

Linking Decentralization and School Quality Improvement

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2004

A Framework for Understanding Educational Decentralization

Decentralization is a method of political reform that shifts authority and responsibility from one level of government to another. Often, the decision to decentralize affects many government bodies and functions including governance and management of education. The decision to decentralize may be based on a variety of intentions. Fiske (1996) cites many reasons and examples in education including:

- Brazil's attempt to promote local autonomy
- Mexico's desire to pay teachers on time
- Argentina's interest in sharing problems of funding education
- India's intent to foster democracy
- Chile's wish to encourage its laissez-faire ideology

The concept of decentralization encompasses a multitude of possibilities that is created by considering four dimensions: (1) Breadth of Transfer; (2) Degree of Transfer; (3) Location of Transfer; and, (4) Functions Transferred.

Breadth of Transfer. This involves the span of a national government's commitment to decentralize. While in some contexts, transfer may involve a small number of government bodies such as education and health, in other contexts, the transfer may involve most government bodies. In Morocco, the decentralization movement is restricted to education and is modest in its approach. By contrast, Indonesia's decentralization effort is extensive, involving all but five ministries. One ministry, Ministry of Religious Affairs (MoRA), remains centralized. Under the Education Act of 1984, MoRA assumed responsibility for education in government-funded religious schools. Its curriculum is aligned with that of the Ministry of National Education (MoNE). This has led to an interesting situation where secular schools are subject to decentralization regulations while religious schools are governed under a centralized system, even though both types of schools are equivalent in program and structure. In Argentina decentralization has been extensive including fiscal and structural reforms throughout the 1990s. This included a massive privatization program, a broad trade liberalization policy, as well as decentralization to the provincial level of education and health services (Galiani and Schargrotsky, 2001).

Degree of Transfer. Rondinelli (1984) condensed the classification of decentralization into three concrete categories.

- **Deconcentration** shifts authority for implementation of rules, but not for making them. Used most frequently in unitary states, this form of decentralization redistributes decision making authority and financial management responsibilities among different levels of the central government. This requires the establishment of regional and possibly district offices for the central government. Although it may appear that decisions are being made at district and provincial levels, actual

decision making is conducted by central government through its offices in those locations.

- **Delegation** means that central governments transfer responsibility for decision making and administration of public functions to lower level governments while holding them accountable. An alternative is to delegate responsibility to semi-autonomous organizations such as public enterprises, housing and transportation authorities and semi-autonomous school districts. Usually, these organizations have considerable discretionary authority and possibly are exempt from constraints placed on the civil service.
- **Devolution** indicates the transfer of authority over governance and management is permanent and cannot be revoked without some form of legal justification. The range of authority includes decision making, finance, and management to either lower level governments or semi-autonomous units of local government. In a devolved system, local governments have clear and legally recognized geographical boundaries over which they exercise authority and within which they perform local functions. Whereas deconcentration and delegation involve more administrative decentralization, devolution involves political and fiscal decentralization as well. This includes local taxing authority.
- A fourth category and the most complete form of decentralization – **privatization and deregulation** – shifts responsibility from public sector to private sector organizations. This allows functions to be carried out by businesses, community groups, cooperatives, private voluntary associations, and other NGOs. In these cases, government and the private sector may function in partnerships such as ministries of education providing partial funding to private schools. Deregulation reduces the legal constraints on private participation allowing competition from private suppliers for services that have in the past been provided by government monopolies. In education, this may mean a shift in the provision of textbooks from central government design, production and distribution to the private sector with lower level educational authorities selecting and purchasing directly from private publishing houses.

Location of Transfer. Generally, the transfer of authority may be made to one of several sub national levels. Sub national governments may be comprised of different levels such as provinces, regions or states; districts, communes or counties; sub-districts; villages; and in the case of education, the school. In certain cases, a non-political level may be created to house management authority. In Morocco, educational authority was devolved to Regional Academies, purely educational structures created by the King and located between the Ministry of National Education and the provincial governments. In Malawi, delegation of authority was made to the next level below the national government – the district by-passing divisions that are the regional offices of the ministry. In Indonesia, the national government’s education decentralization plan has bypassed the provincial government and has, instead, delegated authority to the districts but has emphasized that the decentralization model must be organized around the concept of school-based management and bottom-up planning.

Functions Transferred. Each government entity, whether agriculture, utilities, transportation or education, performs a range of functions. In education, functions may encompass personnel management, construction, program, testing, procurement, student management, financing, training and others. Different functions may be decentralized to different levels as suggested by the following table. Rideout and Ural's research (1993) involved a study of ten industrialized and developing country national education systems. Assessments of the location of decisions were made by a single research group and based on secondary sources:

Location of Decisions by Category of Decision (by Percentage)

Category	Central	Regional	District	Local
Governance				
Policy	90	40	10	10
Planning	90	40	10	30
Implementation	90	30	50	40
School Organization				
Structure	90	10	10	0
Minimum Requirements	90	10	0	0
Financing				
Recurrent	80	50	30	50
Development	90	40	30	60
Training:				
In-service	80	50	20	30
Pre-service	70	50	10	0
Management	60	40	60	50
Curriculum:				
Subjects	90	30	0	0
Content	90	20	10	20
Textbooks	80	20	10	30
Textbook Provision	70	30	20	40
Language Policy	100	20	10	0
Instructional Methods	70	30	20	20
Evaluation of Teachers	60	50	60	70
Monitoring:				
Accreditation	70	30	0	20
Examinations	70	30	30	90
Pupil Promotion	70	0	30	70
Discipline	10	10	30	90
Data Systems	60	50	50	60
School Evaluation	90	40	40	30
Research				
Needs	90	30	10	20
Conduct	80	50	20	20
Implementation	60	20	30	10
Shared responsibilities account for rows adding up to more than 100%				
<i>Source:</i> Rideout and Ural, 1993				

Educational systems exemplify a continual struggle between standardization and differentiation. Standardization is associated with centralized educational systems.

Centralization of educational governance, in turn, is associated with urbanization and population growth. Technological advances, economic competition, government's assumption of the role of financing agent, exponential increases in scientific knowledge and economies of scale gave rise to demand for centralization in educational governance and management. Thus, education quality was improved as a direct result of the ability to standardize the content and provision of education (McGinn and Welsh, 1999). Over time, centralization of government functions and responsibilities developed strong roots and powerful interest groups that are threatened when decentralization is considered.

Beginning around 1970, three major factors contributed to the decentralization movement. First, economic and political theory began to shift away from strong central government and a commensurate increase in the role of demand-side economic factors. The demise of colonialism, demand for increased democratization and the collapse of centralized planning created pressures to decentralize public institutions (Hanson, 2000). Economic and financial globalization further weakened central government. Second, the demand for an educated labor force doubled and tripled school enrollments throughout the world, placing a severe strain on centralized bureaucracies. Third, improved information and communication technologies allowed central governments to maintain control even as the government decentralized responsibility (McGinn and Welsh, 1999). This resulted in the creation of a variety of divergent or differentiated, decentralized systems.

Motives for educational decentralization may be reduced to a list of five:

- **Political Goals.** On one side of the argument, sub national organizations, both inside and outside the system, see that increased participation leads to their empowerment. The balance between standardization and differentiation continues to shift as a result of political pressures exerted by such special interest groups as ministry employees, political leaders, teachers and their unions, universities, parents, local communities, and students. In Mexico, the stated motive was to improve the quality of education; however, the government saw that it was necessary to strengthen policy control at the central level as well as break the power of the teachers' unions to achieve this (AbiSamra, 2001).
- **Administrative Efficiency.** One of the most radical examples of increased administrative efficiency occurred in New Zealand. The Pico Report of 1988 called for the elimination of all bureaucratic structures between schools and the national ministry. Implemented in 1989, at its completion, the Ministry of Education completely abolished regional administration, reduced its own staffing level significantly, and reallocated responsibilities for budget, staff employment, and educational decision making to individual schools. Each school is managed by a board of trustees; has a locally-prepared charter and allocated funds from the national treasury on a per-pupil basis. School-level staff have experienced increased workloads and have complained (Fiske, 1996). Nevertheless, system efficiency has allowed more funding to flow directly to schools for program use.
- **Educational Improvement.** Central governments offer a variety of arguments as to why they can no longer meet the rising cost to provide quality education. Cost-sharing systems involving sub-national taxation, borrowing, community and

- demand-side financing can increase the financial commitments through decentralization. Where central governments are unable to meet the full cost to provide schooling for children, decentralized systems that encourage community financing may be crucial (Kemmerer, 1992). In Chad, communities contributed 47 percent of the nonsalary budget through its parent-teacher associations (Patrinós, Ariasingam, 1997). Do these financial investments translate into school quality improvement programs? In a recent study by Galiani and Schargrodsky (2001) of decentralization in Argentina, they reported that on average, decentralization improved the performance of students' test scores. Other studies show mixed results, depending on the variables and methodologies used.
- **Financial Efficiency.** Encouraged by the thought that more local decision making will reduce the cost of producing a unit of output, different levels of the organizations may agree that decentralization will provide an organizational environment that improves efficiency. Jimenez and Sawada (1999) and King and Ozler (2000) report that their studies in El Salvador and Nicaragua yield results that demonstrate reduced users' costs and improved services as a result of decentralization.
 - **Effects on Equity.** Although the intent of decentralization may be to improve education services to rural poor, females or ethnic minorities, in a number of instances, decentralization may favor wealthier communities. In Burkina Faso, decentralization increased local costs to schools causing an increase in the nation's overall dropout rate (Maclure, 1994). In Morocco, decentralization has focused greater attention on the issue of rural and female student needs; however, this has yet to translate into specific actions. When this becomes a specific goal, as was the case in New Zealand on behalf of its Maori minority (Fiske, 1996), success can be demonstrated.

Most educational reformers contemplate a mix of these reasons when choosing to decentralize. Decentralization, however, cannot guarantee that objectives will be met simply by instituting some form of decentralization as some of the above examples suggest. The type and extent of decentralization reform may necessarily be linked to the stated objectives. If reform is mainly for administrative purposes, then deconcentration to a sub national level may be appropriate. Where quality and equity reform are the desired outcomes, devolution to the school-level may offer the best alternative. The decision to decentralize, however, is never as simple as a statement of a single objective. Objectives may be explicit with hidden motives embedded into the decision as was the case in Mexico.

If decentralization offers as many options as it does and if the range of complex objectives is wide, then is there a potential cause-and effect-relationship between particular configurations of decentralization and specific educational objectives? In other words, if educational objectives are known, are there decentralization patterns that create an enabling environment that allows the objectives to be achieved? Before this can be addressed, a framework for evaluating patterns of decentralization is needed. Winkler (2000) calls attention to an OECD methodology for measuring the degree of education

decentralization. The framework divides educational functions into four groups and sub functions:

Types of Decisions that May be Decentralized

<i>Organization of Instruction</i>	<ol style="list-style-type: none"> 1. Select school attended by student 2. Set instruction time 3. Choose textbooks 4. Define curriculum content 5. Determine teaching methods
<i>Personnel Management</i>	<ol style="list-style-type: none"> 6. Hire and fire school director 7. Recruit and hire teachers 8. Set or augment teacher pay scale 9. Assign teaching responsibilities 10. Determine provision of in-service training
<i>Planning and Structures</i>	<ol style="list-style-type: none"> 11. Create or close school 12. Select programs offered at schools 13. Define course content 14. Set examinations to monitor school performance
<i>Resources</i>	<ol style="list-style-type: none"> 15. Develop school improvement plan 16. Allocate personnel budget 17. Allocate non-personnel budget 18. Allocate resources for in-service teacher training

Although not all education functions and sub-functions are recorded on the table, those selected are representative of the more important issues addressed by decision makers. Others such as procurement and construction are also important, and are embedded in other sub functions such as developing the school improvement plan or allocating non-personnel budget. A second dimension of importance in measuring decentralization of a particular system is the location of the transfer of authority and responsibility. By adding this dimension it is possible to construct a matrix as shown on the following table:

Decentralization Matrix for Country X

Level	Organization					Personnel					Planning				Resources			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
National				80														
Regional																		
Provincial																		
District				10														
Village																		
School				10														

The above table allows one to compare each of the 18 sub functions to the level(s) where authority and responsibility are assigned. Shared authority and responsibility could be indicated in terms of a percentage as shown on an earlier table. As an example, sub function number 4 involves defining curriculum content. In Indonesia 80 percent of the

curriculum is still determined at the national level while 20 percent is considered as local content and determined by the school. Ten percent is allocated to the district since districts may determine content that is important to them. Districts may require schools to implement at least one such program. In this manner, decentralization patterns may be quantified in terms of percent of allocation. One is cautioned that the matrix identifies changes in the regulatory environment that supports decentralization. It does not necessarily follow that changes are being implemented as defined by those regulations. It is necessary to distinguish between the intent of the decentralization (de jure) and the actual (de facto). When trying to link decentralization to school improvement, one must deal with the de facto situation on the ground.

Measurement of School Quality

The measurement of education quality has challenged researchers over the years. Early research, identified as the first wave by Riddell (1997), has linked the measurement of selected inputs to student achievement tests scores as a single measure of educational outcome. The relationship between one independent and one dependent variable was examined (univariate analysis). This was expanded to include an array of independent variables using regression analysis techniques to examine significance of different relationships (multivariate analysis). This production function model, as it is described, is used to explain school effectiveness. Effective schools are those which select the right mix of inputs to increase student achievement. Hanushek (1986) explains this body of research as systematic, quantitative investigations relying on econometric methods rather than experimental methods to explain student performance.

The second wave of research has focused on school improvement. Past and current research analyzes impacts of innovations over time. The methodology involves case study analysis, a qualitative approach. The emphasis of such research is to determine change that leads to quality improvement. Change implies measurement at a minimum of two different points in time. Because the methods used to study change are subjective and not quantitative, school improvement research has been criticized for its lack of objectivity. A more pragmatic approach developed alongside school improvement research has attempted to quantify process variables. Such tools as The Profile of Schools Questionnaire (Likert, 1976), The Quality of School Life Scale (Epstein, 1981), and the School Cultural Elements Questionnaire (Cavanaugh and Dellar, 1997) were developed to convert theoretical constructs into measurable indicators. Many such instruments are being developed and used today by school systems as diagnostic tools to determine where improvements need to be made at the school or district level. Reports generated by aggregating data from specific stakeholder groups such as students, teachers, parents and educational managers identify specific strengths and weaknesses of the school or system.

School improvement research focuses on processes that explain how schools use inputs and attempts to identify those that are critical to ensuring school quality. The premise is that if schools manifest these processes, then quality is present and quality outcomes will be achieved. Such quality constructs as school climate, leadership style, supportive relationships, time on task, and teaching methodology, have been mentioned in quality improvement research as important indicators (Stoll and Mortimer, 1995). The model further assumes that educational outcome is more complicated than simply measuring student achievement. Other factors such as student motivation, stakeholder satisfaction and such measures as absence, dropout, and transition rates also represent quality educational outcomes. Heneveld and Craig (1996) suggest that school improvement research results confirm the findings of school effectiveness research, thus complementing each other.

The third wave of research looks at educational systems as multilevel organizational structures. Cheng (1996) explains that schools functioning within decentralized systems

assessed, and monitored. They conclude that measurable indicators of quality must be developed. Research dating back to the 1950s and earlier has attempted to define quality in a variety of ways, using such statistical techniques as factor analysis, concurrent validation and construct validation to define measurable indicators of quality (Anastasi, 1996). The following matrix synthesizes some of the literature about levels of quality within the school.

The five frameworks were chosen because of the range of approaches used in the measurement of quality. They represent older approaches through recent developments. They look at input, process and outcome indicators representing all levels within a school. The research on which they are based involves advanced and developing country studies. Finally, they represent a range from micro to macro frameworks for viewing school effectiveness and improvement.

The Heneveld and Craig framework (1996) is based on two kinds of sources. First, research about school effectiveness and school improvement was explored extensively. Second, they analyzed 26 education projects funded by the World Bank in Sub Saharan Africa. Based on these sources, Heneveld and Craig identified 18 key factors that influence student outcomes. These factors are divided into four categories: (1) supporting inputs from outside the school; (2) enabling processes; (3) school climate; and, (4) teaching/learning processes inside the school. Four student outcomes serve as the dependent variables. Heneveld and Craig use their analysis to recommend new ways of constructing, monitoring and evaluation future education projects.

Cavanaugh and Dellar developed the school Cultural Elements Questionnaire (SCEQ) to administer in Western Australia secondary schools to investigate school culture, faculty based sub cultures and cultural stability. The SCEQ measures aspects of interpersonal relationships among school staff impacting on a school's instructional program. The SCEQ measures six element structures which were identified in school effectiveness literature as attributes that improve student learning. The initial application of the questionnaire was in 1995. The researchers conclude that the SCEQ data can be used to examine readiness of schools for improvement. As a pre and post assessment, it can be used to measure program improvement outcomes.

Developed by the National Center on Educational Outcomes, Ysseldyke and others (1994) state that the purpose of their booklet is to help make data-based decisions about educational systems and schools and to develop goals that will increase progress toward desired outcomes. A companion manual exists that describes how to use a consensus building approach in selecting high priority outcome indicators. The approach significantly broadens the users' understanding of the complexity of educational outcomes. The framework identifies 77 indicators classified under eight outcome domains, all representing potential educational outcomes.

Five Frameworks/Models for Measurement of School Quality Indicators

Level	Heneveld/Craig School Effectiveness Framework	Cavanaugh/Dellar School Cultural Elements	Ysseldyke/Others School Level Outcomes	Likert Profile of Schools	Mayer/Others School Quality Indicators
School	<ol style="list-style-type: none"> 1. Strong parent and community support (input) 2. Effective support from the education system (input) 3. Adequate material support (input) 4. High expectations of students (climate) 5. Order and discipline (climate) 6. Organized curriculum (climate) 7. Rewards and incentives (climate) 8. Effective leadership (enabling) 9. Flexibility and autonomy (enabling) 10. High time in school (enabling) 	<ol style="list-style-type: none"> 1. Teacher collegiality 2. Teacher collaboration 3. Teacher shared planning 4. Teacher as transformational leaders 	<ol style="list-style-type: none"> 1. Satisfaction (parent, and community satisfaction with school) 	<ol style="list-style-type: none"> 1. Goal commitment (climate) 2. Decision making processes (climate) 3. Team cooperation (climate) 4. Support by leader (leadership) 5. Receptivity to ideas (leadership) 6. Goal emphasis (leadership) 7. Team building (leadership) 8. Work facilitation (leadership) 9. Decision making (leadership) 10. Trust by leader (trust) 11. Communication (other process) 12. School attitudes (outcome) 13. Frustration index (outcome) 	<ol style="list-style-type: none"> 1. School leadership 2. Goals 3. Professional community 4. Discipline 5. Academic environment
Teacher	<ol style="list-style-type: none"> 11. Positive teacher attitudes (climate) 12. Capable teaching force (enabling) 	<ol style="list-style-type: none"> 5. Teacher efficacy 		<ol style="list-style-type: none"> 14. Trust in leader (trust) 15. Influence (other process) 16. Communication (other process) 17. Peer team building (other process) 18. Motivation (other process) 	<ol style="list-style-type: none"> 6. Teacher academic skills 7. Teaching assignment 8. Teacher experience 9. Professional development
Classroom	<ol style="list-style-type: none"> 13. High learning time (T/L process) 14. Variety in teaching strategies (T/L process) 15. Frequent homework (T/L process) 16. Frequent student assessment and feedback (T/L process) 	<ol style="list-style-type: none"> 6. Emphasis on learning 			<ol style="list-style-type: none"> 10. Course content 11. Pedagogy 12. Technology 13. Class size
Student	<ol style="list-style-type: none"> 17. Participation (outcome) 18. Academic achievement (outcome) 19. Social Skills (outcome) 20. Economic Success (outcome) 		<ol style="list-style-type: none"> 2. Presence and participation (present, participates, completes school) 3. Accommodation and adaptation (adjusts top meet outcomes, demonstrates family support) 4. Physical health (makes healthy choices, awareness, and physically fit) 5. Responsibility and independence (moves about in environment, self-responsible) 6. Contribution and citizenship (complies, registers/votes, volunteers) 7. Academic and functional literacy (communication, critical thinking, problem solving, competent in math, reading, writing, and other academics, and technology use) 8. Personal and social adjustment (copes, good self image, respects differences, gets along) 9. Satisfaction (student) 	<ol style="list-style-type: none"> 19. Trust in leader (trust) 20. Influence (other process) 21. Communication (other process) 22. Motivation (other process) 23. Student acceptance of goals (other process) 	<ol style="list-style-type: none"> 14. Student learning (not specified in measurable terms)

Sources: Heneveld and Craig, 1996; Cavanaugh and Dellar, 1997; Ysseldyke and others, 1994; Likert, 1978; Mayer, Mullens, and Moore, 2000

The Likert Interaction-Influence Model (1978) is the oldest selected among the group of five. Developed originally as a model for evaluating for-profit institutions, it was later adapted for use with non-profit and public sector organizations. The Profile of Schools group of questionnaires was designed in the early 1970's for measuring the management styles within schools. It is based on the premise that schools operating closer to a participative style of management are more effective than those operating closer to a more authoritarian style. The self-report survey instruments are used with different stakeholder groups and a profile of the school is determined using a histogram reflecting measures of school processes against an eight-point scale. The school setting is measured against 18 indicators of process (some of which apply to more than one level of the school) divided into causal, intervening and end result.

The Mayer, Mullens and Moore report (2000) responds to the United States Department of Education's National Center for Education Statistics (NCES) request for reports that identify and discuss indicators of the country's education system. The report states,

“The research described in this report indicates that school quality affects student learning through training and talent of the teaching force, what goes on in the classrooms, and the overall culture and atmosphere of the school.”

To that end, the report identifies 13 indicators of school quality that recent research suggests are related to student learning. Of the 13, the report identifies four that has been poorly researched and in need of further empirical study: (1) pedagogy; (2) goals; (3) school leadership; and, (4) professional community. Part of the reason lies with the fact that measures need to be better defined.

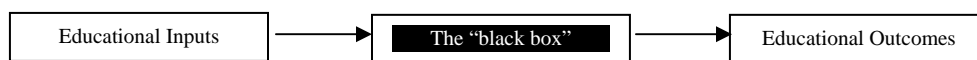
Many more choices were available for inclusion in this analysis. Such instrumentation as the Organizational Climate Discussion Questionnaire (Halpin and Croft, 1962), the Classroom Environment Scales (Moos, 1974), The Quality of School Life Scale (Epstein and McParland, 1976), and the Classroom Learning Environment Inventory (Rochelle, 1990) follow similar patterns of construction and application related to issues of quality in schools. These five frameworks are indicative and provide a rich array of indicators that are based on over 35 years of research into school quality. The previous discussion gives rise to some observations that can be made based on the literature:

Quantification of theoretical constructs representing quality is possible. As this body of research suggests, it is possible to use psychometric techniques to identify theoretical constructs; formulate indicators to measure these constructs; and use results in practical applications for improving school quality. Validation of theoretical constructs relies partially on concurrent validation techniques (Anastasi, 1996). Concurrent validation links existing validated approaches to the new construct under study, resulting in significant correlations between the construct and measures of student outcomes including achievement. School and classroom climate and leadership have received considerable attention as theoretical constructs important in achieving educational outcomes. Others include supportive relationships (parents supporting schools, principals

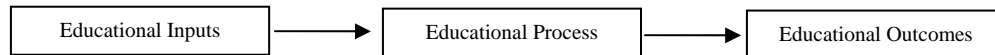
supporting teachers, and to a lesser extent, government support of educational systems); motivation and attitude; communication between and among stakeholder groups and levels of the system; goal emphasis and setting high standards; and classroom practices. Within each theoretical construct researchers search for specific indicators to measure that will represent an accurate quantification of that construct. For example, specific indicators for classroom practices might include use of performance-based planning, use of active learning techniques, application of continuous assessment, time on task, and assigning homework. By combining scores for specific indicators, a measure for the construct is derived. As with Likert's eight-point score on the POS, an average school score of 6.25 for the climate construct is higher than a score of 2.38 for another school or the same school at a different time. The higher score implies higher quality. When a series of measures are acquired for different indicators and constructs, a school's profile may be constructed. Profiles may also be constructed for different stakeholder groups around a single construct, changes in a school or classroom profile over time, or a measure of an education system's profile by averaging school scores. Such measurement techniques are being combined with more traditional approaches involving other quantifiable indicators such as student/teacher ratio, socio-economic status, school size, and ratio of textbooks to students.

Current measure of education outcome may be too simple requiring a profile that is better aligned with the purpose of schooling. Achievement has been established in the literature as the most critical measurement of learning in schools. It is also one of the most criticized measurements of educational outcomes. As Ysseldyke's publication suggests, schools are responsible for achieving a variety of outcomes of which achievement is one. Others relate to responsibility and independence, physical health, personal and social adjustment and others. In short, such indicators should measure a student's preparation and mastery to function as an adult. Although important, specific achievement including literacy and other academic performance, is only one aspect of schooling. Also, within the realm of achievement testing, criticism has been leveled, especially in developing countries, as to the validity of such measurements. Often, national tests are used to determine if students can graduate or advance to the next level of education. Test content may not be aligned with the curriculum, or, more importantly, may represent only a very narrow measure of academic performance especially related to lower order knowledge and skills acquisition. Thus, use of academic achievement tests may be counter-productive in the measurement of school quality because they are not valid tools to measure the type of learning that leads children to become successful adults. It is important to choose measures of outcome that are directly aligned to the mission of schooling. A broader representation of outcome measures are likely to serve this requirement.

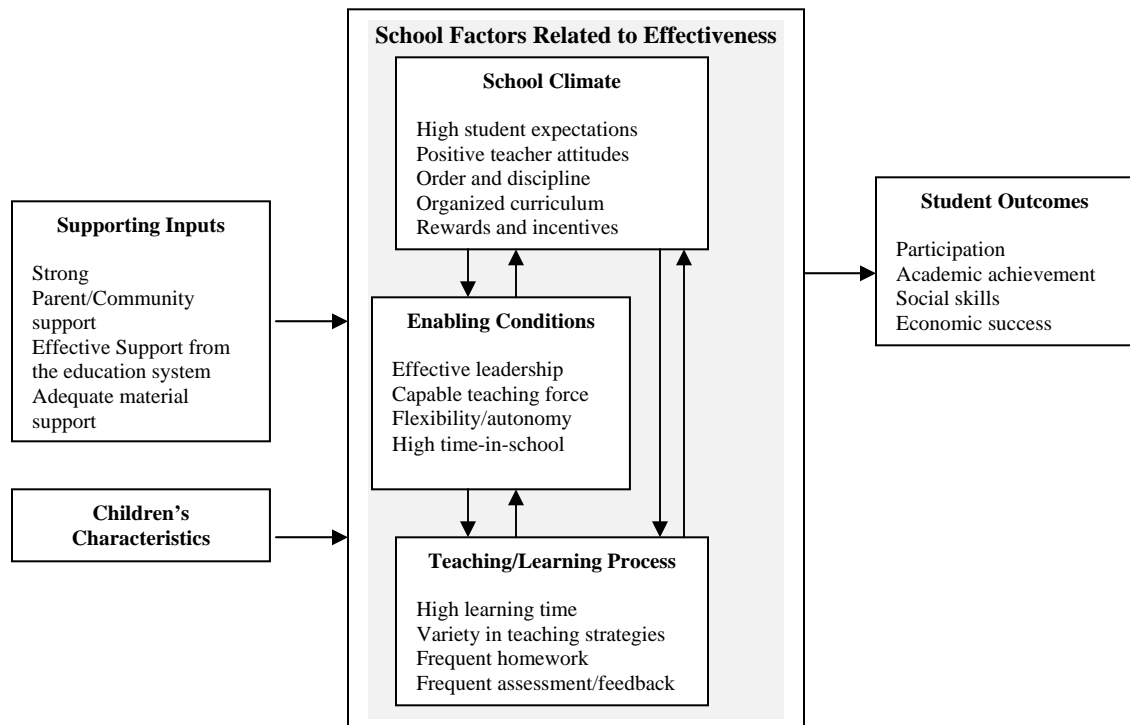
A revised framework for examining the relationship of education indicators may better explain their complex relationship. The production function approach in school effectiveness research correlates educational inputs to outcomes.



The “black box” terminology was used by some to suggest that such research did not explain how inputs were being utilized to create learning. School improvement research has added the dimension of “process” in studying school quality. In other words by examining processes, one would be able to examine how inputs were being utilized. Although two schools might have the same number of textbooks for the same number of students, how those textbooks were used might have a significant impact on learning. The resulting linear model suggested that inputs were provided to schools, processes were implemented to conduct education, and the results were the outcomes.



In Heneveld and Craig’s review, the framework was modified to more closely represent how education systems function:



Source: Heneveld and Craig, 1996

The Heneveld/Craig Framework provides a classification system for indicators, which more closely resembles how schools and education systems work. This framework may be used to build taxonomy of indicators studied by researchers over the years. In Bangladesh, the framework formed the basis for creating an item bank of indicators for monitoring school performance and survey tools were field tested in over 300 primary schools (Academy for Educational Development, 1999). Merging these with other quantitative and qualitative variables, a **Chart of Indicators** may be constructed as the one suggested below. Also, the chart may be expanded to account for multilevel analysis as shown in the next paragraph.

A Framework for a Chart of Indicators

Supporting Inputs	School Climate	Enabling Conditions	Teaching/Learning	Outcomes

Although the literature suggests multilevel analysis as a model better aligned to the complexities of measuring school effectiveness, there is much less written linking schooling to other levels of the educational system. Multilevel research generally examines levels within a school and their relationship to each other. A multi-tiered system contains indicators that are “nested” such as when individual student measures are aggregated into a classroom indicator and possibly again into a school indicator. Analysis at different levels may change interpretation of results as pointed out by Hox (1995) in his analogy of the big frog in a small pond versus a small frog in a big pond. This framework identifies constructs of quality as well as those traditional categories of indicators often used in research. The following chart represents a “first cut” of indicators that might be selected by researchers for the purpose of study:

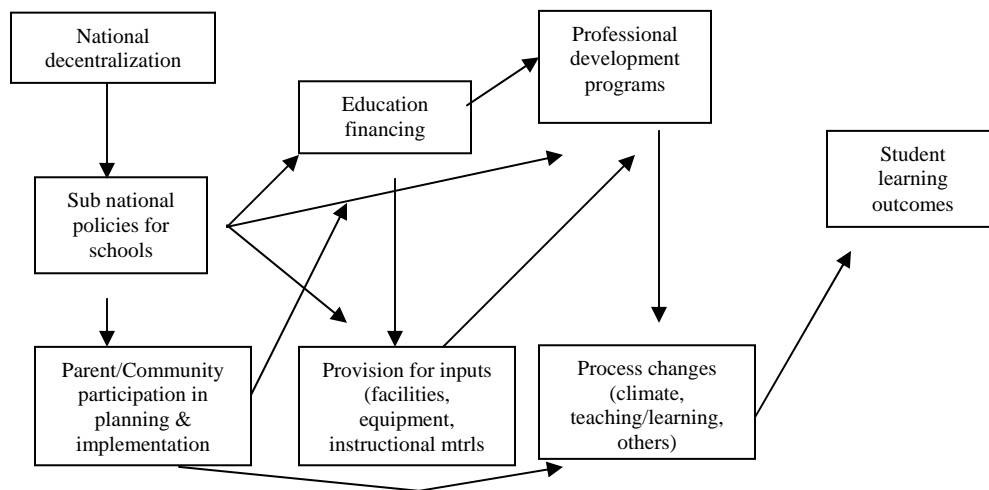
Multilevel Framework for School Quality

Level	Supporting Inputs	Climate	Enabling Conditions	Teaching/Learning	Outcomes
National System	laws, regulations, policies teachers funding education board	high standards organized curriculum rewards/incentives effective leadership	leadership transparency open communication supportive relation.		<ul style="list-style-type: none"> • Student, teacher, staff, parent, community satisfaction • Academic achievement by subject • Student participation in community • Accommodation/adaptation skills acquired • Abuse of drugs, alcohol, HIV/AIDS • Meet physical fitness requirements • Awareness of healthcare, safety standards • Awareness of how to access services • Can complete transactions (banking, shopping, other) • Display higher order learning capability • Meet citizenship standards • Absence rate • Completion rate • Graduation rate • Dropout rate • Repetition rate
Sub National	by-laws, policies, procedures teachers facilities, equipment funding school board	high standards organized curriculum rewards/incentives effective leadership flexibility/autonomy	flexibility/autonomy leadership transparency open communication supportive relation.		
School	teachers facilities, equipment personnel funding supplies school committee community utilities technology	high standards order and discipline organized curriculum rewards/incentives effective leadership	flexibility/autonomy leadership professional develop active committees transparency open communication trust supportive relation.	Teacher collaboration Shared planning	
Classroom	instructional materials textbooks	high expectations of students order and discipline rewards/incentives effective leadership	flexibility/autonomy leadership open communication trust supportive relation.	high learning time variety in teaching strategies frequent homework assessment/feedback lesson plans	
Individual Students/ Teachers	socio-economic background experience/training	positive attitudes	high time-in-school professional develop parent support	teacher efficacy motivation	

The framework accounts for many of the indicators mentioned in school effectiveness and school improvement research. The framework offers a means to view these indicators at the level from which they emanate – inside and outside the school environment – as well as where within the process of conducting education they fit. Note that some indicators appear in more than one location. The classification process is not easy, and decisions as to the appropriate level or levels of measurement for each indicator need to be made. The outcome boxes have been merged to make room for the large number of outcome measures that may be considered. The taxonomy is only illustrative at this stage and may serve as a topic for future research.

The relationships of education indicators are more complicated than any of the frameworks suggest. The Heneveld and Craig framework implies a linear relationship whereby inputs are used by people in a variety of ways that lead to what happens in the school and classroom resulting in student outcomes. Mueller (1995) suggests a model that can be and has been applied to analysis of education systems. Structural Equation Modeling (SEM) is a powerful, multi-level, multivariate data analysis tool used in social science research including education. This path analysis technique requires the user to (1) form a model of how the multilevel system operates; (2) collect data representing the elements within the model; (3) assess if and how the data supports the initial model (4) modify the model and retest the fit of the relationships. A simplified path analysis model is shown below:

Simplified Path Analysis of Potential Relationships



This path analysis demonstrates the complicated, linear relationship of a few of the potential number of indicators that link elements of the larger educational system to the school. The arrows represent the causal assumptions of the model. Correlations are computed to measure the causal assumptions and results provide the researcher with the information for modifying the model. As modifications are made to the model, the researcher is able to construct an explanation of how indicators are related and what

changes will impact on the eventual outcomes of student learning. The approach takes into consideration the multilevel nature of the educational system as well as its complexity in potential cause-and-effect relationships. Results suggest which changes in the system may have the greatest impact on changes in learning outcomes, providing planners at all levels with a clearer understanding of how to allocate limited resources and construct policies. The approach can provide a methodology for linking decentralization policy initiatives to school quality

There may be new ways to conduct data collection and analysis to merge many of the ideas expressed above. Essentially, two types of variables exist – quantitative and qualitative. Quantitative variables have received the greatest attention from researchers, in part because of the ease with which measures are collected. Utilizing school records and other secondary sources, it is possible to collect significant amounts of input and achievement data. As suggested earlier, qualitative data are more difficult to quantify so that school improvement research has gravitated toward case study techniques to assess which processes and conditions might contribute to improving school quality, describing results in narrative format. The holistic approach in research is based on combining approaches to enrich the results in such a way as to explain why relationships seem to exist among indicators. The range of data collection techniques includes use of secondary data sources; application of valid and reliable data collection instrumentation; focus group interviews; observation; and in a few examples, experimentation. The combination of these techniques provides a set of approaches that align with more recent research agendas that apply a holistic approach to data collection.

Analysis of data has involved descriptive-level analysis and relational-level analysis. The descriptive analysis provides a snapshot of each indicator at a point in time, and if measured at different points in time can be compared. The case study approach may be combined to explain why the researchers believe changes have taken place. Relational analysis looks at how indicators relate to each other and causality might be inferred by the significance of these relationships. The Statistical Package for the Social Sciences (SPSS) is often used to conduct the computerized computations that examine these linear relationships through regression analysis. More recently, such computerized tools as LISREL have been used to measure the path of relationships among indicators, expanding the regression analysis technique to adapt to the more complicated multilevel, models of school effectiveness. In education studies conducted in the developing countries, there is little evidence that such techniques are being applied, probably due to the lack of recently trained researchers and the time lag associated with innovations moving from OECD countries to developing ones. Given the increased availability of data collection tools and techniques for evaluating data, researchers have a broader variety of approaches available to study complicated educational systems with the aim of determining how to use limited resources in combination with a multitude of processes to have the greatest impact on quality outcomes, including but not limited to the measurement of student academic achievement. Such an approach may be described as a unified field theory that most closely resembles educational systems in the real world.

Decentralization may be one set of supporting inputs and enabling conditions that leads to the improvement in school quality. Since decentralization is only one piece of the school effectiveness puzzle, is it possible to examine the relationship between decentralization and school quality? The simplified path analysis shown above suggests the complicated nature of relationships among indicators that link decentralization decisions to school quality improvement and improvement of student learning. Not a great deal of empirical research is available examining the link between these issues. If quality is defined under the conditions set in the Heneveld and Craig framework, then it is represented by school climate, enabling conditions and effective teaching/learning practices. For decentralization to have a positive impact on school quality it must improve or increase selected measures of school quality that may be found on the multilevel framework for school quality described earlier. It may achieve this by structuring factors of decentralization as suggested in the previous chapter.

Several studies within the last ten years provide an interesting array of contradictory findings. Walberg et al (2000) concluded that after reviewing 22 studies of decentralization, decentralization features have little or no influence on improving student learning. Their definition of decentralization pertains to how decision making is divided among government units, including schools. They suggest that the question of where and how decentralization should be conducted is more important than simply decentralizing. This is another way of stating that research about de facto rather than de jure is preferred. King and Ozler 1998 study in Nicaragua concluded that schools which exert greater autonomy with respect to teacher staffing and monitoring and evaluation of teachers appear to be more effective in raising student performance. Galiani and Schargrodsy (2001) measured the impact of provincial-level decentralization on secondary school achievement tests. They concluded that variations in Argentine jurisdictions in administration of secondary schools provided them with an instrument to conduct their empirical analysis. They concluded that in the Argentine context, decentralization improved performance on test scores depending on fiscal performance of the province. Similarly, Eskeland and Filmer's (2002) study, sixth and seventh grade level test scores improved in Argentina under autonomy providing that student participation (attendance) was high. These last three studies used a production function model for conducting their research.

The Walberg et al view tends to support the notion that the complexity of both the decentralization process and the measurement of outcomes need to be considered in the design of future research on the relationship of decentralization to school quality. Their conclusions are counter to the three production function research techniques used in Argentina and Nicaragua. The next chapter looks at three education projects implemented by the Japanese International Cooperation Agency (JICA) during the time of transition to three different models of decentralization. Data collection and analysis of these projects may provide some insight into the relationship of specific decentralization indicators and their impact on measures of school quality.

Country Studies

In 1998 the Japanese International Cooperation Agency (JICA) completed a study on how to conduct development studies in the education sector. Long a part of its ODA grant portfolio, the Japanese Government wished to apply the same development study assistance program to the field of education as it had to other sectors. The Development Study is a method whereby JICA responds to requests from host country governments to provide financial and technical assistance in developing a master plan, designing a project, field testing possible innovations, and other purposes (Japan, 1998). As a result, JICA has been funding a number of development studies beginning with the Indonesian Regional Educational Development and Improvement Project (REDIP) in 1999. Since then, projects have been completed in Tanzania, Malawi, and Myanmar. The first three are near completion of their second phase while a new project has begun in Morocco and another planned for Ethiopia. Although each has a different set of objectives, many have a common requirement to evaluate program successes in order to determine what innovations might be brought to scale by other donors.

Because of their similarity in design and implementation of program evaluation methodology, projects in Indonesia, Malawi and Morocco have been selected as sources of case studies linking decentralization to school quality improvement. Each country has initiated a decentralization program of different magnitude and structure while each project was designed to work at lower levels of the system to improve quality functions. While Indonesia REDIP and the Malawi School Mapping and Micro Planning Project are now completing phase two (REDIP 2 and NIPDEP or Malawi National Improvement Planning for District Education Plans), having operated for approximately five years each, the Morocco project (Basic Education Improvement Program for Rural Areas in the Kingdom of Morocco) is in its first phase with less than a year of project activity completed.

Case studies for each country will be constructed to identify the nature of the education system; the type of decentralization being implemented; a description of the project funded by JICA; the results of the data that were collected as part of baseline; interim and post pilot results; and the interpretation of results in light the discussions presented earlier about decentralization and school quality improvement. After the case studies are presented, a final section will be provided that will examine the common results across the three case studies and the conclusions that can be drawn on the basis of those results. Since the Morocco project team recently completed its baseline the survey only and is in its early stage, no data analysis can be constructed. Instead, on the basis of its decentralization scheme as well as the design of the JICA project, predictions will be made as to the results of certain quality indicators. Lessons derived from the Indonesian and Malawi projects may serve to act as predictors of how decentralization in Morocco will impact on school quality. This will require a follow-on piece that addresses the specific results of the Morocco project and the predictions made in this report.

Indonesia

History of Decentralization

Many associate the passage of laws No.22 and No. 25 of 1999 with decentralization in Indonesia. In reality, law No. 5 of 1974 marks the introduction of decentralization. This law sets out the structure of the political administrative system at two levels – provincial (propinsi) and district (kabupaten and kota for urban districts). The law covers the autonomous functions of local governments as well as their deconcentrated structure and tasks. Both provincial and district governments have autonomous legislative, judicial and executive branches that function similarly to the national government for those responsibilities assigned to them. The sub district level government (kecamatan) is part of the district and not autonomous. Villages (desa) have local councils, their own budgets, and the right to regulate their own affairs, but are not considered autonomous. Their status is described under law No. 5 of 1979. Yusuf (1997) observes that under Law No. 5:

- deconcentration by sectors was favored as opposed to devolution and much variation existed across sectors;
- most transfer of authority was to the provincial rather than district governments;
- most of the important revenue generating tasks were not decentralized;
- only parts of many sub functions were transferred with more important elements of these functions being kept at the national level; and,
- there was confusion as to which tasks were being devolved, deconcentrated or co-administered.

The new, decentralization laws of 1999 and 2000 attempt to decentralize both political and economic power away from central government. While Law No. 22 of 1999 was prepared by the Ministry of Home Affairs and addresses the political structure, Law No. 25 of 2000, prepared by the Ministry of Finance addresses fiscal decentralization. Law No. 22 broadly describes the roles and responsibilities of the three levels of government, and the new relationships between the sub national governments and the legislative assemblies at the provincial and district levels. Law No. 25 specifies revenue sharing between the national and sub national governments, and new sources of revenue generation available to sub national governments including borrowing from international donors. Key to sub national funding is the block grant provided by the national government to provinces and districts. Each province and district parliament has the authority to allocate percentages of these grants as it sees fit to each sector including education.

Law 34 of 2003 gave taxing authority to district governments but not provinces, and Lewis (2002) indicates that districts are aggressive in creating new taxes. The new financial management law 17 of 2003 was passed to reform government budgeting and financial management at all levels. It provided for a unified budget, performance budgeting, forward budgeting, participatory budgeting, greater responsibility and flexibility to heads of agencies, modern transparent accounting practices, stronger accountability and professionalism.

The state of decentralization is still transitional. Criticisms including continued lack of transparency, inequities in revenue sharing, contradictory regulations, many of the inappropriately assigned governance and management functions, and vague definitions of roles and responsibilities continue to be leveled at current practices (Ahmad and Hofman, 2000; World Bank Draft Education Sector Review, Vol. 1, 2004). These criticisms apply to education as well as other sectors. New regulations continue to be issued in support of these laws with the intent to clarify, revise and further delineate how laws 22, 25 and 17 are to be implemented.

Organization of Education under Decentralization

Prior to decentralization legislation in 1999, the Ministry of Education and Culture (MOEC) created offices at the provincial, district and in some cases the sub district levels to implement its regulations and policies. These structures (kanwil for provinces and kandepr for districts) worked alongside provincial and district offices of education (dinas P&K) whose responsibilities were to implement national regulations and policies. The education system was highly centralized and divided between Ministry of Education and Culture (MOEC) for secular schools and the Ministry of Religious Affairs (MORA) for religious schools with MOEC having the final authority on all educational decisions. Few decision making responsibilities were delegated to provinces, districts or schools. Under Ministerial Decrees 0487/U/1992 and 054/U/, schools were to create parent/teacher associations (BP3 or Badan Pembantu Penyelenggaraan Pendidikan) and these organizations were able to set student fees. For the most part, however, MoEC established all regulations, policies and procedures.

The system was and continues to be organized into three cycles - primary (years 1 through 6), junior secondary (years 7 through 9) and senior secondary education (years 10 to 12). All governance and management functions were under the control of central government with considerable responsibilities for religious schools transferred to MoRA. Indonesia is unique in that the education system relies heavily on government religious schools and private, secular and religious schools to provide access to all levels of education. Public and private religious schools account for 13 percent of the total enrollment across the 12 years of education (PT Amythas, 2003). In exchange, central government has provided some funding to assist these schools often through the secondment of public teachers. In school year 2001/2002, it was estimated that 44.07 million students were enrolled in 219,037 primary and secondary schools of all types (MoNE, 2002).

The first major decentralization effort in education occurred in 1994 when control of a portion of the curriculum was decentralized. MoEC required all primary and junior secondary schools in the country to allocate 20 percent of total instructional hours to locally designed subject matter. The Local Content Curriculum (LCC) represented a significant departure from previous education policy especially as it related to roles and responsibilities of educators. Bjork's six month, in-depth observation of six junior

secondary schools in East Java suggested that decentralization did not necessarily lead to changes in actual practice and cites three reasons:

- Educators are civil service employees and their loyalty lies with government rather than school stakeholders.
- Financial incentives did not accompany the introduction of LCC so educators had little motivation to increase their workload.
- The culture of MOEC/local education was not changed to align with new regulations so that behaviors associated with local planning and decision making were not instituted (Bjork, 2003).

Concurrent with laws 22 and 25, law 43 of 1999 included some provisions clarifying the roles and responsibilities of the provincial government in education including responsibilities for:

- the promotion of teachers;
- issuing regulations in support of national regulations;
- autonomous programs such as those serving disadvantaged and handicapped students;
- subsidizing textbook purchases;
- some aspects of teacher in-service;
- some aspects of higher education evaluation; and
- creating quality assurance programs

The education sector moved quickly to decentralize education roles and responsibilities. By 2001 kanwil and kandepe education offices were closed and many education personnel transferred employment to provincial and district offices. The Ministry of Education and Culture's name was changed to the Ministry of National Education (MoNE). A ministerial decree was issued to create district boards of education and school committees either to replace the BP3 or work alongside it. In 2002, a new education law was passed to reflect the changes that were being made, and to bring the sector in line with laws 22 and 25. Education Law 20 of 2003, transfers most responsibilities, authorities and resources for the delivery of education to the 416 districts, with coordinating authority to the 30 provinces and some decision making authority to the schools. Still, the law is ambiguous about teacher management; there is no clear roadmap for providing in-service professional development; and some functions have been decentralized too far preventing achievement of economies of scale (Study Team, World Bank, 2004). Also, since MoRA was one of five ministries exempted from the decentralization laws, the religious schools they manage are still subject to a centralized governance and management structure. The following table analyzes where responsibilities of key sub functions of education lie, exclusive of religious schools:

Decentralization Matrix for Public Education in Indonesia

Level	Organization of Instruction					Personnel Management					Planning/Structures			Resources				
	Select school attended	Set instruction time	Choose textbooks	Define curriculum	Determine teaching method	Hire/fire school head	Recruit/hire teachers	Set teacher pay scale	Assign teaching duties	Decide in-service	Create/close school	Select School Programs	Define course content	Set school exams	Develop school impr. plans	Allocate personnel budget	Allocate non-person. bddgt	Allocate in-service resc.
National		80	100	80			100	100	100	100	100	70	80	100	80	80	80	80
Provincial																		
District						100										20	20	
Subdistrict				20														
Village																		
School	100	20			100						30	20		20				20

Source: Survey of 10 key informants for this paper

Organization of Instruction.

Personnel Management.

Planning/Structures.

Resources.

It is within this context that the JICA-funded Regional Education Development and Improvement Project (REDIP) began in 1999.

The JICA REDIP Projects

REDIP 1 began in April 1999 and ended in March 2001 followed immediately by REDIP 2 which ends in September 2004. Both projects pilot tested a number of demand-driven activities at the school and sub district levels across 15 sub districts in Central Java and North Sulawesi in REDIP 1 and 33 under REDIP 2. The target was junior secondary education for government and private schools including religious schools, and the focus were on quality improvement. As a development study, JICA was interested in collecting data at baseline and post pilot points in time. Thus, a great deal of data was made available for analysis. The purpose of the analysis was to identify interventions that appeared to impact on quality improvement. Findings were disseminated to the ministry and other donors in the hope that certain practices might be brought to scale through new funding.

There were minor variations in the design between REDIP 1 and REDIP 2. Essentially, target schools and sub district organizations received training in quality improvement planning; prepared improvement plans; developed proposals based on those plans that were submitted to JICA for funding; received funding, implemented and monitored plans; and received assistance from field consultants as needed. Although Indonesia's version of decentralization was aimed at improving school-based management and district-level

governance and management, REDIP created sub district level organizations that were seen as necessary to support inter-school planning and implementation. Based on models created for district levels, the MGMP (district teacher organizations) and KKKS (district school principal organization; referred to as MKKS for senior secondary education) organizational structures were created for all same-subject teachers and all school principals within a sub district. Also, sub district development teams (TPK) resembling school committees were created for each sub district. These three organizations – MGMP, KKKS and TPK – worked together to prepare proposals for funding of inter school activities such as in-service training, cultural events, fund raising activities, community awareness campaigns and other pilot activities. Two annual cycles of pilot activities under REDIP 1 and again under REDIP 2 were carried out. Pilots focused on quality improvement funding that would impact on classrooms, schools, and local and sub district communities. Funding was not provided for purposes of improving school administration, school construction, or activities not directly linked to quality improvement and learning.

To measure pilot results, an aggressive evaluation system was created for REDIP 1 and modified and simplified under REDIP 2. Using the school improvement framework to define indicators, a chart of indicators was created that included a variety of inputs outside the school control such as socio economic status and urban or rural demographics as well as numerous inputs, process measures of quality, and outcomes. Measures for each indicator were constructed from school records, through self report questionnaires completed by students, teachers, managers and community members and using student test scores from quarterly examination results for the core subjects and national school leaver examinations (NEM). For REDIP 2 focus groups were used as well. Also, outputs from specific pilot activities were analyzed and conclusions drawn as to their impact on school quality. Under REDIP 2, the choice of indicators was streamlined to include those that could be controlled and affected by pilot activities. Survey instruments were also simplified, and data collection techniques improved. The table on the following page contains the array of indicators under REDIP 1.

Results from the baseline, mid point and post pilot surveys appear to be inconclusive. The regression analysis conducted comparing input and process indicators to outcomes under REDIP 1 showed many results that could not be explained. A validation study of key teacher process indicators under REDIP 2 suggested that reliability and validity of results was questionable (Cohen, 2004b). As reported in the study, results of test scores provided by principals during the post pilot survey and those collected during the validation exercise were different in a number of cases. Focus group interviews of teachers who completed surveys did not support results, in many instances, provided by the same teachers on the self report questionnaires.

Still, final reports for REDIP 1 and progress reports for REDIP 2 (Project Team, 2001a; Project Team, 2001b; and Project Team, 2003) provide a wealth of information about school quality that will be summarized in the next section.

Indicators Used in REDIP 1 Program Evaluation

Inputs	Processes	Outputs
<i>Non school and student inputs</i> <ul style="list-style-type: none"> • Enrollment (7) • Student characteristics (2) • Family characteristics (8) • Community/social environment (7) • Government (3) <i>School inputs</i> <ul style="list-style-type: none"> • Facilities (2) • Furniture/equipment (5) • Instructional mtrls (7) • Principal/supervisor (6) • Teachers (11) • Teacher characteristics (6) • Non teaching staff (6) <i>School finance</i> <ul style="list-style-type: none"> • Income (6) • Expenditures (10) 	<i>Classroom Interaction</i> <ul style="list-style-type: none"> • Teaching methodology • Level of technology • Planning • Student evaluation • Classroom climate <i>School/Organization Process</i> <ul style="list-style-type: none"> • Decision making • School climate • Professional development <i>Parent/School Interaction</i> <ul style="list-style-type: none"> • Decision making • Parent/school climate <i>Parent Children Interaction</i> <ul style="list-style-type: none"> • Parent/child interaction <i>Community/School Interaction</i> <ul style="list-style-type: none"> • Decision making • Community/School climate 	<i>Students</i> <ul style="list-style-type: none"> • Average score on quarterly examinations • National school leaver examination average • Promotion rate • Continuation rate • Dropout rate • Retention Rate • Absentee rate • Student satisfaction • Student attitude <i>Predictor of Student Outcomes</i> <ul style="list-style-type: none"> • Teacher satisfaction • Principal satisfaction • Parent satisfaction • Community satisfaction • Government satisfaction

Number in parentheses indicate number of indicators for which data were collected

Source: Final Report, REDIP 1, appendix

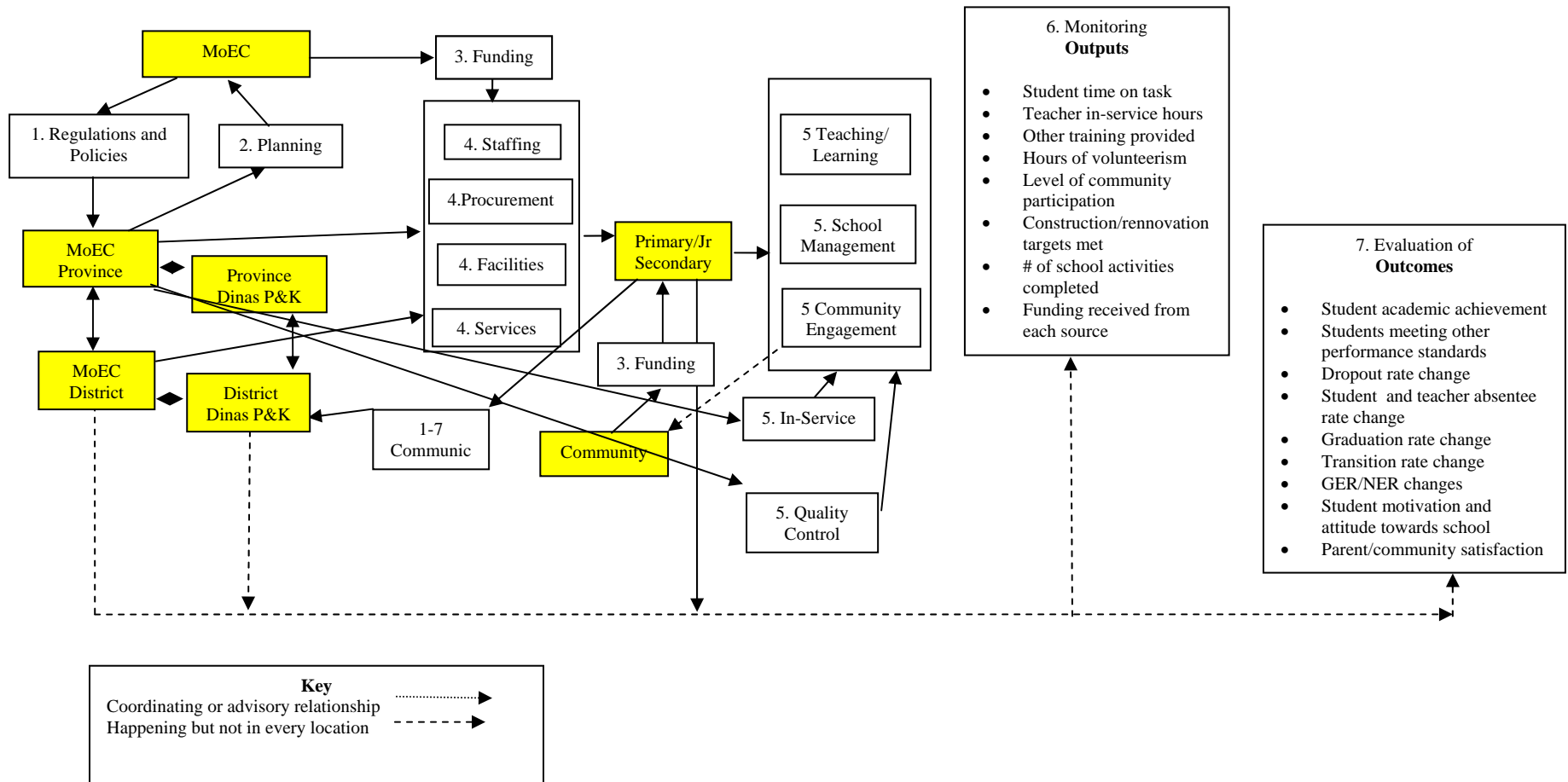
Analysis:

The final report for REDIP 1 and progress report 1 and 3 for REDIP 2 provide a wealth of data-based and anecdotal information that may be used to link different decentralization functions with improving learning and overall school quality. Considering limitations in accuracy of some data, reports provide narratives that explain results in terms of how pilots were implemented and results that can be directly attributed to pilot interventions. To construct an analysis based on the available data, two methods will be used. First, a path analysis which shows the relationships of different classes of indicators as the projects unfolded, will provide a picture of the educational system. The resulting picture provides a framework for applying a case study approach to analyze results under three different scenarios: (1) if there were no decentralization; (2) if there were decentralization but no external intervention; and, (3) decentralization with JICA’s REDIP 1 and REDIP 2 projects serving as the change agent.

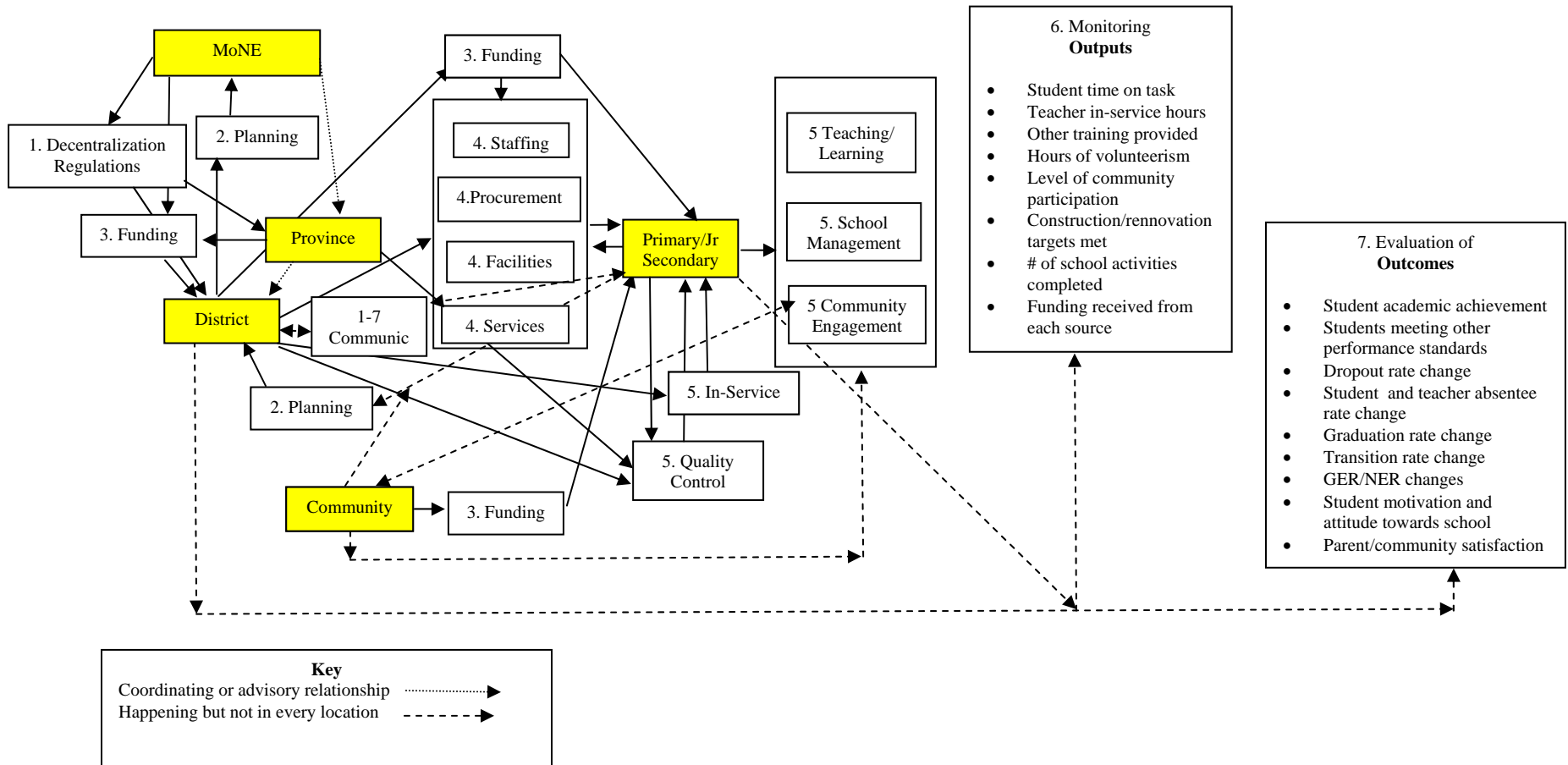
The path analysis diagrams show the various organizational structures in shaded boxes, processes in the balance of boxes, and arrows showing the relationships between organizational structures related to each process. Processes are numbered from 1 to 7 to reflect the order in which the overarching education system unfolds. Each process box may also reflect specific inputs and outputs. For example, under the procurement process (which involves selecting, ordering, shipping and commissioning) specific inputs such as textbooks, furniture and equipment are represented. While quantitative techniques are used to measure specific inputs, outputs and most outcomes, measures of process represent the qualitative dimension of the system. Finally, one process labeled “communication” reflects the two-way relationship between the key organizations

throughout the program cycle. The following three pages provide pictures of a path analyses for these three scenarios:

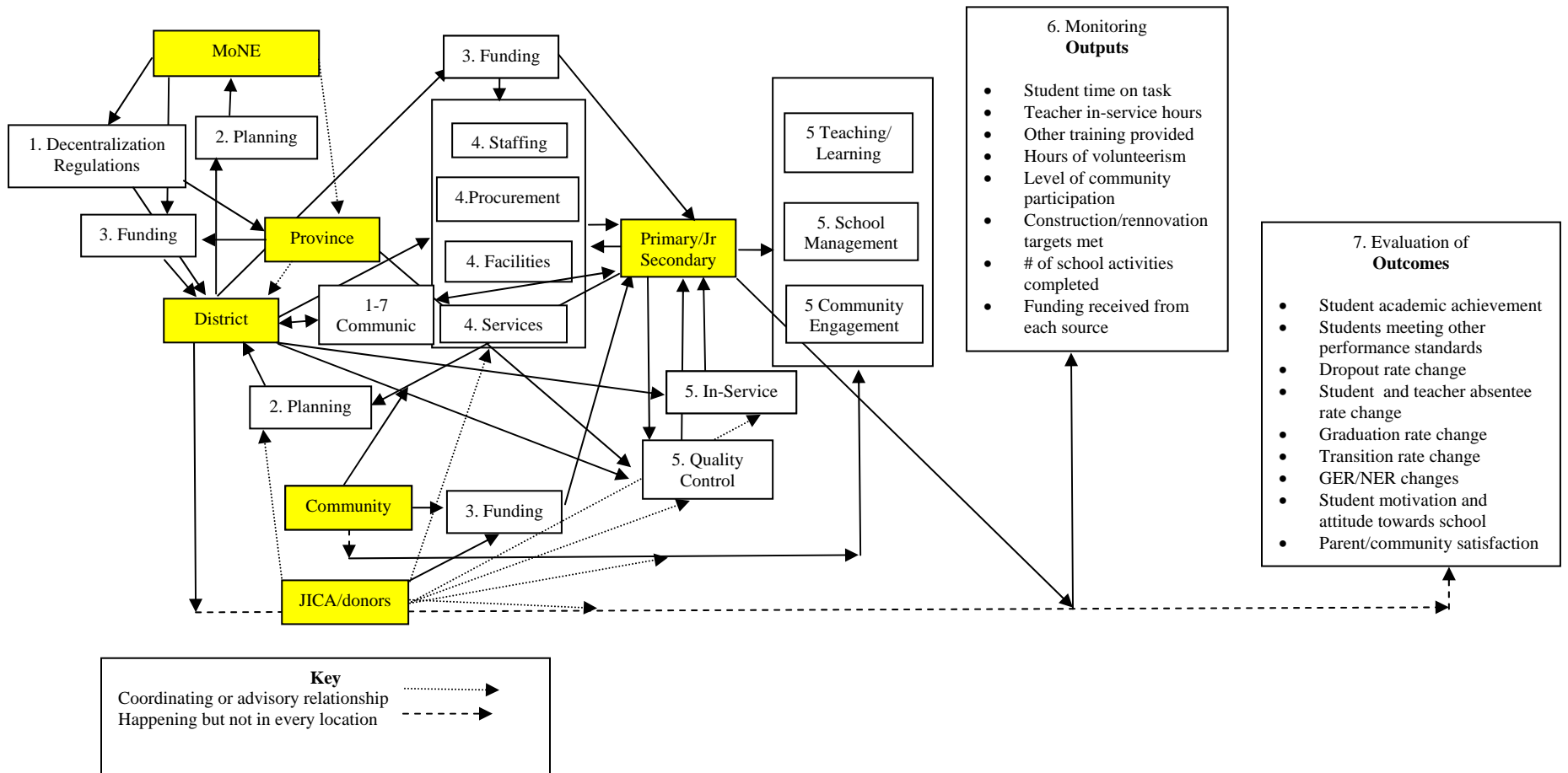
Path Analysis of Scenario 1: Centralized System



Path Analysis for Indonesia of Scenario 2: Decentralized with No External Change Agent



Path Analysis of Scenario 3: Decentralized with Change Agent Interventions



The large, shaded box in the three diagrams represents the governance and management structure for each scenario. The lower box represents the school and community level (in scenario 3 it also includes the sub district level). The first column of small boxes represents system inputs, while the second column represents key educational processes performed at the community and school level. The third column identifies the types of outputs that are achieved with the fourth column identifying the key system outcomes that are expected. One can readily see the major difference between the formerly centralized system of education in Indonesia (scenario 1) and the current system (scenario 2). Scenario three represents scenario 2 but with interventions through the REDIP 1 and 2 projects. Although less change is evident, the changes are critical if one looks at impact on educational outcomes.

Governance and management. The shift from the centrally controlled system to the decentralized version moves many functions from the central government to the district government. In Indonesia, decentralization further implies that districts create awareness among communities that they are responsible for many of the educational functions and that the concept of “bottom-up” planning is a school and community one. Thus a second dimension of governance and management is the inclusion of stakeholders outside the system in educational processes. The public awareness initiatives under decentralization have stressed the inclusion of parents and community members in more educational processes; whereas, under the centralized system, these same stakeholders were excluded from most educational processes.

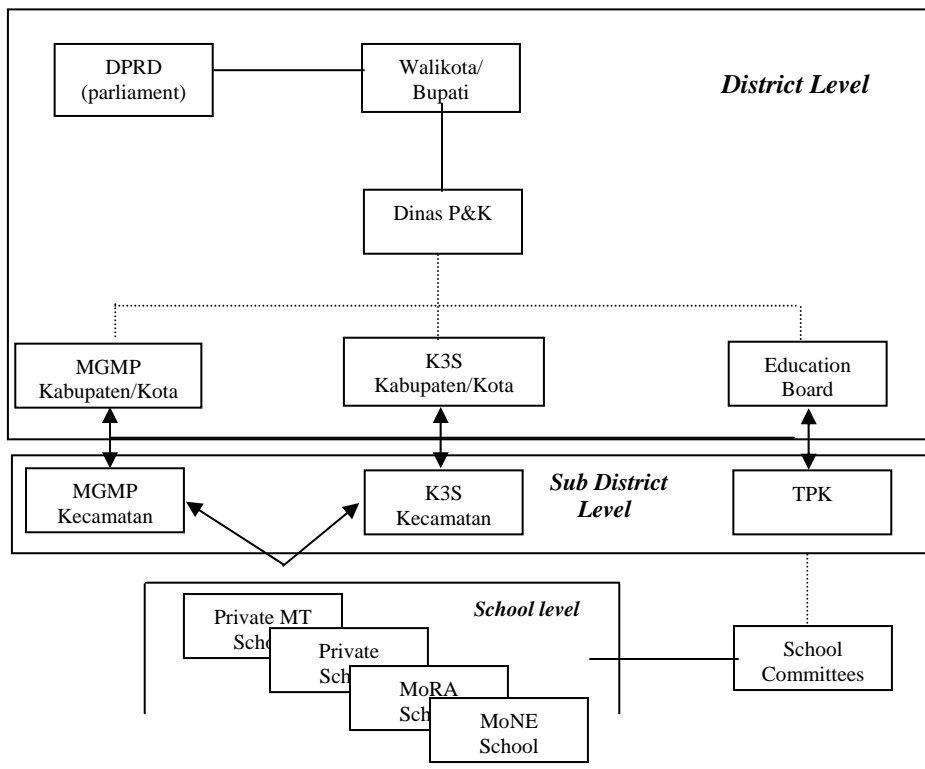
Essentially, there is no difference in governance and management between scenario 2 and 3; however, REDIP (scenario 3) provided technical assistance and funding to convene community meetings to acquaint a wider audience of the opportunities available under REDIP and responsibilities that community members could assume under decentralization. This same role could have been assumed by district dinas P&K but wasn't due to lack of skills in effective community engagement as well as lack of financing.

Organizational structures. Under scenario 1, given that control of education was centrally located, few organizational structures outside of the school were needed to support education. The one exception identified in the regulations is BP3 or parents' association. Unlike school councils or committees, BP3 has no authority. Its de facto role is to set student fees. Under decentralization, BP3 continues to exist alongside new school committees that have a broader role at the school level. Some shared governing and management authority may be granted to school committees, but it is too early to tell if this will happen. No funding is provided for their operation.

Under scenario 3, REDIP created three structures deemed necessary for improving school quality, and these structures appeared to be best located at the sub district level. It is at this level where all junior secondary schools are close enough together to convene meetings, and the number of schools at this level is not too great that all can participate actively. The major difference, therefore, between scenario 2 and 3 is that additional organizational structures were deemed important to close the gap between the district and

school levels and their function was to create support systems through close, formal communication. The three organizations were for teachers (MGMP) serving as a mechanism for professional development; KKKS for school principals serving professional development and school problem solving; and the TPK or sub district development committee whose mission was to address inter-school needs whether program, professional development (working in conjunction with KKKS and MGMP), and problem solving. MGMP and KKKS are supported under national regulations but only at the district level, and evidence suggests that activities of these district organizations have been very limited while frequently excluding private schools. Costa (2003) indicates that senior secondary schools can generally afford to cover costs of only one teacher to attend MGMP meetings. TPK regulations do not exist, and are completely project supported. In sub districts that participated in REDIP 1 but not REDIP 2 evidence that the TPK model has been sustained is apparent, funded completely by local support. Recent regulations provide for the creation of school committees and district education boards instead of the TPK. Clear roles and responsibilities for these organizations have not been defined, but they are seen as having some governing and management responsibilities while the TPK is viewed as a support organization by REDIP. The following chart diagrams the relationship of these organizations under scenario 3:

Scenario 3 Organization of District-to-Schools



Source: Cohen, 2004a

The chart not only shows the relationships as they existed under REDIP, but identifies potential sub district relationships that link the schools with districts, thus serving as lynch pin mechanisms.

Funding. The change in the funding pattern between scenarios 1 and 2 is dramatic. Under the centrally funded system, limited revenue actually reached the school. Instead, textbooks, materials, repair crews, electricity, and salaries were all paid by central government and based on plans that were prepared at the central level through kandep and kanwil offices. Most of the local sources of revenue were from fees set by the BP3 committee and assessed on parents. National scholarship programs then and now provide funds that are deposited directly into student accounts where they are used to cover school fees and other expenses. Communities provide some in-kind funding support.

Educational financing has made the transition to decentralization, and districts are now performing the same role as central government did using block grant funds provided by the Ministry of Finance. There is some indication that districts are identifying sources of district level funds and allocating them to education. No clear pattern of such funding has emerged. The decisions taken to fund specific school programs seem to be somewhat more responsive where districts are involving schools in the planning process. Actual cash forwarded to school bank accounts is still very limited. Teachers are now paid by districts and other services such as textbook purchasing are being handled by district education offices. In some of the 416 districts, schools may apply for grants from district funding sources. There is strong evidence that in two districts where REDIP operates, district parliaments have increased the percentage of funding for education as a direct result of school plans being forwarded to districts. This information is anecdotal.

Schools still rely on BP3 for much of their source of revenue under scenario two. Under scenario 3, schools were required to manage JICA money they received into school bank accounts to fund specific pilot programs. In many cases, schools provided a match to these funds and sought support from the wider community which responded. Scenario 3 funding procedures were successful in leveraging community funding from seed money provided against proposals submitted that were based on school quality improvement plans. As an example, one school leveraged the purchase of a REDIP-funded computer by receiving five more from the community to use in a computer laboratory for students and teachers. Also under scenario 3, schools and sub districts were provided funds for all processes such as public awareness, meetings, M&E and training. These funds were outside those provided for pilot program activities. Funding of these activities served to encourage attendance and provided necessary resources to complete activities mandated under each process. It is not a typical procedure for district governments to provide this type of funding, reducing the incentive for communities to participate in quality improvement processes.

Private religious and secular schools rely almost exclusively on local funding sources. Established by a foundation (yaysan), schools range from very poor to very wealthy. Fees tend to be much higher for secular and some religious private schools (although lower for many madrasah schools) while some foundations use other revenue sources to augment

the operation of their schools. In an opposite scenario, PGRI or teacher association schools, require that schools remit some percentage of fees to the foundation. As a result, these schools are under-funded. MoNE assigns or seconds some teachers to many private schools to reduce the school's operating cost and to maintain alignment with national policies.

School/community processes. Under scenario 1, almost all educational planning was conducted by MoEC based on information it received from its kanwil and kandep offices. These offices acquired their information from the district dinas p&k offices responsible for collecting school level data. School-level planning was restricted to determining funding it would require and requesting funding from BP3. The school's primary responsibility was to implement educational processes based on regulations, policies and plans established by MoEC and MoRA for religious education. Although private schools were required to align their programs with national regulations, the unusual set of issues surrounding the operation of these schools resulted in varying degrees of planning and implementation. The quality of these schools varies dramatically.

Decentralization, under the education law of 2003, devolved more responsibilities to schools stressing the need for school-based management (SBM). The planning process, which includes self assessment, is now a responsibility of schools. Districts do not seem to rely on school plans to construct district plans so there is a disconnect in terms of information flow. Data collection systems have deteriorated at the national level, and data at the district level is unreliable (PT Amythas, 2003).

Districts rely more on schools to engage communities in educational processes. District education boards are being established, but no information presently exists on how many of the 416 have been created or the roles they have assumed. It is unclear who is responsible for professional development and capacity building; few national regulations or policies currently exist to replace the model employed under the centralized system. The Management of School-based Quality Improvement Project (MSBQI), and often referred to as the BOMM Project, is managed by MoNE is designed to provide funds and capacity building for schools to make the transition to a school-based management model. Funding is provided by the World Bank but its impact is limited in terms of the number of schools served. MoNE's attempt to make the transition to a decentralized system seems to be faltering in that it has not redefined roles and responsibilities; staffing levels have not been reduced significantly; the Ministry of Finance continues to maintain a high level of funding; and MoNE has not redefined its functions under decentralization (World Bank, 2004). As a result, districts have an unclear mandate from MoNE as to how they must proceed. This leaves open the possibility that districts can adopt any number of approaches to improve their systems with minimal interference from the national government. So long as funding flows from districts to the schools, and few other regulations are clearly defined, school systems do have flexibility to design programs as they desire. A national curriculum is still in place as is the national leaving examination. This could change at any time. For example, BAPPENAS, the agency for national planning, is considering drafting a new law to shift funding and management of education to the provinces and away from districts.

Scenario 3 has used this period of transition to focus on process changes at the school, community and sub district level. REDIP introduced a standardized approach to quality improvement that empowered communities by giving them control over setting priorities and controlling funds and then holding them accountable for monitoring and evaluating the success of their plans. A series of processes were introduced, supporting inputs designed, and capacity building programs implemented to change individual and organizational behavior. Thus, a more formalized approach to public awareness building, capacity building, self assessment, planning, proposal writing, program implementation, program monitoring, and program evaluation was introduced and replicated over four years. REDIP 1 and 2 document these approaches in progress reports. Key to the approaches was the involvement of outside stakeholders in all aspects of educational processes and through existing organizational structures. Government representatives were brought together with parents, community members and educators on school committees, TPK committees, and ad hoc committees responsible for a specific activity such as organizing an art fair. Public and private, religious and secular same-subject teachers were brought together through MGMP. Principals from all schools in the sub district were brought together in KKKS. Each structure had an operations manual outlining mission, roles and responsibilities, and rules for operation. Each organization developed its own program and sought its own budget. Each organization received preliminary capacity building activities to train them on how to operate. All three organizations met at least monthly and in many cases more frequently. Scenario 3 differs from scenario 2 in the way it approaches building capacities of individuals and organizations to achieve specific set of outcomes through regular and formal meetings and close oversight.

System Outputs. Outputs may be classified into three categories – construction, procurement and services. With the exception of these three elements being funded by BP3 money, under scenario 1, all outputs were driven by MoNE and MoRA for public education and to a much lesser extent for private education. Much criticism has been leveled at the shortfall of outputs achieved by MoNE and MoRA under scenario 1. With the increase of compulsory education from year six to year nine in 1989, a great burden was placed on the ministries to build many more facilities. At this writing the problem has shifted to where there may be a surplus of primary education facilities which might be converted for use as junior secondary education facilities but a short fall still exists for junior and senior education facilities. The private sector was relied upon to create schools to meet the increased demand for places, and in many cases, these new private religious and secular schools lacked basic facilities such as bathrooms, laboratories, office space, electricity, and running water.

Under procurement, the textbook system proved highly inefficient. Textbooks were designed by MoNE's textbook center, printed and then shipped to schools through provinces, and districts. The highly inefficient system resulted in double orders arriving at one school and none at another; textbooks being stranded in district warehouses due to lack of funding; and months in delays resulting in lack of textbooks for students. Visits to schools also showed that furniture was in short supply, of poor quality, and in disrepair.

Similar problems existed for all procurements whether equipment or instructional materials.

Teacher training outputs were also low under scenario 1. The PPPG (national centers for in service training operated by MoNE) and BPG (provincial in service training centers) were under-utilized with some estimates as low as 20 percent annual utilization. Pre-service programs did not produce a sufficient number of teachers to meet demand. The Open University provided certification programs under a World Bank-funded loan when MoNE increased certification requirements for Junior Secondary School teachers from a two-year to a three-year diploma and Akta 3 certificate (teaching certificate), but some have criticized of the quality if the output.

Under scenario 2, construction of new facilities is a shared responsibility. Districts may request funding from MoNE under a new grants mechanism (DAK or specific grants program). It is expected that districts will provide the balance of funding for new facilities, renovation of existing facilities, and provision for electricity and water. Supposedly, the transfer of authority to the districts will reduce the inefficiencies of locating facilities in the wrong places; reduce the time it takes to repair serious problems with facilities; and reduce the cost of construction due to greater participation by communities in the planning and monitoring processes. Since the first round of national grant funding to districts has been completed in school year 2003-2004, it is too early to tell. REDIP (scenario 3), provided some grant money for facility repair providing that it was directly link to instruction. This meant that funding for laboratories or student bathroom construction was acceptable. No funding was provided for new classrooms, however.

Increases in procurement outputs are not measurable at this time. One major change in curriculum and textbooks can be noted. MoNE has introduced a competency-based approach in defining new curriculum and districts may determine how they choose instructional materials including textbooks to support the new curriculum. Whereas districts are most likely the level where textbooks and other core instructional materials will be selected, schools have more control over selection and creation of specific instructional materials. This is evidenced by the number of instructional materials created in Central Java during school-year 2002-2003 under REDIP 2. The box below contains a list of 12 of 43 items developed by teachers within the MGMP structure or within specific schools and funded as pilot activities. An examination of the products revealed high quality design, content and printing:

Selected Teacher-Derived Materials in Central Java

Title	Type
1. Practical Guide for Physics	Student module for classes 1, 2 3, second semester
2. Practical Guide for Biology	Student module for classes 1, 2 3, second semester
3. Teaching aids and games for the classrm	Teachers' guide for English language
4. Module for Teaching Islamic Culture	Student module for first year in religious schools
5. Mathematics Module for Class 3	Student module for year three, second semester
6. Indonesian Language Module Class 3	Student module for year one, first semester
7. Module for Social Sciences, Economics	Student module for economics, first year, first sem.
8. Communication Game for English	Instructional tool for teaching English
9. English for Junior High School	Student worksheets for first year, first semester
10. Geography for Junior High School	Student handout worksheets for geography
11. Teaching English Using Active Learning	CD Rom of English lesson using botany
12. Module for Teaching Citizenship	Student workbook first year, first semester

Source: REDIP 2 Newsletter, February 2004 (translated from Indonesian)

During REDIP 2 focus groups conducted in April 2004, teachers explained they developed selected program to align the instruction with the new curriculum; because they did not have instructional materials for the subject; or because the materials were cheaper to produce than purchasing existing textbooks. Those materials, whether equipment, materials or supplies, were purchased by schools or TPK directly under scenario 3, while under scenario 2, most instructional materials are being purchased by district procurement offices.

Outputs for services include professional development, public awareness/community engagement and student activities. Outputs for teacher training under scenario 2 do not exist at the time of this writing unless specifically funded by donors. No provision has been made for how in-service training will be conducted, and facilities under the control of MoNE are not currently assigned to be managed by any jurisdiction as centers for teacher training. The BGP has been renamed as Centers for Education Quality Assurance, but no actions have been taken to activate programs for schools. Under scenario 3, teacher, principal, community and technical staff training was outlined in school and sub district plans. Proposals were made to JICA by schools and by TPK for specific training, resulting in a new system of “on-demand” training. Those requesting training selected their own trainers and venues as well as domain of content required.

Three other categories of services requested under scenario 3 involved funding for public awareness campaigning, active research and student activities. Public awareness outputs involved parents and community members supporting a specific school or across a sub district and included topics such as HIV/AIDS awareness, the importance of schooling, or their roles in school-based management. Action research identified specific school problems, an analysis of their causes, and recommendations for possible solutions. Student activities included funding for art fairs, sports competitions, and English language debates. Similar programs have been funded by other donors such as UNICEF and are considered essential outputs of the educational system. Districts left to their own decision making have not, as yet, demonstrated they will fund such programs unless stated by national standards or mandated in the regulatory process. No progress has been made concerning establishment of national standards since a preliminary list was

prepared in 2002. Thus, the assumption is that although decentralization has created an environment to increase service outputs, it has yet to provide the funding to do so.

Under scenario 2, unless districts create a mechanism for responding to on-demand financing of services, schools and communities will need to rely on districts to plan for these activities. Although too soon to tell, it is possible that a supply-side approach similar to scenario 1 will be adopted by districts unless districts seek plans from schools before they prepare their annual plans. Outputs under decentralization can be measured in two ways. First, the number of outputs generated such as the number of teachers trained, public awareness campaigns conducted or number of school or inter-school programs completed. The second deals with the quality dimension in that they are relevant to the needs of the school. Whereas supply-side models assume that higher organizational levels know what is needed at the school levels, demand-side models reflect clearly what schools and community identify as their specific needs if based on data-oriented planning. Thus, decentralization is likely to increase outputs in terms of the quantity dimension, but not necessarily the quality dimension. One may only speculate at this time that scenario 2 will improve on quantitative outputs and possibly qualitative outputs, while scenario 3 outputs increase across the quantitative and qualitative dimensions.

Student Performance Outcomes. Student learning is the focal point of all education system activity, so the measurement of learning is the important measure with which researchers are concerned. The two learning measurements that are available for schools are the national leaving examination for primary, junior secondary and senior secondary or NEM and the end of quarter tests that each grouping (cluster, sub district or district depending upon the location and level of education) of schools designs and administers. For the final-year students of each cycle, these scores are combined to create the EBTANAS score that will determine if students may graduate. The EBTANAS score is criticized because teachers can adjust the quarterly exam score to improve the EBTANAS so that students may graduate. The testing system, therefore, is fraught with political ramifications and subject to corruption.

Educators, government officials and the communities at large are debating the value of the NEM and there is a strong indication that it will be discontinued. The learning that the NEM is purported to measure is restricted to scores that can be achieved through multiple-choice questioning. It does not measure other important aspects of learning in appropriate ways such as using student performance measures. Another criticism is that schools focus too much time on preparing students to do well on this high stakes test, reducing the amount of time available for other learning. The quarterly tests are prepared at the local level and are supposed to be responsive to what is in the curriculum. Since the quality of tests varies across schools and since teachers may tamper with results, it may not be good practice to compare results across systems. One may readily conclude that good measurement tools are not available for Indonesian students so that comparison between and among schools as well as comparison over time reveal nothing significant about student learning.

Other student measures include such rates as absenteeism, repetition, dropout, continuation and graduation. Absenteeism and dropout rates are of particular interest because they may reflect on the quality and relevancy of the teaching-learning process. Students who attend school regularly and who do not dropout may see the longer term benefits of education, enjoy the experience, and are motivated to learn. As a result of the increased “time-on-task” students increase learning.

REDIP 1 sampled 148 experimental schools and 47 control group schools and among other indicators, measured average results on the quarterly examinations, absenteeism, dropout rates and student satisfaction at baseline and post pilot (REDIP 2 results for post pilot survey were not available for this study). A regression analysis was used to correlate these outcomes to various input and process indicators. The regression analysis yielded inconclusive results. Several reasons were given including poor data collection technique; too short a timeframe to allow for changes in results, and lack of validation of instruments. A comparison between baseline and post pilot indicators yielded the following student outcome results:

REDIP 1 Results of Selected Student Baseline and Post Pilot Indicators

Sample Location	Quarterly Exam Average*		Dropout Rate		Absence Rate		Student Satisfaction**		Student Attitude**	
	base	post	base	post	base	post	base	post	base	post
Project Experiment	6.47	6.46	3.85	6.18	5.34	15.40	3.51	3.57	3.87	3.99
Project Control	6.53	6.42	3.79	4.11	3.51	18.50	4.00	4.05	4.00	4.05

* Maximum score is 9 and average is for all students in years 1, 2 and 3

** Likert-type scale range from 0 to 5

Source: REDIP 1 Final Report

The results are similar to results for most other indicators suggesting that no significant differences exist between baseline and post-pilot survey results (one year and nine months apart) or between experimental and control groups. Some results are baffling such as the dramatic increase in absenteeism in both the experimental and control groups. Results of the baseline and interim surveys under REDIP 2 are showing little difference between the measurements over one year. As stated, quantitative results of REDIP 1 and most likely REDIP 2 are inconclusive. Results, therefore, must be based on observations and focus group results contained in the various project reports.

Other System Outcomes. Many of the outcomes shown in REDIP reports indicated changes in stakeholder behavior and processes used to change inputs into outputs. These results are presented in narrative form and demonstrate differences between how such changes occurred when compared to changes in scenario 1. These types of changes resulted in outcomes that affected the performance of stakeholder groups and organizational structures. Such outcomes are directly link to student performance through creation of systems that cause students to stay in school longer (reduced dropout and increased transition and graduation rates), improve attendance (lower absence rates), improve achievement (higher scores on standardized examinations and other measures of learning as evaluated by teachers) and increase motivation and satisfaction with schools (student attitude, motivation and satisfaction measures). Measures for these indicators can serve as proxies for student outcomes as suggested by school improvement research.

The following table summarizes different system changes that can serve to predict that improved, quality learning is taking place:

Selected Quality Outcomes from REDIP 1 Reports

Classroom Level Quality Outcomes
<ul style="list-style-type: none"> • Direct school purchase of textbook increased time on task for students since teachers did not have to write lessons on board (Mranggen, Kejajar, Bitung Tengah sub district schools) • MGMP weekly activities focused on active learning, low cost teaching aids, testing, classroom organization and lesson plans and immediate feedback at MGMP meetings helped reinforce behavior change in classroom; and developed supportive relationships necessary to sustain such change
School Level Quality Outcomes (148 schools participating)
<ul style="list-style-type: none"> • Direct school purchase of textbooks and other instructional materials increased efficiency in procurement and reduced mistakes in shipping, putting books in the hands of students in weeks rather than months (Mranggen, Kejajar, Bitung Tengah sub district schools) • Pilot program activities provided practical training for school principals in transparent, financial management and reporting techniques (all 148 schools) • In sample of 29 schools, matching funds generated for pilot programs ranged from 50% to 720% (ex.: SLTP Susukan Pilot = rps 2,780,000 and match = rps 20,000,000), significantly increasing resources available for school quality improvement
School/Community Level Quality Outcomes
<ul style="list-style-type: none"> • Schools added farming, aquaculture and handicrafts to local content curriculum also serving as fundraising for school while using local farmers' and craftsmen's' expertise (Manisrenggo, Juwiring, klaten, Tombatu, Minahasa sub district schools) • New community engagement techniques increased communication between parents and schools including home visits by teachers, open school policy, parents' night, school newspaper, and school events (Manisrenggo, Juwiring, klaten, Tombatu, Minahasa sub district schools) • Two-way communication increased school staff understanding of student problems such as absence rates so that better solutions resulted in reduced absence rates for students as well as teacher absence rates because of higher community visibility
Sub District Level Quality Outcomes (15 kecamatans participating)
<ul style="list-style-type: none"> • KKKS meetings were used to solve variety of problems such as reducing absence and dropout rate at open schools, sharing textbooks among schools, sharing science and religion teachers between secular and religious schools with overall impact of raising quality of poorer schools especially private schools • Specific KKKS on-demand training programs improved skills in such areas as community engagement, conducting action research, fund raising, proposal preparation, shared leadership, financial management (Kepil, Wonosobo, Banjarharjo and Brebes sub districts) • MGMP used as centers for professional development including contracting with outside trainers, micro teaching, peer tutoring, and development of low cost instructional materials • Meetings held weekly for most same-subject MGMP groups so that feedback on trying new classroom practices was fast, encouraging teacher to use new methods and materials in the classroom. Anecdotal reporting indicated that student motivation increased as a result of changes in teachers' classroom behavior • TPK increased school programming by scheduling, organizing and managing inter-school events such as art fairs, debates, sports competitions, cultural events (all 15 sub districts) leading to increased participation by students, parents and community • TPK served to coordinate certain professional development activities for KKKS and MGMP including raising funds to pay for training • TPK parent awareness campaigns led to reduced dropout rates (Kepil, Likupang, Kombi, Tenga) and enrollments increases (Guntur, Juwiring, Kepil, Kejarjar, Banjarharjo, Likupang, Bitung Tenga, Tombatu) • TPK mobilized significant financial and in-kind local resources (reported by 12 sub districts) • TPK fostered linkages with faculties of education, principals and BP3, district parliamentarians from within the sub district, sub district government officials, village councils and local businesses • Overall team-building within and across KKKS, MGMP and TPK improved communication and

transparency, especially between community, government and schools and between public, private, secular and religious schools

- Linkages of schools through MGMP, KKKS and TPK, have resulted in increased sharing and dissemination of materials, ideas and funding across the sub district, and in some cases between adjacent sub districts and linkages with government officials have raised information to the district level

Source: REDIP 1 Final report and REDIP 2 Progress Reports 1 and 3

Results are not always positive. Unintended outcomes have resulted. Without close supervision by REDIP field consultants several problems would have become serious. Such issues as simple as purchasing spare parts, maintaining transparent financial procedures, satisfying documentation requirements accurately, continuing democratic practices at meetings among different stakeholder groups, all demonstrate the desire to revert to old habits without continuous and consistent reinforcement from the change agent, whether donor or government office. REDIP 1 and 2 documents these problems and the need to maintain vigilance over all new process changes until they are sustainable by those responsible for their practice. REDIP has attempted to adjust for this need by providing 17 field consultants who were assigned to a specific number of schools within their assigned sub districts. Also, JICA is about to fund REDIP 3 that will continue to work with some of the same sub district while expanding into new locations. This would mean that some sub districts will have benefited from the REDIP methodology for up to six years or six cycles of self assessment, planning and implementation. The question arises as to how many years are necessary to achieve sustainable behavior change for individuals and organizations within the decentralization context.

The following table summarize the discussion for the three scenarios:

Summary of Differences among Scenarios for Indonesia

Indicator Group	Scenario 1 (Centralized System)	Scenario 2 (Decentralized System)	Scenario 3 (Decentralized System with External Change Agent)
Governance and Management	<ul style="list-style-type: none"> • Overall responsibility for governance with MoNE. • Management of public religious schools delegated to MoRA. • Management of private schools responsibility of foundations within government regulations and accredited by MoNE 	<ul style="list-style-type: none"> • Overall responsibility for regulatory process with MoNE. • Sub national parliaments may establish regulations • Governance and management devolved to districts and shared with education councils • Provinces to coordinate implementation and responsible for management of certain teacher, higher education and special needs functions • MoRA schools still managed centrally. Private schools continue as before. • School-based management stipulated in regulations as key to decentralization 	<ul style="list-style-type: none"> • Same as scenario 2
Organizational Structures	<ul style="list-style-type: none"> • MoNE and MoRA maintain provincial and district office to ensure implementation. • Provincial and district offices of sub national government for implementation. • BP3 or parent association has no authority but to establish fees • Teacher and other in service responsibility of PPPG and BPG training centers under MoNE • Faculties of Education responsible for pre service • Specific MoNE center for curriculum, textbooks and NEM 	<ul style="list-style-type: none"> • MoNE regional office for education closed. • Dinas P&K district office responsible for implementation. • New regulations require district education councils and school committees to be created with shared authority • PPPG continues while BPG converted to center for education quality assurance • Faculties of education continue to be responsible for pre service • Privatization of textbook publication still unclear. • National school leaver testing being debated • Curriculum center still active and focused on competency-based education 	<ul style="list-style-type: none"> • Operates within structure and supports capacity building of existing institutions from district level down to school including new school committees. • Creates sub district organizations for teachers, school principals and community to serve as lynch pin between schools and districts • Builds capacity of sub district organizations to create on-demand in service programs • Encourages linkage with faculties of education as source for in service trainers. • Builds capacity of schools and sub district organizations to select and develop instructional materials including textbooks • Builds capacity to link stakeholder groups and different levels of the system.
Funding	<ul style="list-style-type: none"> • Central level provides funding for recurring and development budgets • Central level provides scholarships for needy • BP3 at school level establishes fees 	<ul style="list-style-type: none"> • Block grants from central to districts are allocated across sectors including education with allocation decided by district • Provinces and districts may raise additional funding for education through parliaments • MoNE may provide direct grants to districts 	<ul style="list-style-type: none"> • Same as scenario 2 with additional possibilities • Provide limited grants for quality improvement and require matching funds or in kind contribution • Provide capacity building to schools and

	<ul style="list-style-type: none"> Private school foundations may provide funding from other sources to support schools 	<p>for specific purposes (DAK)</p> <ul style="list-style-type: none"> Central government to continue scholarships BP3 and foundations may continue to set fees and donate additional funds Disparity between MoNE and MoRA structures have created reduction in revenues to MoRA schools Provinces to fund special needs programs Several other examples of special financing schemes from national, provincial and district governments 	<p>TPK in community fund raising</p> <ul style="list-style-type: none"> Provide capacity building to different organizations to advocate for greater contribution of funding to education at the district level using school plans Continue training on proposal preparation for submittal to NGOs and other funders
School/Community Processes	<ul style="list-style-type: none"> Civil Service mentality treats school as a closed system. Only linkage of any significance is with BP3 Private schools, especially madrasah are excellent examples of community school environment 	<ul style="list-style-type: none"> Although still civil service encouraged to create open institution through school-based management. Creation of district education councils and school committee is to grant some, as yet unspecified, authority and responsibility to broader range of stakeholders SBM to encourage greater participation at community level in planning, implementation and monitoring and to improve transparency 	<ul style="list-style-type: none"> Focused on developing standardized procurement, roles and responsibilities, manuals, forms, and training programs targeted to different groups at school and sub district levels to establish specific individual and organizational behaviors shown in the literature as leading to school quality Provided on-site monitoring of each step of the quality improvement process (self-assessment, planning, proposals, implementation, monitoring and reporting) and provided support through 17 field consultants on-demand
System Outputs	<ul style="list-style-type: none"> Direct relationship between amount of funding and amount of output, whether number of students graduated, teachers trained or books published. Qualitative dimension suggests that the distance from national to local level is so great, supply-side determined outputs lacked quality Procurement highly inefficient Low outputs from services both in terms of quantity and quality 	<ul style="list-style-type: none"> Decision making is closer to end users, so combination of supply-side and demand-side decision making increases outputs both in quantity and quality Access to additional funding sources will increase outputs Shared governance and management responsibilities with district education councils and school committees to increase efficiency and relevancy of outputs 	<ul style="list-style-type: none"> Increasing ability of organizations to develop data-based plans makes better use of resources so that increases in efficiency increases outputs with the same revenues as well as increase quality of outputs Creating structures at sub district level created new types of inter-school outputs Empowerment of communities through control of additional funding also increased contribution of additional resources from community increasing outputs
Student Performance Outcomes	<ul style="list-style-type: none"> External measures such as TIMMS identify student achievement in math and science low compared to most other countries. Indonesia's measures of student learning 	<ul style="list-style-type: none"> Too soon to tell the impact of decentralization on student outcomes. Deterioration of data collection and reporting systems now makes it difficult to 	<ul style="list-style-type: none"> Problems with data collection instruments and procedures limit the ability to measure student achievement outcomes Other measures of student outcomes such

	<p>were not reliable measures.</p> <ul style="list-style-type: none"> • Other measures such as absence, dropout, and repetition, transition, and graduation rates are below international standards. • No attempt to measure more complex array of student and other outcomes 	<p>determine accurate outcomes on timely basis.</p> <ul style="list-style-type: none"> • Current debate on exit examinations may result in elimination of NEM • Minimum service standards may impact on outcomes; however, no decision made on their status 	<p>as absenteeism and satisfaction are inconclusive in the REDIP 1 study.</p>
Other System Outcomes	<ul style="list-style-type: none"> • Very little research done on measures of outcome other than student achievement 	<ul style="list-style-type: none"> • Decentralization requires individual and organizational behavior change and measures need to be constructed to measure such as Minimum Service Standards 	<ul style="list-style-type: none"> • Other predictors of student learning such as changes in organizational processes to be in line with schools identified as high quality, suggest that school quality has improved under REDIP 1 and 2 • The short timeframe in measuring outcomes makes it difficult to predict extent of change or potential for sustainability.

Conclusions:

USAID's Managing Basic Education Project staff conducted a school survey in 2003 and discovered that decentralization did not have any impact on approaches to teaching (USAID, 2003). Not surprising, others have indicated that decentralization in itself does not lead to school quality (Fiske, 1996; McGinn and Welsh, 1999; Walberg, et al, 2000). The decentralization movement in Indonesia is government-wide and significant in scope, especially for education. By skipping over provinces and assigning management responsibility to districts, Indonesia has taken a major step. By assigning a major portion of management responsibility to schools through school committees is even bolder. The decision to move quickly, however, has resulted in a lack of clear definitions of roles and responsibilities, conflict among some regulations and policies, and lack of preparation of organizations and individuals to assume responsibilities. The national government is now reconsidering some of these decisions and may enact new regulations that shifts more governance and management responsibility away from districts and to provincial governments.

Scenarios 1 and 2 show the intent of the shift from a centralized to decentralized system as it exists at the time of this writing. Not all the complexities of various decisions and actions have been explored, the goal being to focus on what elements of decentralization lead to improvement of school quality as a means to improve learning. By comparing results of scenario 3 with scenario 2, one may see more clearly where gaps exist between the implementation of decentralization (scenario 2) and implementation of decentralization involving an external change agent (scenario 3). The differences between these two scenarios allow one to draw various conclusions about what needs to be done within Indonesia's decentralized structure to ensure that the quality of schools is improved.

There appear to be four conditions that separate scenario 2 and scenario 3 that deal with district, sub district, community and school interventions that are provided for under decentralization and that directly impact on improving the quality of schools and student outcomes.

Proper community engagement and public awareness to change behaviors. As suggested, the real difference between decentralization and centralized management and governance is how people and organizations change behaviors to implement new regulations. Decentralization should not create a centralized system at a lower level, but change the system qualitatively so that a greater variety of stakeholders participate in a new way. Under scenario 2 communications of these changes to stakeholders at all levels has not been thought out. The discipline of Behavior Change is not new but seems to have found its roots in other social sectors such as health, population, nutrition, and environment. Specific behavior change methodologies have not caught on in the education sector. So it is not surprising that the Indonesian governments – national, provincial and district – have not set out a plan to formalize the behavior change strategies necessary to prepare communities for the new system of education. The focus

has been on capacity building of specific institutions rather than providing appropriate information and education to the broader community.

By contrast, under scenario 3 behavior change strategies were an integral part of every step of the project. Community awareness campaigning preceded each phase of REDIP's interventions. Project awareness programs were conducted at the province and district levels, and dinas p&k offices were expected to assign counterpart to assist in all phases of the project. Once sub districts were selected and pilot schools identified, visits were made by the JICA team and government counterparts to educate the community about the project. As the project unfolded stakeholders performed their roles in accordance with tight definitions of what they were to do as stipulated in operation manuals and through training. By performing new behaviors again and again in TPK meetings, MGMP sessions, and community events, educators, community members and government officials saw immediate results. Posters, school newsletters, community meetings and events served as communication tools to reinforce continually how decentralization was conducted at the local level. This reinforced behavior within organizational settings whether inside the classroom, the school, within the community, at the sub district level and at the district and provincial levels since counterparts were witness to the successes achieved. The period of performance is too limited to determine if such behaviors will be sustained after the project ends, but if districts do not assume responsibility as the internal change agent, then many of the achievements will be extinguished.

REDIP 1 and 2 successes may be partially attributed to the consideration of behavior change as an important component of planning when introducing decentralization. The plan needs to include specific strategies that lead stakeholders to realize they are empowered to take authority and responsibility; they see the benefit to themselves, their children and their community by doing so; and they have specific tools to provide guidance at every step of the implementation process that clearly defines roles and responsibilities of each actor whether conducting a self-assessment, preparing a school plan, taking responsibility for leadership of a school initiative, or monitoring the finances of an activity.

Sufficient financial resources under the control of local organizational structures. A graphic example in the change in funding patterns can be seen by examining the path analyses of the three scenarios on pages _____. The difference between scenarios 1 and 2 is related primarily to where the money for education resides. The pattern for how expenditures are made is little changed with districts substituting in the role of paymaster. There are new sources of funding established under scenario 2 such as the Assistance Scheme for Facility Improvement (ASFI) established by in Asian Development Bank loan for MoRA schools or continuance of scholarship programs for needy students. Under scenario 2, schools have little need for bank accounts unless they are successful in generating direct funding through means they establish. This lack of control of actual money is not commensurate with the new authorities and responsibilities they have been given. The exception here is in the private sector where foundations, coupled with school fees, generate a higher level of cash than comparable schools in the public sector; nevertheless, the foundations tend to control these funds rather than the community

served by the school. With respect to the school's control over revenue, there is little change between scenarios 1 and 2.

REDIP gave control of pilot program funds directly to the school committee at the school level and the TPK at the sub district level. Bank accounts needed to be established with appropriate signatories as spelled out in the financial management operating manual developed by the project team. Funding was activity-based and in line with new requirements set out in law no. 17/2003. The matching requirement of the REDIP pilots created new sources of revenues (and in-kind donations as well) to flow to the bank accounts of schools and TPK. In all cases, schools and communities controlled more funding than they had ever controlled in the past. This approach created financial functions that included costed, school-based planning; activity-based budgeting; tight monitoring; basic accounting procedures; and transparent financial management.

It was the JICA team's contention that the amount of money provided by districts, although important, was less important to improvement of the quality of schools than who controlled the decisions on how it was spent and who actually handled the money. This type of control is seen as a key factor in community empowerment, which is pointed to in research as an important condition in school quality improvement (Chrispeels, 1996; Munn, 1993; Wolfendale, 1992). By involving community stakeholders in a transparent, financial functions, their trust in schools, their participation in a greater variety of school activities, and their financial contributions to their schools increased.

Proper training and capacity building to change behavior. Although a layered approach (provision for education and training at different levels of the system) for pre service and in service programs existed under scenario 1, it has been criticized for lack of program quality, under-utilization, being supply-driven, and oriented to support the civil service regulations. In one REDIP survey, teachers reported not having attended an in-service for three years. The district-level MGMP and KKKS meeting lacked sufficient school representation and new principals received minimal, if any training at PPPG centers, prior to reporting for duty. Teacher pre service programs have and continue to be criticized for the academic orientation in course content rather than dealing with practical issues of learning and teaching. Even so, as Sweeting (2001) discusses numerous teacher training and teacher education projects have been funded over the last 30 years, some continuing through the new decentralization period.

Given the rapid and recent transition to decentralization little preparation time has been given to creating an integrated in service system for teachers, principals, school committees and district education councils, technical staff, and training of inspectors. Under scenario 2 districts are responsible for providing in service training and professional support activities but few have the resources or motivation to do so. Some districts are showing initiative in recognizing these responsibilities by redeploying resources for instructional improvement (World Bank, 2004). Also, quality assurance has been transferred to the provinces through a new Education Quality Assurance Agency (LPMP) and one of its responsibilities is to provide training for quality improvement, most likely at the former BPG facilities now called Centers for Education Quality

Assurance. These centers are to respond to demands from districts for training. The topic of professional development as an improved model appears to be at the discussion stage still. The MSBQI project, as mentioned earlier, is providing systematic training for school-based-management, and most other training continues to be funded by donors such as UNICEF, ADB, and World Bank.

REDIP addressed the issue of in service at the sub district level building the capacity of schools to define their professional development needs of all participants, not just teachers; identify sources of training; organize the training; and create systemic mechanisms for sustaining the process. The approach addresses one level of the professional development system, leaving district-and-above elements to decision-makers at those levels. The model is completely demand-driven and is probably an exception to most other types of training conducted over the last 30 years. UNICEF appears to be the only major donor desirous of developing a sustained professional development system for teachers and principals. Their effort is at the primary level and involves a layer below the sub district referred to as the cluster.

Continued observations of these MGMP and KKKS meetings have demonstrated some effective outcomes with respect to motivation, team building, shared leadership, and improved classroom practices. Some of these outcomes are mentioned on Table _____ above. Rough estimates of in-service attendance suggests that all teacher participating in MGMP were involved in 60 to 80 hours of in-service per teacher, per year, for upwards of 100 percent of public, private, secular and religious teachers, not counting practice in their classrooms. The MGMP meetings utilized outside trainers funded by the project, micro-teaching and peer tutoring, team preparation of instructional materials, and problem-oriented discussions all involving active learning and practitioner-oriented development techniques. Comparing output indicators between pilot and control groups, the results are significantly positive for the REDIP teachers. As a quantitative output, results far exceed formal programs expected under scenario 2, both in terms of quantity and quality.

Since teachers have the greatest impact on learning, linking a professional development system they control to a larger system of professional development is a key, low cost element in improving classroom practices. Any professional development program should include such a demand-side model at the grass roots level given the speed with which it can be organized, its cost-effectiveness, its reach in terms of the number of people served, the quality of the programs and outputs, and the incentive it creates through team building. Similarly, KKKS has met principal's needs to create a more professional role for them, especially as instructional leaders. Their average attendance suggests approximately 40 hours per year, not counting implementation and practice in the school. The TPK has further assisted in professional development by reacting to demands for training of school committees, technical staff, volunteers, and others not normally served by government-sponsored in service programs. Although no specific hours can be attributed to training of numbers of stakeholders, reports suggest these numbers as high when compared to training received by the same classification of stakeholders not participating in REDIP.

The lesson here is that if teachers' professional development has the greatest impact on learning, then a systemic, dynamic system must be created. The multi tiered system that is controlled at the district and possibly provincial level needs times to reorganize and adjust and then phase in. Teachers may wait years before benefiting from new programs that may or may not be designed to meet their specific needs. Part of the professional development system must be highly and rapidly responsive. The system tested under REDIP demonstrate how quickly an effective system can be mobilized and eventually attached to a larger, district/provincial system.

Effective monitoring and evaluation to hold those involved in implementation accountable. Quality assurance (QA) may be used to determine that standards are being met. Although broad in scope, QA in this context refers to the provision of materials and human resources so that schools and communities can fulfill commitments to their standards. Quality improvement (QI) uses inputs and processes to upgrade outputs and outcomes for which the school is responsible. In the larger context under decentralization, teacher QA is assured through certification while student QA is determined through standardized testing. QA for schools is based on what Indonesia is calling Minimum Service Standards. Under scenario 1, school-level QA was based on visits by school inspectors. In a REDIP 1 survey, principals indicated that visits might number once in a year or less. Under scenario 2, the plan is for schools to conduct self assessments, determine standards, and then measure progress against those standards. This links the QA and QI efforts and may be linked to a new role for inspectors now being considered. The quality improvement and quality assurance cycle is the cornerstone of the MSBQI project which emphasizes implementation of school-based management. Thus, the SBM system serves as a school-level function while other QA systems are to be implemented at the district, provincial and national levels involving a new accreditation for schools, upgrading certification requirements for teachers, and considering a new national examination system that is used for evaluating the education system rather than as a system for graduating students.

The focus of the REDIP project was on school-level QA and QI efforts and based on funding of proposals that outlined specific goals and objectives, activities, outputs and outcomes. The plans served as the basis for monitoring of activities, expenditures and outputs and evaluating achievement outcomes. These plans were the tools. The external monitors were the 15 field consultants under REDIP 1 and the 20 under REDIP 2 who were assigned specific responsibility to visit schools, school committees, TPK, MGMP and KKKS meetings on a regular basis. The role is similar to what might be the role of the inspector under the new system for Indonesia. They provided support in completing forms, preparing reports, and answering specific procedural questions; provided oversight to make sure that activities were on schedule and on budget; conducted training on new rule and procedures; served to motivate stakeholders to achieve high levels of participation; alerted the JICA team in Jakarta of potential problems and possible solutions. As a result of this particular effort most outputs were achieved on schedule.

The difference between scenario 2 and scenario 3 is significant. Even under ideal situation where other donors provide similar QA and QI initiatives, no provision is made for continuous support from external field staff to ensure that stakeholders are complying with proper procedures, completing forms correctly, and maintaining schedules of activities. The inspectorate system is being redesigned and currently not operational. Instead, such programs may rely on interim visits and reports involving considerable time lags between visits. This makes it more difficult to correct situations and may impact on outputs being achieved late, of lower quality, and in reduced number. The cost implications for such an approach, however, are high. The question is also raised as to how long does this type of support system need to remain in place until appropriate behavior change is achieved. It does suggest that new institutional change requires continuous support to assure that behaviors are appropriate to meet requirements. REDIP is unable at this time to determine if appropriate behaviors practiced by stakeholders and supported by field consultants will be sustained once the project ends, although sub districts under REDIP 1 but not REDIP 2 are maintaining some of the structures such as MGMP, KKKS and TPK through self-funding mechanisms.

In conclusion, the Indonesia case study reveals that new systems created under decentralization need to be multi tiered. Capacity building, for example, may be the responsibility of the district, but that sub systems under capacity building can be delegated to institutions at lower levels that can sustain themselves. There is the added benefit that such lower level systems can get underway much faster than larger systems that are to serve district-wide initiatives. The problem will be to link these different levels into a cohesive system; to monitor performance of lower level systems; and to ensure equity of programs at the lower levels. Overall, what links decentralization to school quality improvement in Indonesia is the empowerment of school and sub district organizations to take responsibility for quality; to provide basic or seed resources; provide the training and tools to initiate them and the monitor them so that programs follow the correct procedures. Disruptions in the transition to decentralization and conflicting policies and procedures may have impact when no change agent is involved. So long as the grass roots organizations perceive they can assume more responsibility without fear of censure, the environment is there for communities to improve schools. The key variable is the concept of the change agent, whether internal to the system as with the MSBQI project, or external as with donor direct involvement.

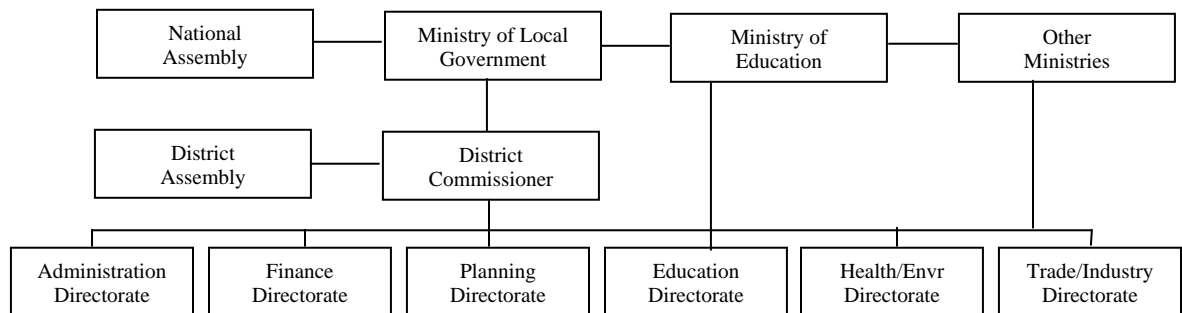
Malawi

History of Decentralization:

Subsequent to independence from British colonial rule in 1964, Malawi entered a period of autocratic rule lasting 40 years, contributing to Malawi becoming one of the poorest and least developed countries in the world. Upon the death of its president, Malawi introduced a democratic, multi-party system as stipulated by a new constitution promulgated in 1995. Among other mandates, the constitution required establishment of local government authorities. By 1998 the Cabinet approved a National Decentralization Policy stipulating the creation of elected assemblies at the district level and major urban areas and devolution of central government functions to them. Davies and Harber (2003) suggest there were two purposes underlying the decentralization movement. First, there was a genuine need to introduce democracy in the form of a multi-party system closer to the people. Second, ineffectiveness of the then, current centralized system could be made more efficient through decentralization. After the passage of the Local Government Act of 1998, the district commissioner's office was abolished, and the first district assembly elections were held in November 2000.

There are 33 districts in Malawi. Decentralization regulations mandate the following organizational structure for these districts as follows:

Malawi Decentralized Organizational Structure



Under this structure, the district commissioner supervises six directorates. Line management of the district commissioner is through the Ministry of Local Government, while each sectoral directorate has responsibility to the district assembly and Ministry of Local Government through the district commissioner and directly to the appropriate Ministry such as health or education.

In 1995, the Government approved a new instrument to improve the linkage between budgeting and development priorities presented in the Malawi Poverty Reduction Strategy Paper (MPRSP). The Medium-Term Expenditure Framework (MTEF) was to integrate capital and recurrent expenditures. Education was one of the first ministries selected to implement this framework in the 1998/99 fiscal year. The framework provides for annual budget ceilings set by the Ministry of Finance, and a logical basis for assigning resources on the basis of priorities. Line ministries prepare and submit their three-year budgets as an output-focused approach based on costing priorities and

projections of available resources. In its 2000 review of the first phase of the MTEF, the Treasury Ministry identified a shift of national funding towards the social sectors, estimating that the education budget doubled from 16 percent to 33 percent of the national budget between 1994 and 2000. Implementation fell short of expectations at different phases of the cycle, but overall results have been promising.

The Joint Review Committee (2001) reported a number of findings related to decentralization. They stated that the legal framework is generally responsive and adequate. Although the plan for civic education and local government elections was appropriate, it was under-funded. They reported weak administrative capacity in district assemblies. Fiscal reforms have been implemented in the form of unconditional block grant transfers from central to district governments, the formation of local government finance committees, and secretariat. Although the District Development Fund (DDF) was begun, a number of changes were seen as necessary to serve its purpose. A new integrated financial management system was in use and training provided for users. Sectoral devolution guidelines were distributed by government and some ministries have taken modest steps to begin implementation, but little progress has been made. The new local development planning system was in place, but that the government needed to look closely at linking national and district development planning, roles of traditional authorities, and the trade-off between excessive bureaucratic formalization and participatory planning.

At the completion of a study on the intergovernmental fiscal transfer system (2001), the Cabinet Committee on Decentralization approved a mechanism to transfer funds to local governments in the form of block grants towards recurrent expenditures. Fund for capital expenditures are disbursed through a district development fund provided mostly by donors. These funds are channeled through the Department of Local Government to district assemblies. Due to serious financial limitations on local governments, the GoM continues to pay salaries of civil servants directly.

By early 2004 the following has been achieved related to decentralization:

- Staffing of the department of Local Government (DLG) has been increased to meet the demands of decentralization and strategic planning.
- 219 new district commissioners, directors of finance, directors of planning and development and directors of administration have been hired by district assemblies and trained in the new decentralization policies and procedures.
- Preparation of a comprehensive development program for 2002-2006 was completed.
- Training conducted for most development committees.
- The National Local Government Finance Committee (NLGFC) has completed a strategic plan; developed an allocation formula for sector grants; obtained parliamentary approval for the allocation formula; created a district revenue profile for 30 districts; undertook the elimination of the audit backlog for districts so that decentralization could progress; introduced the MTEF as a budgeting tool

- for district assemblies; developed assembly audit guidelines; developed budgetary control measures; and developed guidelines to broaden districts' revenue base.
- A new financial management computer system (IFMIS) was implemented in the same six districts where the JICA-funded education project was to be implemented.

By the time of this writing, many of the structures, processes and tools were in place to implement fully decentralization regulations.

Organization of Education under Decentralization:

The legal authority for education is vested in the 1975 Education Act of Malawi. There have been recent discussions by MoEST with donors to prepare a new law. Since 1975, the most significant changes in the system have included introduction of free primary education in 1994, preparation of Vision 20/20: National Long-Term Perspective Study, development of the Policy Investment Framework: 2000-2012 (PIF) (1999), preparation of the MPRSP (2001), and the preparation of the Education for All Plan (EFA) (2002). Based on education goals established under Vision 20/20, those responsible for preparation of the PIF, the education section of the MPRSP and the EFA action plan are attempting to integrate goals, and actions into a common plan for education.

The education system is comprised of an eight year primary education cycle and a four year secondary cycle. Under decentralization the Ministry of Education, Science and Technology (MoEST) has delegated responsibility for primary education to the district while maintaining management of secondary education through its six divisional offices. There is a plan to transfer management of secondary education to districts, which is one explanation as to why qualifications for all District Education Managers include experience at the secondary level. In 1999 there were about 2,900,000 primary students enrolled in 4,481 schools. At the secondary level, approximately 243,000 students were enrolled in 3,500 schools many of which were community day secondary schools (CDSS). Many are converted colleges of distance education and private schools, and their quality is considered much lower than conventional secondary schools.

Educational indicators describe a system with many serious problems. Free primary education increased total primary enrollment to approximately 80 percent of the school age population, but a significant disparity exists between urban and rural access as well as boys and girls. Only 18 percent of those that graduate primary have access to secondary education. The average dropout rate hovers around 12 percent and absences are significantly high because of traditional practices and engagement in income generating activities. Girls' enrollment is lower than boys. Almost 50 percent of primary teachers are trained and the national average for student to teacher ratio is 72:1, and when compared to qualified teachers is 123:1 (World Bank, 2004). The system is one of the least funded in Africa, relying heavily on donors to meet development costs. Over 90 percent of the development budget is provided by donors. (Project Team, 2002).

Under decentralization, district assemblies are responsible for primary education while secondary, vocational training and literacy are managed by the divisions on behalf of the MoEST. District and divisional educational planning must be in line with the PIF, which has been developed by the MoEST. Besides policy formation, MoEST is responsible for curriculum development, the inspectorate, setting standards, and training. Key to decentralization in the decisions about how much money education receives. Funds are now allocated by district assemblies for recurrent expenditures and mainly provided by donors for targeted purposes through the district assembly. The matrix below summaries key sub function responsibilities:

Decentralization Matrix for Malawi

Level	Organization of Instruction					Personnel Management					Planning/Structures				Resources			
	Select school attended	Set instruction time	Choose textbooks	Define curriculum	Determine teaching method	Hire/fire school head	Recruit/hire teachers	Set teacher pay scale	Assign teaching duties	Decide in-service	Create/close school	Select School Programs	Define course content	Set school exams	Develop school impr. plans	Allocate personnel budget	Allocate non-person. bdet	Allocate in-service resc.
National			100	100				100			50			100	20	100	50	
Division						50				100								
District						50					50				80		50	
Zone/Cluster																		
School																		

Many of the responsibilities split between divisions and districts reflect the differentiated responsibilities between primary and secondary education.

Educational decentralization is part of the larger decentralization plan described in the previous section. Within the education sector, decentralization is being introduced in phases. By mid 2003, the Inter-Ministerial Committee approved the Education Sector Devolution Plan; however, MoST had not produced guidelines for its implementation. Under the phase-in, teacher certification and appointment would remain the responsibility of MoEST, but dismissal of teacher would be the responsibility of the districts. Registration and accreditation of schools would be the responsibility of MoEST as would procurement under the Central Supplies Unit. Payroll responsibilities has been shifted to districts. Although teacher training remains the responsibility of MoEST, districts are expected to play a more active role for in-service, making better use of teacher training centers located in most zones of primary education. Curriculum, student testing and inspection functions remain the responsibility of MoEST. MoEST currently is involved in the budgeting process, but eventually, district assemblies will work directly with NLGFC. Location of new schools is a shared responsibility between MoEST and the districts.

The six divisional offices under MoEST have been assigned management responsibilities. Each division is assigned responsibility for a group of districts across a region of the

country. These responsibilities include budget request development, fund allocation, educational advisory services, distribution of supplies centrally procured, and for planning, monitoring and evaluation. Also, for the time being, divisions will maintain management responsibility for secondary education. As transition to decentralization is completed, the role of divisions will become advisory while providing oversight responsibility for MoEST functions. Primary education advisors (PEA) will take on responsibility for evaluating primary schools and report to the Coordinating PEAs located in the district offices. Secondary Education Method Advisors (SEMA), currently stationed at divisional offices, will transfer to district offices sometime in the future. Finally, District Education Managers report to MoEST, but will, eventually, report directly to district assemblies. Schools are to work more closely with parent-teacher associations and school committees to develop plans, program implementation and school program monitoring and evaluation; however, almost no emphasis is being placed on school-based management at this time. The emphasis is on districts building capacity to manage primary education.

JICA Project:

The JICA-funded project entitled *The National School Mapping and Micro-Planning Project in the Republic of Malawi – Micro-Planning Component* began in December 2000. Due to its success, MoST requested funding for a continuation which resulted in the *National Implementation Program for District Education Plans in the Republic of Malawi (NIPDEP)*. This project continued operation as Phase 2 beginning in January 2003 and ending in June 2005. The main purpose of the initial project was to build capacity within six districts to prepare education plans through a participatory process. In addition, decentralized data collection approaches were explored to improve accuracy in planning. In Phase 2, the project was expanded to include three objectives: (1) strengthen implementation of the District Education Plans (DEP) developed during Phase 1; (2) build capacity in planning and implementation of DEPs of the central and local education officers in the context of decentralization; and, (3) formulate the National District Education Development Plan based on the PIF, sector development plans and DEPs.

During Phase 1, the project team developed a two-week training program and when completed by district and school-level stakeholders resulted in the preparation of a draft DEP. Due to its success with the six pilot districts, MoEST asked JICA consultants to conduct training for the balance of 27 districts. At the end of the project, all 33 districts had completed draft DEPs; shared them with communities; and submitted them to district assemblies to be included as part of the District Development Plan. Some districts used the plans as models for other sectors to use in preparation of their district plans. Since pilot activities were limited to increasing accuracy of data and use of computers at the district level, project evaluation was measured in terms of achievement of outputs rather than measurement of outcomes. Under Phase 2, the six pilot districts were responsible for requesting funding from JICA through proposals based on their DEPs. The level of funding is at the district level, but funding was to be used to improve specific schools within the district. It was possible to establish outcomes based on the pilot programs that

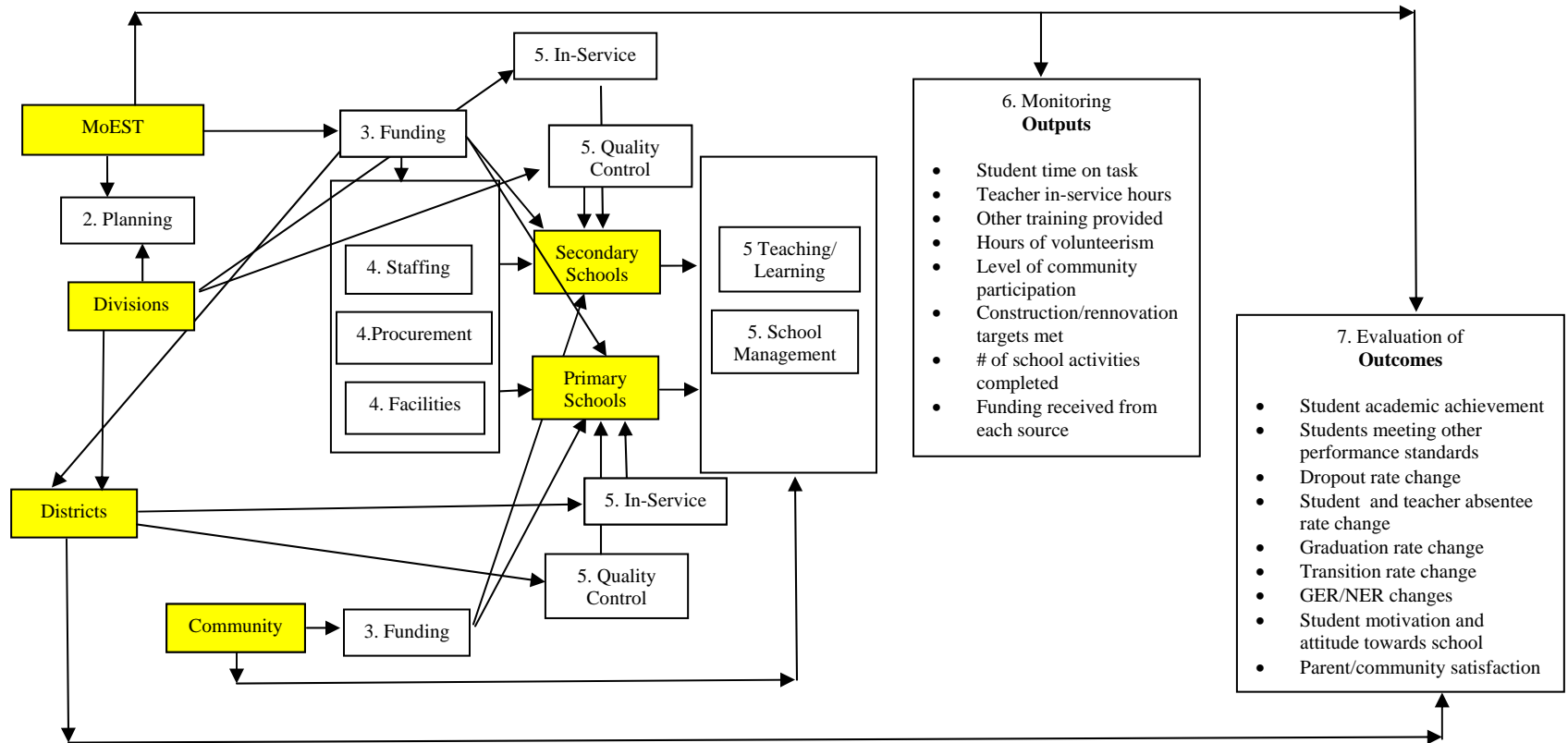
were implemented within pilot districts. The Malawi Center for Education Research and Training (CERT) was contracted to conduct baseline, interim and post-pilot evaluations for pilot projects. At the time of writing, data were available for baseline and interim results, the project not having been completed. These results form the basis for the case study along with narrative explanations provided in the Final Report for Phase 1 (Project Team, 2002b) and Progress Reports under Phase 2 (Project Team, 2002a and 2003).

Analysis:

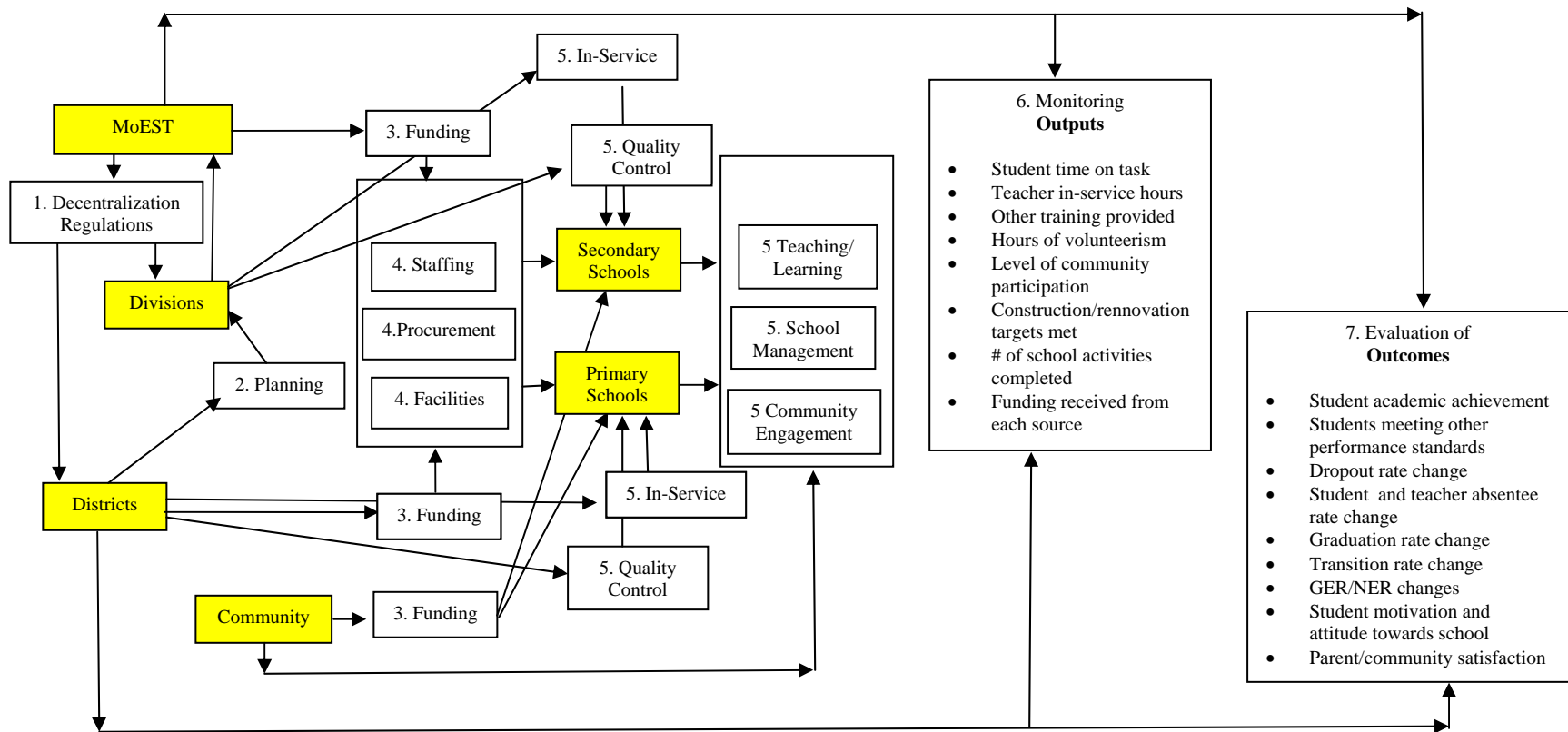
Three path analyses are provided on the following pages to identify the three scenarios under analysis – scenario 1 = before decentralization; scenario 2 = during the first phase of decentralization; and scenario 3 = during decentralization JICA’s project serving as an external change agent. Shaded boxes represent organizational structures. The numerals contained in boxes representing variable groups show the order in which the system unfolds over the school year. For example funding must be provided (numeral three) before teachers can be hired, construction started or supplies procured (numeral 4). These particular inputs, procurement for example, represent not only those items that are procured such as textbooks, but also represent the process of procurement involving ordering, shipping and verifying.

While JICA worked in six pilot districts, other donors focused on different aspects of the education system such as GTZ for teacher training and CIDA for textbook distribution. Some of these activities overlapped the JICA project, but one in particular provides additional data. The Shiradzulu Initiative funded by DfID experimented with an integrated approach to build a decentralized system in one district Davies, Harber, Dzimadzi, 2003). Findings from this project will be incorporated into this case study.

Path Analysis for Scenario 1: Former Centralized System in Malawi



Path Analysis: Scenario 2 Malawi (Decentralization without external change agent)



Governance and Management. Under the first scenario, the Malawi education system was typical of most centralized system. Central government prepared laws, regulations and policies while lower level institutions were responsible for implementation.

Organizational Structures.

Funding.

School/Community Processes. Communities have two tracks to influence education. The first is through the education system and participation on committees. The second is through the Ministry of Gender, Youth and Community Services. At the district level, this ministry is to work through the District Education manager's office. At the school and village levels such organizations as the Area Education Committees, Village Education Committees are to work through the formal and non-formal education system to broaden community participation.

System Outputs.

Student Outcomes.

Conclusions:

Summary of Differences among Scenarios for Malawi

Indicator Group	Scenario 1 (Centralized System)	Scenario 2 (Decentralized System)	Scenario 3 (Decentralized System with External Change Agent)
Governance and Management		<ul style="list-style-type: none"> • Currently in transition 	<ul style="list-style-type: none"> •
Organizational Structures	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
Funding		<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
School/Community Processes		<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
System Outputs	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
Student Performance Outcomes	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	
Other System Outcomes		<ul style="list-style-type: none"> • 	

Conclusions:

Morocco

History of Decentralization

Organization of Education Under Decentralization

Decentralization Matrix for Morocco

Level	Organization of Instruction					Personnel Management				Planning/Structures			Resources					
	Select school attended	Set instruction time	Choose textbooks	Define curriculum	Determine teaching method	Hire/fire school head	Recruit/hire teachers	Set teacher pay scale	Assign teaching duties	Decide in-service	Create/close school	Select School Programs	Define course content	Set school exams	Develop school impr. plans	Allocate personnel budget	Allocate non-person. bdgt	Allocate in-service resc.
National																		
Regional Academy																		
Province																		
Commune																		
School																		

JICA Project and Data Analysis

Observation

Common Results and Possible Lessons for School Quality Improvement

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