Strategic Planning in Education:
Some Concepts and Steps

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Contents

Abstract

In the context of national education development, the term of strategic planning is increasingly referred to. First, one may wish to plan and carry out all the activities deemed needed, but without achieving the ultimate goals. Furthermore, more resources do not necessarily stand for the best results. The way one uses these resources can lead to a different level of benefits. Thirdly, it has become more and more difficult to plan everything one would wish to do. One ought to make choices, often tough ones, through a balanced decision-making, trade-offs across the system and consensus building process.

There are a variety of approaches to carry out strategic planning. One cannot say that there is a "single perfect way" to conduct it. Each institution has its own particular interpretation of the approaches and activities in strategic management. However, what is generic to strategic planning and management are certain typical stages involving similar activities carried out in a similar sequence.

Any management involves four basic stages: analysis, planning, implementation and evaluation. **In the education sector, the management operations related to "upstream", planning work consist of: (i) system analysis; (ii) policy formulation; (iii) action planning.**

Sector analysis consists of conducting data collection on and critical analysis of the aspects relating to the education sector. Planners carefully review how the system functions (internal dynamics) and examine various contextual, determining factors (the environment of which education is a part), e.g. macro-economic and socio-demographic situations and developments.

Policy and strategy formulation: Careful (and critical) analysis of the educational system undertaken during the sector analysis leads to questions about what the education sector must do in order to address the major issues, challenges and opportunities. These questions include what overall results (strategic goals) the system should achieve and the overall methods (or strategies) to implement policies designed to bring about such objectives.

Action planning is a process whereby one translates the policy statements (options and strategies) into executable, measurable and accountable actions.

In a broader sense, action planning includes specifying objectives, outputs, strategies, responsibilities and timelines (what, what for, how, who and when). The output of this process is a plan of action.

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I. Introduction

Planning is a process whereby a direction is set forth and then the ways and means for following that direction are specified. There are many forms of planning with several types of activities involved in this process.

A plan is the product of the planning process and can be defined as a set of decisions about what to do, why, and how to do it. A plan of action is a living reference framework for action. This implies that:

- As a reference of action, the plan is the result of consensus building process, to be agreed upon by all those working in the fields covered as well as the other stakeholders contributing to its implementation;
- As an indicative, living framework, it is designed in such a way as to allow for adjustments in light of new developments during implementation;
- As a working tool, it includes not only policy and expenditure frameworks, but also the hierarchy of objectives, key actions and institutional arrangements for implementation, monitoring and evaluation.

More and more, education managers are compelled to think and plan strategically, due to some following reasons:

- First, one may wish to plan and carry out all the activities deemed needed, but without achieving the ultimate goals.
- Furthermore, more resources do not necessarily stand for the best results. The way one uses these resources can lead to a different level of benefits.
- Thirdly, it has become more and more difficult to plan everything one would wish to do. One ought to make choices, often tough ones, through a balanced decision-making, trade-offs across the system and consensus building process.

These lead to espouse strategic planning. A strategic plan in the education sector is the physical product of the strategic planning process and embodies the guiding orientations on how to run an education system within a larger national development perspective, which is evolving by nature and often involves constraints.

II. The Strategic Management Cycle

II.1. An Overview

Like any other systems, education has inputs, processes, outputs and outcomes:

- Inputs to the education system include resources such as teachers, buildings, equipment, books, etc.
- These inputs go through a process (throughput) whereby they are mixed (input mix), combined and/or moved along to achieve results.
- Educational outputs are tangible results produced by processes in the system, such as enrolments, graduates and learning achievements.
- Another kind of result, which can be called outcome, is the benefits for the students, their families and/or the society as well.

As a way of strategic management, education systems should be analyzed and thought out in terms of relevance, efficiency, effectiveness, impact and sustainability: for example, one will wonder whether the inputs to the education system are relevant for addressing the needs, to what extent the processes (utilization of resources) are efficiently driven and how well the anticipated outputs are effectively produced. Outcomes should be weighed in terms of their impact and sustainability.

II.2. Operational v. Strategic Planning

In the past, planners usually referred to the term "long-range planning". More recently, they use the term "strategic planning". Although many still use these terms interchangeably, strategic planning and long-range planning differ. Long-range planning is generally considered to mean the development of a plan aimed at achieving a policy or set of policies over a period of several years, with the assumption that the projection of (or extrapolation from) the past and current situation is sufficient to ensure the implementation of the future activities. In other words, **long-range planning assumes that the environment is stable, while strategic planning assumes that a system must be responsive to a dynamic and changing environment**. The term "strategic planning" is meant to capture strategic (comprehensive, holistic, thoughtful or fundamental) nature of this type of planning.

With regard to operational and strategic planning, a narrow definition would be that strategic planning is done with involvement of high levels of management, while operational planning is done at lower levels. However, this document proposes to give it a wider definition as shown in the following table.

	Operational planning	*Strategic planning*
Focus	Routine activities	Achieving goals
Purpose	Achieving the best use of available resources	Planning the best courses of action
Rewards	Efficiency, stability	Effectiveness, impact
Information	Present situation	Future opportunities
Organization	Bureaucratic, stable	Entrepreneurial, flexible
Problem solving	Relies on past experience	Finds new ways and alternatives
Risks	Low	High

II.3. The Strategic Management Cycle

There are a variety of terminologies used in strategic management and a variety of approaches to carry it out. One cannot say that there is a "single perfect way" to conduct strategic planning. Each institution has its own particular interpretation of the approaches and activities in strategic management. However, what is generic to strategic management are certain typical stages involving similar activities carried out in a similar sequence. Any management involves four basic stages: analysis, planning, implementation and evaluation.

In a more sophisticated way, we can say that **strategic management is a continuum of successive stages such as: critical analysis of a system, policy formulation and appraisal, action planning, management and monitoring, review and evaluation. Experience and lessons learnt from implementation, monitoring and evaluation provide feedback for adjusting the current programme or for the next cycle of policy formulation and action planning**.

Diagram: The strategic management cycle
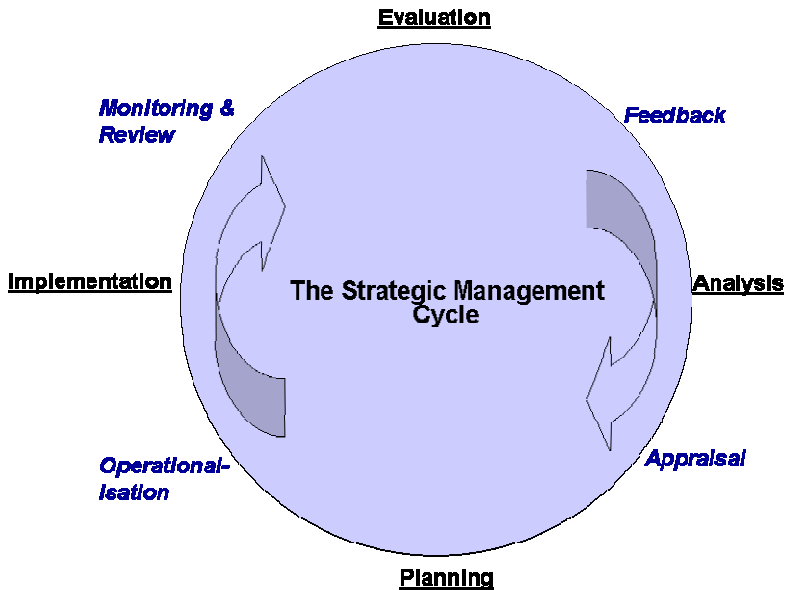
The diagram above outlines this cyclical pattern of strategic management:

- Any management cycle begins with analysis, whereby the current situation of a system and the critical issues pertaining to its status and functioning are first analysed.
- Findings and remedial options are then formulated and appraised, thus providing policy orientations.
- When the system is analysed and the future directions are traced, one can proceed with planning the necessary actions to correct or improve the situation. A plan can be long range (6 to 10 years), medium term (3 to 5 years) or short term (1 to 2 years).
- Operationalization consists of taking the necessary reform and institutional measures that are conducive to the smooth implementation of plans or programmes and before the actual execution starts, including:
- Designing specific development projects or programmes and/or mobilizing resources required to implement the planned actions and activities.
- Planning and management are subject to feedback-providing operations, i.e. monitoring, review and evaluation.

In the education sector, the management operations related to "upstream", planning work consist of: (i) system analysis; (ii) policy formulation; (iii) action planning.

Sector analysis: This diagnostic stage consists of conducting data collection on and critical analysis of the aspects relating to (and surrounding) the education sector. Planners carefully review how the system functions (internal dynamics) and examine various contextual, determining factors (the environment of which education is a part), e.g. macro-economic and socio-demographic situations and developments. They look into the above aspects from the perspective of the system's strengths, weaknesses, opportunities and threats (better known as the SWOT analysis) regarding educational development. This will help to identify the critical issues, to identify the challenges and to construct remedial actions. Some call this phase of education sector analysis (ESA) the diagnostic work. Sector review, system analysis, etc. are also used.

Policy and strategy formulation: Careful (and critical) analysis of the educational system undertaken during the sector analysis leads to questions about what the education sector must do in order to address the major issues, challenges and opportunities. These questions include what overall results (strategic goals) the system should achieve and the overall methods (or strategies) to implement policies designed to bring about such objectives. This stage of strategic planning is called policy formulation.

Action planning: Action planning is a process whereby one translates the policy statements (options and strategies) into executable, measurable and accountable actions. In a broader sense, action planning includes specifying objectives, outputs, strategies, responsibilities and timelines (what, what for, how, who and when). The output of this process is a plan of action. For the purpose of result-based planning, the Logical Framework Approach is also widely used when preparing development projects, programmes and plans, thus contributing to results-based programming, management and monitoring in the education sector.

Usually, **projections of resource requirements** are included in strategic, operating or work plans. Resources can be human, technical, physical and financial. Information on financial resources include: the cost estimates required for the implementation of the plan, the budget likely to be available in the future and the funding gaps (additional funding) to fill in for each of the years included in the span of time, giving particular attention to the first years. The MTEF (Mid-Term Expenditure Framework) processes in place in some

countries should contribute to fruitful negotiations and trade-offs between the "top-down" budget ceiling and "bottom-up" initiatives for resource envelope for the sector. Plans build on the MTEF and further detail how the funds will be spent (by recurrent budget, capital budget, project budgets, etc.)

III. Three Stages of Strategic Planning

III.1. Sector Analysis

Sector analysis is the first stage of sector development planning. Sector review, situation analysis, diagnosis, etc. are sometimes used interchangeably. **Basically, sector analysis consists in conducting data collection on and critical analysis of the aspects relating to (and surrounding) the education sector**. Planners and managers carefully examine both internal and external aspects of the education system. In other words, they:

- review how the system functions (internal dynamics) to meet people's needs and economic demand;
- examine various driving forces behind the education system and external conditions (the environment of which education is a part), e.g. macro-economic and socio-demographic situations and developments.

Planners and managers can look at the above aspects from the perspective of the system's strengths, weaknesses, lessons and opportunities regarding educational development. They also examine the relevance, efficiency and effectiveness of the inputs, processes and outputs of the system in its current setting. This helps to identify critical issues, challenges and construct remedial actions and policy provisions.

The main categories of aspects to be considered when conducting an Education Sector Analysis (ESA) and/or when describing the diagnostic part of an education sector development plan are: (i) macro-economic and socio-demographic frameworks; (ii) access to and participation in education; (iii) quality of education; (iv) external efficiency; (v) costs and financing of education; and (vi) managerial and institutional aspects. The aspects (ii), (iii), (iv), (v) and (vi) can be documented by sub-sector (pre-school, primary and secondary education, technical and vocational education, higher education, non formal education, etc.)

III.2. Policy Design

Education sector policies represent the government's public commitment to the future orientation of the sector. A clearly formulated policy can play an important "operational" role as a reference for action. It can help to guide decisions and future actions in educational development, including the interventions of international and bilateral cooperation agencies, in a coherent way. It is important that policy promote the coordination and success of programmes and projects. The formulation of a "good policy for education" is a necessary step in promoting the emergence and effective implementation of action plans, programmes and projects.

A policy is a set of the goal and purposes (specific objectives). Often, education policies are defined along the following threefold dimension:

- access (access, participation, including gender and equity issues)
- quality (quality, internal efficiency, relevance and external effectiveness)
- management (governance, decentralization, resource management).

These dimensions are addressed (i) either as a whole, by programme component or by sub-sector, (ii) with target indicators by time-range (medium or long-term) and with a few quantitative indicators. One cannot say that there is a perfect way of writing policies or of listing different policy aspects. An indicative checklist is presented below as a way of providing specification of some of the fields requiring definition in an educational policy and the implementation strategies. This list is not exhaustive:

- access to and participation in education;
- equity and the reduction of disparities between boys and girls, regional disparities, rural/urban disparities and social disparities;
- quality and the relevance of education at different levels (basic education, general secondary education, technical and professional education, higher education, adult education, etc.);
- the place that the private sector and local groups occupy in the organization of education;
- regulation of student flows between (i) formal and non-formal education; (ii) public and private education; (iii) general secondary, technical, and professional education; (iv) short and longer higher education; (v) elementary and secondary, secondary and higher education, etc.;
- institutional aspects such as governance, management and planning, including the decentralization, de-concentration and centralization balance;

- partnership and communication between actors and partners, the level and form of participation and communication;
- cost control in recurrent and capital expenditure; and
- policies and strategies to mobilize resources in connection with decentralization, the development of the private sector and partnership development.

Particular emphasis should be placed on formulating quantified objectives such as enrolment, admission, and flow rates, pupils/teacher ratios, the supervision rate, the space utilization rate and the share of education in the national budget. For this purpose, simulation techniques and models have been used successfully to define policies that can then be quantified for consultation and the negotiation of trade-offs between stakeholders and development partners, on issues related to enrolment objectives, the organization of provision of different levels of education, and public, private, external financial contributions.

III.3. Action Planning

A national policy should establish the framework for its implementation by giving the main goals and priorities, as well as the strategies to achieve them. It should be credible: that human and financial resources are available for carrying out the policy. **Action planning (or programming) is the preparation for implementation. An action programme (which could also be called an action plan) aims to translate into operational terms the policy directions that education authorities intend to implement in a given time horizon**. It is a tool for "clarifying" to some extent the goals and strategies in relation to the education policy, programming the activities required, establishing the timing, indicating the necessary resources, distributing institutional and administrative responsibilities, preparing the budgets, etc. It is important to consult and negotiate with the various development partners throughout the action planning stage if the country is to mobilise their support for plan implementation.

> **Note**: It is necessary to differentiate between an action plan/programme and an investment programme which often deals with the infrastructures and equipments to carry out the action plan and the recurrent expenditure incurred by such investments. The duration of an action programme, in general, is five years. One of the criteria of an action plan – in order for a plan to be called action plan - is to go beyond mere policy statements and lists of activities to further define and prioritize the actions, activities, and

required resources in a coherent manner. These actions and resource projections should be defined within a given macro-economic framework using appropriate technical tools such as a simulation model.

In general the education policy framework document concerns the whole of the education sector. The action plan, which is linked to this policy framework, should also be sector-wide. Sometimes, a policy statement may concern either a particular sub-sector (secondary technical and professional education, for example) or a cross-cutting theme (improvement of the quality of education, for example), this within an overall, sector-wide development framework. Inasmuch as the subsectors represent fairly homogenous groups, an action programme can be developed first for each sub-sector, then these programmes are assembled into a sectoral plan of action, ensuring that a coherent whole is produced which faithfully reflects the policy framework.

An initial task for those in charge of developing an action plan is to draw up a typology of concepts to be used: objectives, results, actions, activities, measurements, resources, etc. It is necessary to achieve consensus on the concepts and their logical arrangement.

Different methodologies and techniques of action planning have been designed and used by different countries and agencies. Among them, two instruments are emerging as reference tools in developing action plans in the education sector: the Logical Framework Approach and simulation modelling. In reality, these two and other approaches are used, not in isolation but to complement each other, resulting in the preparation of a credible and coherent action plan for educational development.

IV. Planning for Monitoring and Evaluation

We are all accountable for the work we do. We are accountable for the use of the resources that we are given. We are accountable to a variety of people, but foremost to the people and communities we serve, though we are also accountable to those who provide resources.

We also need to learn lessons. We need a system that is reflective and analytical, examining performance both:
- On an on-going day-by-day, month-by-month basis so that we can change direction and improve what we are doing; and
- On an occasional basis, perhaps annually or every three years, when we can examine our effectiveness and the changes that have occurred so that we can build lessons from such experience into our future plans.

In response to these needs for accountability and feedback, three main questions should be addressed when preparing education development plans or programmes:

- What can enable us to judge and measure whether an objective or an expected result is achieved and an activity implemented?
- How can we assess the achievement of an activity, an output or an objective?
- What level of result are we going to assess?

In general terms, monitoring and evaluation consists in measuring the status of an objective or activity against an "expected target" that allows judgement or comparison. This target is an indicator. This implies that one has to define at the stage of planning some indicators that can enable measurement whether and how an output or an activity is delivered in comparison with the initial targets.

The second question concerns how to assess the status of each level of the programme. Your boss might want you to produce results, no matter how you achieve them. However, you ought to care about the use of the means that you are given in order to attain the results expected by your boss. This can be done by regular monitoring of the achievement of your activities. On the other hand, you may need an external and objective point of view to assess the impact of your activities, which can be done by a more formal form of assessment, an evaluation.

It is very important to plan M&E from the outset: e.g. when doing a strategic plan or planning a programme or a project. A system is needed that will help answer the questions of:

- Relevance: does the organization or project address identified needs?
- Efficiency: are we using the available resources wisely and well?
- Effectiveness: are the desired outputs being achieved? Is the organization or project delivering the results it set out to deliver?
- Impact: have the wider goals been achieved? What changes have occurred that have targeted individuals and/or communities?
- Sustainability: will the impact be sustainable? Will any structures and processes so established be sustained?

It is important to note that credible indicators cannot be constructed without a reliable information system. Without the production of reliable statistics, the quality of monitoring and evaluation will be questionable at the stage of the plan implementation. In other words, one must start by establishing a reliable information system in order to ensure the quality of the monitoring and evaluation.

IV.1. Performance Indicators

An indicator is a number or ratio (a value on a scale of measurement) that can be obtained from a series of observed or calculated facts and that can reveal relative changes as a function of time. Indicators are used to measure performance; they play a crucial role in monitoring and evaluation:

- they specify realistic targets for measuring or judging if the objectives have been achieved
- they provide the basis for monitoring, review and evaluation so feeding back into the management of the organisation or project and into lesson learning and planning for other subsequent work
- the process of setting indicators contributes to transparency, consensus and ownership of the overall objectives and plan.

The following introduces the general types of performance indicators that can be used to assess progress towards the achievement of different types of expected results and to answer the question: How do we know whether we are achieving/ have achieved our goal?

Direct or indirect indicators

Direct indicators (often statistical). These indicators are used for objectives that relate to a directly observable change resulting from activities and outputs. A direct indicator is simply a more precise, comprehensive and operational restatement of the respective objective. If the expected result is to increase the number of professionals trained in an area over a period of time, one should ensure that quantified data are collected on a regular basis and made available for monitoring, review or evaluation. For example, if the expected result is to: "train over two years 250 inspectors in educational planning and management", then the direct statistical indicator would be simply a count by semester or by year of the number of those actually trained in this field.

Indirect or proxy indicators may be used instead of, or in addition to direct indicators. They may be used if the achievement of objectives: (i) is not directly observable like the quality of life, organisational development or institutional capacity; (ii) is directly measurable only at high cost which is not justified; (iii) is measurable only after long periods of time beyond the life span of the project. However, there must to be a prima facie connection between the proxy and the expected result. The following example illustrates how a proxy indicator could be used to assess progress in what might seem to be an intangible situation. If the expected result is: "greater awareness among the general public and policy-makers about the major challenges of the HIV/AIDS in education", a good proxy indicator might be to collect data on the number of times public figures spoke of these challenges and/or the number of times the mass media reported on these challenges. In this case, collecting data every six months would be satisfactory. In the longer term, programme evaluation should offer statistical data to ascertain more accurately the totality of the factors and variables at play.

Qualitative or quantitative indicators

The Quantity-Quality-Time (QQT) maxim for constructing an indicator generally works well. But its rigid application can result in performance and change, that is difficult to quantify or to be given appropriate value. That a change may be difficult to quantify or that the analysis of qualitative data may not be straightforward, are not reasons to sweep them under the carpet. Special effort and attention needs to be given to devising qualitative indicators. A balance of indicators is needed, with some that focus on the quantitative and others on qualitative aspects.

Quantitative indicators may relate to:
- the frequency of meetings,
- the number of people involved
- growth rates
- the intakes of inputs; e.g. grants, buildings, teachers
- the adoption and implementation of the outputs, etc.

In many instances where the expected result may be qualitative (change of attitudes, capacity building, etc), a non-statistical approach may be the only way possible to develop an indication of "progress". Qualitative indicators largely focus on the "process of change" - asking stakeholders what they did as a result of their participation in activities. This technique works especially well in instances where training seminars and workshops are the pursued outputs. However, when dealing with stakeholders, care needs to be taken to avoid a focus simply on "satisfaction". Rather, the focus should be on what happened as a result of the participation. It should also be noted that narrative indicators can seldom be quantified easily over the short term.

Qualitative indicators relate to:
- the level of participation of a stakeholder group
- stakeholder opinions and satisfaction
- aesthetic judgements; e.g. taste, texture, colour, size, shape, etc.
- decision-making ability
- the emergence of leadership
- the ability to self-monitor
- attitudinal and behavioural changes
- evidence of consensus.

Qualitative indicators are sometimes called narrative indicators. The following example illustrates how narrative indicators could be used. If the expected result is to "Enhance provincial capacities for organization and management of non-formal education", then a valid narrative indicator might be through a follow-up questionnaire to be circulated among those individuals who participated in training activities to ask them what they did in their provinces as a result of the actions of the Ministry of Education. Such a questionnaire should not be a survey of client satisfaction. It should ask: "What did you do as a result of your participation in the training workshop?" It could be sent out to stakeholders several times – at least once a year - in order to develop a "baseline" and thus begin to assess the continuum of change. It may be that oral interviews could be used in lieu of a formal written response. Narrative indicators enable an organization to assess the

interconnection of factors without recourse to extremely expensive statistical research. In this way, one could demonstrate "partial success" even if other factors may have prevented the overall "enhancement of national capacity". This example also illustrates how a proxy indicator could be combined with a narrative indicator. In this case, a reliable proxy indicator might be the number of new non-formal education centres. The proxy has not measured "enhanced capacity"; rather it has shown the impact.

IV.2. Three Classifications of Evaluation

Depending on the nature of a programme and the purpose of an evaluation, there are different classifications of evaluation.

The **first classification** can be made depending on who's conducting the evaluation:
- internal (when the evaluation concerns a programme implemented entirely within an institution, is carried out by the persons belonging to the same institution as those managing the programme, sometimes in cooperation with the assistance of external evaluators);
- self-evaluation (is a form of internal evaluation done by those who implement the programme); or
- external (when the evaluation concerns a programme whose implementation involves persons from outside the institution, often carried out by evaluators independent of the institution).

The **second classification** is made depending on the use of evaluation. An evaluation can be:
- formative (because its main goal is generally to correct the course taken by a programme and its results are usually intended for those implementing it. Sometimes called mid-term evaluation because it is carried while the programme is still being implemented);
- summative (because it leads to conclusions about the value of the programme so that lessons can be learnt for the future. It is called end-of-programme evaluation); or
- ex-post (because it is conducted some time after the completion of the programme in order to draw conclusions on the impact and sustainability of the programme. It is another form of summative evaluation.)

The following three types of evaluation form the **third classification** that is being widely used in programme evaluation. However, it is recommended that some flexibility is applied when conducting the types of evaluation described

below in combination with those mentioned above. These three types are: monitoring, review and evaluation.

Monitoring: It is not an evaluation per se, but is a process whereby the progress of activities is regularly and continuously observed and analysed in order to ensure that the expected result is achieved. It is done by regular collection and analysis of information for checking the performance of the programme activities.

Monitoring is usually done internally by those who are responsible for the execution of activities (programme managers) in order to assess:
- whether and how inputs (resources) are being used;
- whether and how well planned activities are being carried out or completed; and
- whether outputs are being produced as planned.

Monitoring focuses on efficiency, that is the use of resources, especially at the activity (and sometimes at the output level).

Major data and information sources for monitoring are: financial accounts and also internal documents such as mission reports, monthly/quarterly reports, training records, minutes of meetings, etc.

Review, as for monitoring, is a task performed usually by those who are responsible for the activities, but it is a more substantial form of monitoring, carried out less frequently, e.g. annually or at the completion of a phase.

Often called mid-term review, its results are designed for those who are implementing the activities as well as the providers of funds. Reviews can be used to adjust, improve or correct the course of programme activities.

Review focuses, in particular, on effectiveness and relevance. It assesses whether the activities have delivered the expected outputs and the latter are producing the expected outcomes, in other words whether there is indication that the outputs are contributing to the purpose of the project or programme.

Key data and information sources for review are typically both internal and external documents, such as annual status reports, survey reports, national statistics (e.g. statistical yearbooks), consultants' reports, etc.

Evaluation in many organisations is a general term used to include review. Other organisations use it in the more restricted sense of a comprehensive

examination of the outputs of a programme, how it contributes to the purposes and goals of the programme.

Evaluations are usually carried out both by insiders (those belonging to the same institution as the programme managers) and outsiders (external evaluators) in order to help decision makers and other stakeholders to learn lessons and apply them in future programmes. Evaluations focus, in particular, on impact and sustainability.

Evaluations may take place:
- at the end of a project phase or at the completion of a project (terminal or summative evaluations) to assess immediate impact; and/or
- beyond the end of the project (ex-post evaluations) to assess the longer-term impact of the project and its sustainability.

Key data and information sources for evaluation are both internal and external. They may include annual status reports, review reports, consultants' reports, national and international statistics, impact assessment reports, etc.

IV.3. Objects of Monitoring and Evaluation

As described above, depending on the purpose and types of evaluation, the focus of evaluation can be different.

Like any other system, the education sector has inputs, processes, outputs and outcomes as show in the figure below. These are the main objects of monitoring and evaluation.

Inputs are human, financial and other resources necessary for producing outputs and achieving results. In the education system, they are teachers, equipment, buildings, textbooks, etc. These inputs go through a process (throughput) where they are mixed (input mix), combined and/or moved along to achieve results.

Outputs are the products and services that are generated as the tangible results in carrying out the planned activities. In an education system, they are, for example, the graduates and the knowledge acquired during their studies. Producing an output by itself can be meaningless. Such outputs are sought for the purpose of contributing to the achievement of an outcome.

Outcomes are the effects of utilizing the outputs. They are the overall changes in situations and/or benefits for the students, their families and/or the society as well, that can be qualitative and/or quantitative. For example, in the education sector, they are the gains that the graduates from an education level can actually obtain thanks to the knowledge they acquired at school.

Systems are often analyzed in terms of relevance, efficiency, effectiveness, impact and sustainability: for example, one can wonder whether the inputs to the education system are relevant for addressing identified needs, to what extent the processes – utilization of resources - are efficient, and how far the anticipated outputs are effectively produced. Outcomes and results will be analyzed in terms of their impact and sustainability. These are the focuses of monitoring and evaluation.

Figure: Relevance, efficiency, and effectiveness.
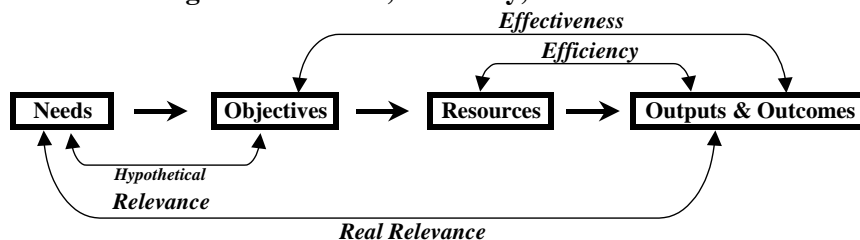
Relevance can be hypothetical or real:

- Hypothetical relevance is defined in relation to needs, e.g. whether a goal, an objective or an expected result of a programme or project reflects the actual needs of the beneficiaries or not. This is the focus of evaluation when appraising a programme before its approval, and sometimes during the programme review.
- Real relevance measures the extent to which the outputs produced and/or outcomes achieved respond to the needs of the population. This is the focus of evaluation when conducting a programme review, most often during a programme evaluation.

Efficiency describes the relation between the quantity of the outputs (products and services) produced and the quantity of resources used to produce them. Unit or average cost is often used to express the efficiency. This is the focus of evaluation during programme monitoring and review, and sometimes during programme evaluation.

Effectiveness describes the extent to which an objective has been achieved. In other words, it measures the level of achievement of an objective (or an expected result) of a programme or project pursued and of the effects (outputs and outcomes) achieved. This is the focus of evaluation during the programme review, and most often during the programme evaluation.

Impacts are the effects on the population and the environment by the pursuit and the achievement of an objective. The action involved in the pursuit of an objective can change a situation in both predictable and unpredictable ways. Sustainability is the extent to which the benefits delivered and changes brought about by a programme or a project continue after its completion. Programme evaluation, and project review in a lesser extent, focus on impact and sustainability.

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