to actively participate and providing sufficient space for the initiative, creativity and independence.'* Curriculum guidelines from both 2003 and 2005 also call on teachers to use a variety of methods in their teaching, such as small group work, discussion and practical activities. The clearly will have an impact on the way that teachers think about their daily lessons.

3. Instructional Materials

In Indonesia, teachers generally see the textbook as the most important instructional tool at their disposal. The National Textbook Center no longer writes the textbooks, which are now supplied by private publishers. The role of the NTC is to evaluate publisher textbooks and recommend them to districts and schools. It is up to the district and schools to decide which books will be used. The KBK may have an adverse affect on publishers who have invested a great deal of MoNEy in producing recent textbooks. It is likely the books do not align with the new standards.

Two issues need to be addressed concerning textbooks. Teachers need to be trained on how to use a textbook as one of many instructional tools rather than following it in sequence. The CLCC and MBE programs provide training in how to develop low cost/no cost materials using community resources. They train teachers on how to use student work to motivate students and to serve as exemplars by hanging student work on the walls. Other projects such as REDIP have used the MGMP and KKG as venues to train teachers on developing their own instructional materials. Thus, there is a strong foundation for providing training in how to develop instructional materials to support the KBK approach. Teachers who have not participated in training under externally funded projects often do not use any instructional materials other than the blackboard and textbooks if they have them. Thus, KBK training is critical to changing how teachers plan and implement teaching/learning in the classroom.

Additionally, publishers need to be trained on the new KBK and how to align future textbooks with the competencies for various grades. They must be shown how to include active learning techniques in the exercises and assessments they prepare. They need to be trained on developing other instructional materials that can be used by teachers as active learning tools.

4. **Assessment**

Assessment is the way educators' measure student learning. Assessment encompasses testing but also includes a number of other techniques that align with more authentic or real world techniques such as letter writing, reading a computer manual, debating an issue, organizing and presenting findings of a research project, and many others. Assessment is also used to ensure learning takes place and to determine if further study is required or if the student can move on to the next competency. In this way, assessment is part of the learning process rather than a technique for summative evaluation.

In Indonesia, assessment is now implemented at two levels of the system for formal education: classroom-level and national-level. The national-level assessment system is new, the UAN [Ujian Akhir Nasional] and UAS [Ujian Akhir Sekolah] having replaced the EBANAS. The UAN is the national government examination and incorporates **three** subject areas at JHS level:

- Indonesian
- English
- Mathematics

BSNP will undertake the national exam. There are discussions at the moment within BSNP on whether one of the natural science subjects should be included in the UAN. The national examination can be carried out at least once and at the most twice in an academic year¹³.

The UAS is a school-based examination. This covers all subjects matter areas. This UAS is a final examination in all subject matters except science and technology and takes into account the results of the teachers' continuous evaluation. Therefore, the UAN is combined with a school examination UAS to determine if a student passes and graduates.

The criteria for passing the national examination are currently being discussed and developed by BSNP. According to current documents, it will be targeted to:

- Intelligence
- Knowledge
- Personality
- Noble character
- Skill to live independently
- Skills to continue studies

This system of assessment has been implemented in schools for the past two years. MONE personnel have two identified two main problems. During continuous class based assessment and school tests, teachers are only assessing students against one dimension of the competency-based curriculum - knowledge. This is the dimension that they are most accustomed to assessing – whether students are right or wrong. They are unfamiliar with assessing the higher order skills, attitudes and contextual understanding and are not yet able to perceive that all students can achieve to some degree. Furthermore, continuous assessment is being used only as a technique for summative evaluation and not as a part of the learning process. Continuous assessment is a critical tool in KBK and should be used as a diagnostic/prescriptive technique to ensure learning

¹³ In 2004, the UAN was carried out on two occasions, but according to BSNP, this was not a popular choice and in future they will only undertake it once a year

and not only a summative test to record a student grade. Thus, the concept of assessment is not **fully** understood by Indonesian teachers. KBK cannot be successful until teachers use continuous and authentic assessment techniques in their classroom. Continuous assessment is part of the training that teachers receive when learning about active teaching/learning so that all teachers within DBE should receive such training.

Since teachers can now contribute to the final grading of students through classroom assessment, teachers have more control over determining whether a student can graduate. Theoretically, teachers have less pressure to “teach to the test.” However, although the curriculum and methods of assessment have changed, the national and school level examinations have not been aligned to the new curriculum. At the moment, the national examinations are mostly multiple-choice items. It addresses the lowest level of Bloom’s taxonomy. With the advent of the KBK, the items in the test bank may or may not be aligned with the performance standards for subjects at the different levels of schooling. Some questions may measure learning that is not part of the competencies to be taught, while other items might not be aligned with the appropriate grade level a competency is taught. Further, as a multiple choice test, it does not fit well with the concept of measuring student performance, especially as necessary to measure higher order learning. As a result of the disassociation between the curriculum and the national examination, teachers have been developing and implementing assessments based on the requirements of the competency based curriculum in the first two years of JHS but change and ‘teach to the test’ in the third national examination year. In this way, they can assure that their students have the best chance to pass the examination. This change is confusing for teachers and students alike. This issue is being addressed by the National Testing Center, but discussions about how to proceed are at an early stage so the direction of change is unknown at this time.

5. *Professional Development and Awareness*

During 2006 BSNP will develop standards for teachers. These will comprise of an **academic qualification** and **competence as learning agents**. Teachers will be expected to be physically and mentally healthy and have the ability to materialize the objectives of national education. In terms of qualifications¹⁴, all teachers have to have a minimum academic qualification in the form of an S1 and in terms of competency, all teachers must have a professional certificate as a teacher. The principles set out in the BSNP document state that ‘learning agents’ must have:

Competencies	Examples
Pedagogical competence	Ability to manage the learning process, planning and implementing the learning process, the evaluation of learning results and the development of students]
Personality competence	Steady, mature, wise, has authority, can be an example for the students and has noble character]
Professional competence	Ability to master learning materials
Social competence	Ability to be part of society, effective communication and interaction with students, other teachers, educational personnel, parents and guardians of the students and the community

Higher Education Institutes and the Directorate General for Higher Education have already developed teacher competencies for initial teacher training courses and MoNE already accredits these. These competencies have been used in previous assessments

¹⁴ According to the Education law [202003] without a diploma and or expert certificate but has special expertise that is acknowledged and needed may be appointed after a feasibility and equivalency test

of in service teachers and they will probably be used as a transitional provision while the standards are being developed. It is possible [but as yet uncertain] whether these standards will be adopted as the new standards or whether new ones will be created. It is unlikely that there will be much difference in the competencies required for pre – service and in service teachers, except to include all the previous experience of the in service teachers. Nevertheless, within 3 years, all newly qualified teachers will have to meet the standards laid down by BSNP and in 15 years all in-service teachers have to meet these standards. This will require a great deal of in-service training and professional development.

For in service, this is an enormous undertaking for two reasons, the quantity and quality of the teachers already in service. There are more than 2.9 million serving teachers in Indonesia schools distributed over 30 provinces. MoNE would have to test and certify nearly 200, 000 teacher per year to meet the 15 year target. The current qualifications and competencies of the teachers fall far short of the national standards as the following figures illustrate:

- In 2002/3 of the teachers serving in **primary school** 91.65% did not meet the standard of S1 and 49.3% were found not to have adequate competencies to teach
- At the same time in SMP¹⁵ 57.7% of teachers did not meet the qualification requirement and 39.9% were found not to have adequate competencies to teach
- 47% of MT teachers did not meet the qualification requirement in 2003/4. 30% of Public MT and 50% of Private MT teachers were under-qualified¹⁶
- 85% of all MI teachers did not meet the standard for S1, which included 77% of the public school teachers.

Professional development has been centrally driven for years. Pre-service has been the responsibility of FKIPs and to a lesser extent, the Open University. In-service has been the responsibility of the BPPG or provincial training centers operated by MoNE.

MoNE has created a new Directorate General entitled **Directorate General for Quality Improvement of Teachers and Educational Personnel**. Under this DG, two directorates – Directorate for Teacher and Educational Personnel of Non Formal Education and Directorate for the Improvement of Education and Training will have direct responsibility for teacher development.

Under management of these Directorates are a number of centers for teacher training. For formal education, this includes 30 LPMP or which are Quality Assurance Centers and 12 teacher training and upgrading centers. The 12 centers include six for vocational training and six for academic/subject matter training. There are also 30 Madrasah development centers and 57 community learning resource centers attached to Madrasah throughout the country. In addition to these national bodies, some Dinas Pendidikan Kabupaten are planning to create teacher training institutes and build capacity of the KKG and MGMP organizations where teachers can meet in clusters to determine ways to define problems and improve quality of the teaching/learning process.

The new DG has expressed interest in expanding the supply-side professional development system to create a demand-side mechanism through schools and KKG/MGMP activities. The vision is innovative and with support, likely to become a reality. With the involvement of the FKIPs in an expanded role to provide in-service

¹⁵ All data on JHS from the Directorate General for Quality Improvement of Teachers and Educational Personnel'

¹⁶ All data on MT's from ADB situation analysis report of Madrasah

assistance and the willingness of the Open University to align its programs with KBK, the potential for a comprehensive professional development system to include managers and other specialists, is possible.

The problem is that the various organizational components themselves are new and in need of institutional building before they can be linked into a complete professional development system. The linking of subsystems is essential to avoid fragmentation of service delivery, a condition that has existed for many years. The LPMP, for example, was defined in initial legislation to have over 40 responsibilities. This is unrealistic and a dilution of resources. The mission needs to be redefined with more focus.

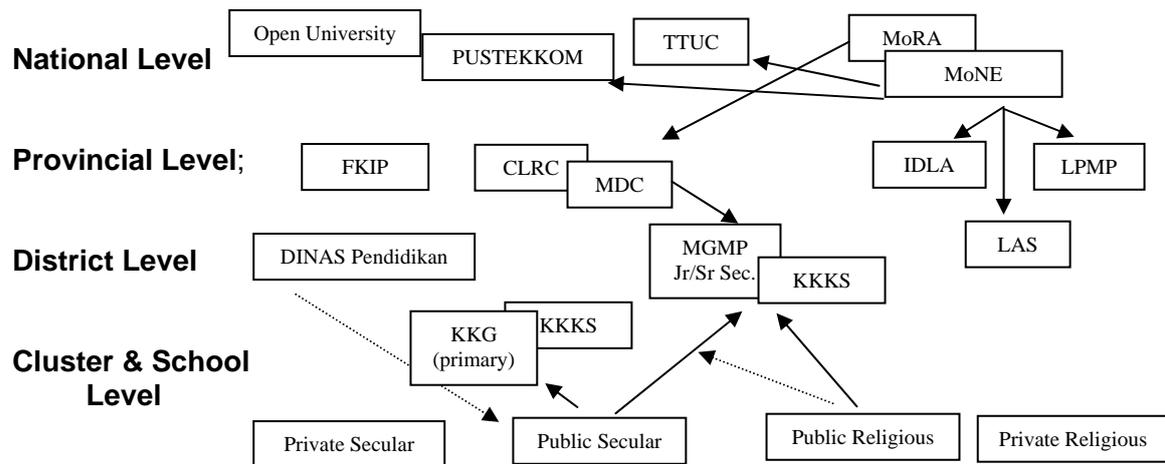
Teachers from MT are part of the same MGMP as teachers in MoNE schools. Sometimes, MT teachers attend training with MoNE counterparts and sometimes separately. On occasions, training of teachers in MORA schools is carried out through a different structure from MoNE teachers.

57 model Madrasahs have been established in Indonesia. There are 'master' teachers in each of these Madrasah with responsibility to train other Madrasah teachers in the district. Attached to the model Madrasah are Community Learning Resource Centers [CLRC]. The CLRC are equipped with residential and training facilities including computers, language laboratories, science laboratories and libraries. They are expected to provide various activities through their links with MGMP including developing instructional materials, demonstration of effective teaching methodologies, in-service training and hosting MGMP activities. However, results from an assessment by ADB¹⁷, found that links with MGMP were weak or non-existent.

There is a large gap between MoNE schools and MoRA schools and between public and private schools. All schools and teachers have to adhere to the same standards, but is the system responsible for providing a seamless approach to professional development among these four categories of school – public secular, private secular, public religious, and private religious – or does each category require a separate professional development scheme? These and other policy issues must be addressed before a system can be developed. In the meantime, professional development activities continue through donor funding and through different levels of government funding. The donor community is attempting to coordinate activities through CLCC, MBE, the DBE program and Australian initiatives. It may be that these initiatives can serve as pilot sites for the CDC, NTC, and the new professional development DG. In a recent review of changes in the delivery of pre-service and in-service development, the following picture emerged:

¹⁷ 'Analysis of the current situation of Madrasah Education' A document prepared by SMEC for the Madrasah Education Development Project' of ADB, October, 2005

Current Structure for Delivering Pre and In-service Programs



Open University: OU is the main provider of distance education. It is authorized to offer both pre-service and in-service professional development programs and can expand its audience beyond teachers to encompass headmasters, educational specialists and managers. It maintains offices in all provinces but is considered a national institution able to apply the same standards of performance throughout the country. Although having experimented with ICT in the past, most programs are now delivered through paper/pencil format.

PUSTEKKOM: The Center for Information and Communication Technology, under MoNE, has as its main task to help solve education problems in Indonesia by utilizing ICT (Information and Communications Technology) to improve the quality of basic education, especially in remote areas. Since the 1970s, it has been using radio broadcasting and print materials to provide in-service teacher training. PUSTEKKOM also develops and promotes various instructional media such as sound slides, audio, video, CD ROM, Computer Assisted Instruction (CAI), multimedia packages, instructional radio, and educational TV and has a dedicated educational TV channel launched last year.

FKIPs: FKIPs limit their role to pre-service education. Formerly independent teacher training institutes (IKIP), they have been merged with universities and have become faculties of education. Some professors engage in individual in-service delivery, but the FKIP does not see itself as an in-service provider. All programs are delivered on campus, faculty having little or no contact with schools. Pre-service students do have a field experience requirement as part of their training. Under current regulations FKIPs provide a two-year diploma and teaching certificate (AKTA) to qualify primary teachers (D2/A2), a D3/A3 qualification for junior secondary teachers and an S1/A4 (four year undergraduate degree) for senior secondary.

MoNE/MoRA: The sub directorates for curriculum previously had a role in socializing and training teachers on the competency based curriculum. With the establishment of the Directorate General for Quality Assurance of Education personnel, their role may change, but this is not yet become apparent.

MoNE Training Centers: MoNE manages four types of training and teacher resource centers for formal education and one type for non-formal education (five Institutes for Development of Non-Formal Education and Youth). There are 12 Teacher Training and Upgrading Centers (6 vocational and 6 non-vocational) located in Jakarta and other

major cities in Java. It has converted the 30 provincial BPPG teacher training centers into Institutes for Quality Assurance and assigned a number of responsibilities including in-service training. Other responsibilities include M&E and action research. They have boarding facilities and a variety of laboratories and a library and located near the provincial capitals.

MoRA Training Centers: MoRA oversees Common Learning Resource Centers (CLRC) in association with Madrasah Development Centers (MDC), which have been established in most provinces. They are equipped with residential and training facilities similar to the LPMPs and include language laboratories, science laboratories, and libraries. The CLRC are expected to provide various activities through their links with MDCs and subject teachers working groups (MGMP) mostly at the senior secondary level. The MDCs serve as “think tanks” for MoRA provincial offices and are not officially recognized.

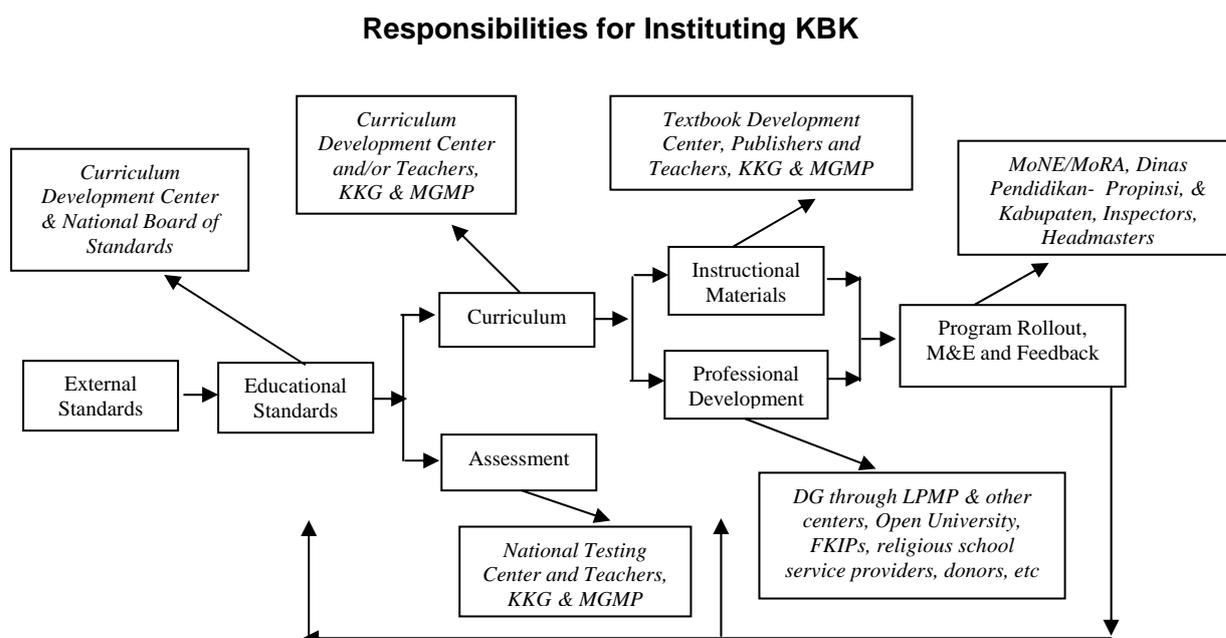
Dinas Pendidikan Training: With decentralization some Dinas offices have seen the necessity of establishing their own teacher development and resources centers. This is a new concept and little is known about where they are located and the exact details of their mission.

KKG/MGMP and KKKS: These structures are recognized in previous regulations and are to serve as venues for same grade teachers (KKG) at the primary level and same subject teachers at the junior and senior secondary levels (MGMP). The KKKS serves as a venue for school principals. Currently there are approximately 5,500 KKGs and 11,000 subject MGMPs throughout Indonesia. Both MoNE and MoRA schools participate in the same KKG and MGMP. Given the large number of primary schools, they meet in clusters at the sub-district level while junior secondary MGMP meet at the district level. The JICA-funded REDIP1, 2 and 3 projects continue to experiment with junior secondary MGMP and KKKS by bringing all schools in a sub-district together including public, private, secular and religious. The project has reported some interesting results concerning sharing of ideas, mainstreaming private and religious schools, and unique problem-solving. Interviews with participants of the current formal MoNE and MoRA systems report poor attendance, lack of focus on improving quality, and other results that adversely impact on the mission of these structures.

This picture of education and training is comprehensive in the nature and types of organizations available to deliver the necessary short, medium and long-term professional development mechanisms. There are four short-comings. First, each organizational structure works in a vacuum having little contact or cooperation with the others. Second, the FKIP system is responsible for pre-service only, any participation in in-service is purely on an individual basis by professors. Because of this, faculty are not in touch with what is happening in schools, and as a consequence teach more theory than practice as it applies in the Indonesian context. Third, the system is designed to deliver one-off training with little or no follow-up so it is not known whether training has been effective. Since training is directed at improving individual behaviors, the schools and other parts of the system may prevent teachers from practicing what they learn. An organizational improvement model is needed to replace the individual improvement model. Fourth, the approach is purely supply-side, the decision as to what should be taught is made by the education and training institutions themselves. Although there are structures in place at the cluster and district levels (KKG, MGMP, and KKKS) they are not being used to create a demand-side system where these organizations are empowered to decide what they need to know and how to access resources.

E. Conclusions and Recommendations

The KBK is the underpinning for educational reform. It determines how education is to be delivered whether at the primary, junior secondary and senior secondary level, and whether through the formal or non-formal system. With the above analysis, it is clearer which organizational structures are responsible for which parts of the KBK, and all parts or subsystems must work in tandem as a system if effectiveness and efficiency are to be achieved. The following diagram identifies most of those organizations responsible for the different parts of the KBK system:



Any donor assistance to build the KBK system should be designed to support the institutions responsible for the development, implementation, and management of KBK. Whereas required assistance may be limited in one area, possibly the creation of standards, other areas may require significant assistance such as rollout of teacher training. From the donors' point of view, assistance must be structured to support the mission, intended outcomes and regional constraints of the particular project. If these two conditions can be met, then outcomes will be achieved that benefit all stakeholders.

1. Conclusions

The following represent the conclusions about the KBK system:

Standards: Standards have been developed for the curriculum and they are binding on all schools. Standards have been developed by educators and may not reflect the greater need of society. What should have taken place is the involvement of society's members – business owner, health care workers, scientists, and others – in defining the minimum standards for school graduates to succeed as adults. Since this was not done, it will be left to teachers to determine real world contexts to develop curriculum and instructional materials

It is likely that new curriculum will not be approved until mid December in 2005. Although the organization and draft documents reflect in-depth understanding of some elements of the process, it remains to be seen if the new standards will be stated as minimum performance-based outcomes for students. If not, it will be left to the teachers

to take standards to the next level of specificity. This has direct implications for what will be included in training modules directed at KBK teacher training.

There are a number of challenges facing the successful implementation of KBK in the schools. Teachers have little experience in developing the indicators to measure a competency and designing a **syllabus** and therefore, little capacity to do so. BSNP will develop guidelines for syllabi development to support teachers and schools. Nevertheless, CDC staff are very clear that they are not sure how or whether schools will be able to do this and believe that some areas will still need the **centralized** approach until they are more confident. Therefore, they will develop model syllabi be developed to support the areas, which need help.

Teaching and Learning. The teaching and learning approach is expected to change to implement the competency based curriculum. Teachers are required to move from a traditional 'teacher centered approach' to a 'child centered approach'. Many teachers will find this challenging to do, especially in-service teachers, who may have been teaching for many years. While there are some general principles to the active learning teaching approach, there are also some subject specific guidelines, which give some clear suggestions for a subject specific teaching, and learning [such as the Citizenship Praktik Belajar Kewarganegaraan PKB] and teachers may need support to adapt to these new methods.

Assessment. The national **assessment** system is currently not structured to measure learning of intended outcomes of the new standards. Test items **must be aligned** with the standards so that what is taught is measured and what is not taught is not measured. Further, the construction of test items needs to be more practical and authentic so as to align with real world applications. It is unlikely that the multiple choice format can be abandoned.

If teachers can use effective continuous assessment techniques in the classroom, higher order learning **can** be measured. However, since teachers can now contribute to a student's final evaluation for graduation (under the new UAN system), this level of assessment becomes very important. **Continuous, authentic assessment is a key topic for teacher development.**

Textbooks and other instructional materials. Publishers are unlikely to be aware of the changes KBK will have on the use of **textbooks**. This has the potential of creating conflict if it is perceived that teachers and schools will abandon the use of textbooks. Second, publishers need training on how to produce new textbooks in line with standards and how to develop textbooks that encourage the use of active learning in the classroom. Thus, the NTC needs to receive training on how KBK works.

Teachers need to see the new role for textbooks in the classroom under KBK. The textbook is only one of many instructional materials, which can be used in learning. Schools are expected to develop their own locally relevant syllabi and this should include teachers producing locally relevant instructional materials. However, teachers currently make limited use of their local environment to create instructional materials. Stones can be collected and put in jars to teach counting and place numbers; tree leaves can be collected for biology and labeled in English or French to teach a foreign language. Such an approach makes the curriculum come alive and has the added benefit of reducing the cost of instructional materials.

Professional Development. Since it is people that will make KBK a success, **professional development** and **awareness** is the most important part of the KBK development process. There are two levels. First, the awareness level acquaints those

not directly involved in KBK about what it is and why it is being instituted. Parents may fear change because it may reduce the possibility of their child passing the UAN. An awareness campaign is essential to change attitudes and behaviors of the broader community. Generally, Indonesia is good at introducing new initiatives through to the community level.

Second, those responsible for all parts of the KBK design, implementation and management need to be trained. Training is not **one-off** as is often the case in Indonesia. It is possible that those teachers who have been trained on KBK are not practicing it in the classroom because there is **no incentive** or **follow-up**. This is the reason that the professional development system must be institutionalized. The fear is that KBK will be introduced in the same manner as previous initiatives where those responsible know the vocabulary but do not possess the understanding. Each target audience responsible for some aspect of KBK needs to be trained and then implementation of that training monitored. If this is not done, the implementation of KBK will be sporadic and ineffective as a national initiative.

Implementation. Rollout needs to be **systematic**. Often the lack of appropriate funding limits national implementation of new initiatives in Indonesia. Without external assistance there are often limited resources, far below what is needed for a national rollout even if implemented sequentially over several years. Under the new system, financing of education is now provided from the national level to districts, where districts will decide on priority use of funds. This suggests a further problem in that some districts will see KBK as a higher priority than others. Also, the portion of KBK rollout funded by the center does not often reach the more isolated areas of Indonesia so that it may be concluded that unless this is a combined effort among, Center, districts, provinces and donors, the rollout will again be sporadic and not reach the more difficult geographic regions of Indonesia.

On a positive note, senior education officials are changing and many new placements are more oriented to improving the quality of education than maintaining the civil service approach to management. This has been occurring not only at the national level but at the provincial and district levels as well. This is very encouraging and makes significant change easier to achieve.

2. Recommendations

As a result of these **conclusions** and looking at them in the context of DBE2 and DBE3, we make the following recommendations to provide coordinated assistance to the development, implementation and management of the KBK program:

Use the standards as a guiding principle. The traditional donor model is to treat activities as if they were a project and to complete specific outputs, which are handed over to the beneficiaries. In contrast it is the intention of DBE2 and DBE3 to assist in the support of existing governmental organizations and work **within the context of the legal, regulatory and policy structure** with **counterparts** from appropriate agencies to meet their agenda within the limitation of DBE parameters. For this reason, the focus of these recommendations will be on developing training modules with counterparts from the CDC and Directorate involved in teacher training. This allows DBE to use limited resources to achieve the largest return from its interventions.

Work with counterparts to develop a series of training modules for target audiences. Training modules will be needed to ensure that stakeholders understand the purpose and how to implement KBK. Thus, training will encompass both skills transfer and awareness. As suggested earlier, modules are needed for teachers and

headmasters for the range of applications of KBK from converting standards in the curriculum to a syllabus reflecting the local context, preparing KBK lesson plans, developing instructional materials, establishing an active learning environment, conducting continuous assessment, and using KKG/MGMP/KKKS as the venue for continuous improvement of the teaching/learning process. The modules should look at subject specific issues. DBE3 may consider including modules to support teachers to understand how to include the cross curricular themes in their teaching.

In addition one or more modules are needed to use with other stakeholders as awareness training. Target audiences would include representatives from school committees, representatives from Dinas and Kanwil offices at the sub-district, district and provincial level, and members of district education councils (for MoNE and MoRA schools as well as private schools).

Finally, training should be provided to the **National Testing Center** and the **National Textbook Center** to acquaint them with how KBK will be instituted at the school level so they can align tests and publisher materials with the new standards approach. At least two weeks of training will be required to implement the various skills training modules and one day of training to conduct the awareness training. Modules will be developed in a manner consistent with KBK so that participants can learn by doing. Also, alternative delivery systems will be considered in the design including the intent to video tape training sessions and converting to CD formats and for delivery by the Open University. Modules will be developed by the CDC and teacher training advisers from DBE.

Field test modules with master trainers identified by the appropriate agencies and within project provinces. The question arises as to who will deliver the training to target audiences. Consistent with the approach, master trainers are to be selected from existing institutions and include those from the DG training structures such as the LPMP and DBE2 and DBE3 will need to conduct a survey of all potential training institutions within the six provinces of the program. One innovative approach will be to involve FKIP faculties as institutions rather than as individual trainers as has been the case in the past. DBE2 is examining ways in which FKIPs can offer in-service training for credit hours so that teachers and other specialists can accumulate credit towards advanced diplomas or degrees increasing the emphasis on professional development.

Meeting the standards means that teachers can expect increases in salary and chances of promotion. This will serve to motivate teachers and other specialists to attend training, possibly at their own expense. Thus the selection of master trainers from the provinces should be organized within this context so that all training, whether provided by FKIP faculty or LPMP instructors or other official organizations, can lead to credit hour awards.

Since this is a DBE target outcome, team members will work with appropriate government officials from the Directorate of Higher Education, Directorate involved in teacher training, Directorate involved in basic education, the Open University, and the FKIPs to examine the viability of this approach. In the meantime, trainees will be selected from the pool of master trainers participating in the DBE program so that materials can be field tested and then revised at the CDC.

Organize training across the six provinces involved in DBE. It is assumed that considerable time will be needed to design and field test materials as well as establish a formalized system for involvement of FKIPs in offering credit hour in-service training. DBE2 has made a commitment to work with FKIPs and assist them in developing 60 training modules. Also, the DBE2 university team will be mobilized to work directly with FKIPs to develop the credit hour programs and modules. From this, other linkages will

be fostered such as study tours to and from the USA. The KBK model can serve as the first set of programs that FKIP faculty adopt and adapt for credit hour awards.

While this is being negotiated DBE will work with the DG for teacher training and the CDC in designing a rollout of training modules in the six DBE Program provinces and develop a longer term plan to roll out across the nation without the assistance of DBE. Thus, the DBE program will help in the preparation of a strategic, three-year plan and one-year action plan for KBK rollout. This rollout will include the three years left in the DBE program where additional districts within the six provinces will be selected and mobilized.

Assist in establishing an M&E system. One major criticism of traditional in-service programs is the one-off nature of delivery. One reason for focusing on systemic change is to ensure that the system provides for continuous professional development. This is the reason for emphasizing the KKG/MGMP/KKKS cluster approach in delivery of training. These structures can use their regular meetings to continue to practice and evaluate the progress they are making in their classrooms and schools. DBE plans to involve district coordinators and master teachers in these meetings to observe, assist in improves the quality of such meetings and focus energies on improving the teaching/learning process. This, however, is a DBE goal and will not be sustainable once the project ends. Therefore, it is necessary to establish an M&E system using extant system personnel to evaluate the quality of teaching/learning improvement and to monitor that meetings and milestones are being met. The responsibility for a quality improvement M&E system starts at the school level with the headmaster and moves up the system to inspectors, and Dinas Pendidikan Kabupaten. At the national level the LPMP's role is to encompass quality assurance so they should participate in a formal M&E program so that information flows from the districts to the provinces and then to the national level. These personnel, and possibly others, form the network from the school to cluster to kabupaten to province to center for an M&E system. Although this is a potential structure, appropriate processes need to be designed to effect the necessary changes. DBE will work with appropriate agencies at the national, provincial and district levels to design an institutionalized system for M&E. DBE will further assist by establishing a trial system within its target provinces with the assistance of district and provincial coordinators. The purpose of the system will be to provide data about how the KBK system is being implemented and to institute a **process evaluation** system at the school level. Previously, inspectors visited schools infrequently and focused on evaluating the school rather than assisting teachers to improve. The purpose of process evaluation is to work with teachers to help them improve the teaching/learning in the classroom. This means that headmasters must learn how to be instructional leaders and inspectors to evaluate teachers using techniques that can provide immediate an un-intimidating feedback for the purpose of quality improvement. The concept of process evaluation should be a module that is developed by FKIPs and delivered to headmasters and inspectors who, in turn, train teachers in the process.

These recommendations are sequential and inter-dependent. Also, they are within the DBE brief so that DBE staff and provide significant assistance at the incipient stages of KBK, which is seen as a way to improve dramatically, the quality of education in Indonesia. They represent two levels of involvement as shown in the following diagram. As suggested, DBE will work with national, provincial and district educators to ensure they assume ownership, a key element of sustainability. DBE will work with counterparts from appropriate institutions to design procedures, develop selected training modules and develop an M&E system.

At the second tier, DBE Jakarta and Field-based staff will work with counterparts from training institutions to develop additional modules, as well as adapt them for alternative

delivery through OU and PUSDEKKOM. Also, Training will be provided in M&E to link with the M&E designed with higher-level educational institutions. Whereas DBE 2 will be involved with teacher training at the primary level, DBE3 will be involved with teacher education at the junior secondary level. DB1 and 2 will focus initially on primary level management training, but will examine how training will be extended to junior secondary education. A companion paper provides additional details about various working relationships especially dealing with the management training and development approach.

DBE1,2, and 3 Program Design for Professional Training and Development (within the context of Decentralization and KBK Initiatives)

