Distance training on:

Sectoral Analysis and Management of the Education Systems (SAMES)

Background

Education system expansion in developing countries and the reorientation of aid mechanisms require strong national capacities in terms of education system steering and management.

These needs are currently constrained by the relative scarcity of staff trained in sector analysis and education systems management, due notably to:

- High staff mobility, and
- The fact that training in these two areas is scarce, scattered and often provided on one-off basis.

There is therefore a significant need for capacity building for the ministries in charge of defining and steering education systems.

The SAMES training was designed to meet that need by offering to African executives responsible for the management, financing and evaluation of education systems:

- a distance and on-the-job training, to keep the existing skills within the ministries while achieving the goals of providing a comprehensive training (thus with relatively long courses) and having a real impact (large graduating classes), and
- an operational diploma training, so as to simultaneously satisfy legitimate wishes for individual advancement and real institution need.

Curriculum

The proposed training is based on the expertise developed by the IIPE Education Sector Analysis Unit (well known as Pôle de Dakar). It is directly inspired by the approach and methods used by the Unit's experts during exercises like the development of a CSR (Country Status Report), which combine system diagnosis and formulation of recommendations, requiring a thorough and cross-cutting approach to the running, financing and performance of the education systems under study.

The goal of the training is not only for students to learn a set of techniques derived from functions that are generally separated, but equally to provide them with a mean of dealing globally with the issues under focus that helps them grasp the issues' different dimensions and, where necessary, overcome constraints linked to the scarcity and quality of available data.

The training comprises 8 technical modules numbered M0 to M7, and 5 international group sessions: 3 face-to-face and 2 virtual.
Module 0 – Using spreadsheet and statistical analysis software

Module M0 aims to equip students with the skills they need to work with the software used throughout the training: CALC, a spreadsheet that is used to carry out a large number of course exercises, and to teach them the fundamentals of statistics.

The module is delivered during the first face-to-face group session (G1), during which the principles and theoretical foundations of the training are also defined.

Module M1 and M2 are linked and focus on measuring the operationality and quantitative performance of the various levels of education.

Module 1 – General and educational demographics

The first module (M1) deals with educational demographics and how to calculate enrolment ratios. Its aim is to determine the quality of the demographic data and the various procedures that can be used to improve it (overlapping averages, estimated trend lines, etc.). Practising calculation of enrolment ratios (net ratios, gross ratios, enrolment ratios at specific ages) provides an opportunity to gain familiarity with the operational issues besetting the sector (intake capacity, access, repeating, retention/dropouts and transition). It culminates in the production of synthetic estimators used in international comparisons (such as average education expectancy). These relatively conventional items are constructed so as to establish progressive mastery of the various spreadsheet functionalities (data entry, calculation, graph layouts, trends, etc.).

Module 2 – Analysis of school careers

The second module (M2) focuses on school careers and measures of internal efficiency. It introduces the two major complementary families of school pathway analysis (cohort analysis and generational analysis) and particularly the different types of estimates that can be used according to the availability and quality of educational and demographic data. In measuring school careers and internal efficiency, it emphasizes estimation of school career profiles, which now replaces traditional enrolment ratio estimates in diagnoses of the coverage and efficiency of the different levels of education. In addition to the ability to produce the expected findings, the accent was placed – both in the course itself and in the items presented in the thesaurus – on how to interpret the findings and a on strategy for further analysis to be implemented before defining policies to address the difficulties observed (analysis of demand, causal factors of dropouts and repeats, etc.).

Module 3 – Quality of learning

The third module (M3) focuses on the measurement of academic achievement and its individual and contextual causal factors.

The goal of this module is not to turn the learners into producers of this type of data, which in itself would require considerable special training. It is, instead, to help them become enlightened users of such findings, able to judge their quality and include them in the day-to-day management of the sector (standardisation of staffing levels, choosing the most cost-effective ways of organising education, etc.). To achieve this goal, they need to master the methodological principles of model building and evaluation and become familiar with the tools and organisation of evaluation surveys (design and administration of proficiency tests, questionnaires intended for pupils, families, teachers, etc.). A particular effort will be made to enable proper interpretation of the different types of models presented in the evaluation studies. The students’ knowledge of evaluation tools will be thorough enough for them to be able to conduct, by themselves – based on national examination scores – simple evaluations such as "school value-added assessments", which help improve day-to-day quality management (mobilisation of teaching teams, school development programmes) and facilitate the dissemination of a "culture of evaluation".

The first videoconference session (VC1) follows these first three modules. It is designed to be an initial general review of the training, to ensure the quality of learning and develop new analytical skills (estimating school value added based on national examination data).

Modules M4 and M5 are also linked and allow learners to complete both parts of an Education Financial Simulation Model (EFSM) that compares "needs" (teachers, materials, assistants, school buildings, etc.) to available resources.

Module 4 – Education system planning and administration

Module (M4) deals with sector planning and administration. It is divided into three sections: the first, and most conventional, focuses on how to determine and forecast needs (functional equation determining teaching staff, materials and building needs according to choices in terms of educational grouping of pupils, classroom use, subject timetables and teacher workloads) and constraints on factor allocation (particularly as regards teachers, encompassing their terms of recruitment, status and payment basis).
The second section deals with how to standardise the functional equation (classroom size, teacher recruitment level, types of courses, etc.). This section covers the development of an indicative framework based on "best practices" (Fast Track Initiative), the mobilisation of evaluation data and a specific analysis of school staffing (random staffing, the relationship between staffing and academic performances, etc.). The third section covers methods of sector and school administration (centralisation/decentralisation, stakeholder empowerment, programmes, local management tools, etc.) and includes discussions of their respective impact on running and outcomes.

**Module 5 – Costs and financing**

Module M5 deals with the various dimensions of financing. The first section focuses on the overall financing structure of the sector and how to estimate the scope for mobilising public funding in the coming years. It includes an examination of temporal data and how to correct for inflation. The second section deals with the "reconstruction" of reliable financial data based on various available sources and the transition from an accounting logic to an analytical approach. The third section covers how to estimate spending per pupil (based on financial data corrected for reliability) and its different components. The fourth section focuses on the construction of a simplified simulation model combining needs definition and calculation, on the one hand, and available resources, on the other hand.

These two modules are followed by a face-to-face group session (G2) largely concentrating on the elaboration of a financial model based on national data gathered by the student groups (this data may be supplemented, where necessary, with data collected by trainers from Pôle de Dakar). The findings of these simulations will be used to prepare national analysis sheets that will be presented and discussed together during a brief “back-to-class” session (VC2) in the form of a videoconference.

Modules 6 and 7, respectively focusing on external efficiency and equity, broaden the theoretical vistas opened during the first 5 modules by laying down the principles for sub-sectorial trade-offs.

**Module 6 – External efficiency**

Module M6 covers the various tools used to analyse the economic and social relevancy of the training delivered. The first element, in particular, reposes on a review of the situation of education system graduates in the working world (access, pay, career) and the modes of regulation of the relationship between training and employment. It establishes a framework for overall trade-offs in collective investments in the different levels and types of education affecting the resources available for each of them and therefore the simulations that apply to them.

**Module 7 – Equity**

Module M7, on equity, addresses another level of trade-offs affecting the aforementioned sub-sectorial simulations. The attempt to achieve equity may in itself be a goal of the running of an education system. Education system managers must therefore master the tools that can be used to enlighten the general debate by evaluating the factors that contribute to differentiation of school careers (and professional careers) and assessing strategies aimed at compensating for the inequalities that are collectively deemed unacceptable. Again, the factoring in of this dimension has an impact on the sub-sectorial trade-offs examined previously through the sole prism of internal efficiency and quality (positive discrimination by supplying education, distributing bursaries, etc.). Finally, factoring in the dimension of equity is essential for the handling of delicate issues such as flow regulation at different levels of education, which could be achieved in large part by increasing household participation in education financing.

**Target audience**

Staff serving in ministries in charge of defining and managing African education systems (ministries, non-governmental organisations, technical and financial partners, etc.).

- 607 hours of training (7 distant learning modules, one face-to-face module, 5 themed group sessions, one group project and one individual project on country data)
- Personal study time per student is assessed at 607 hours.

**Teaching Methods**

- Alternating distance education and international or national group sessions
- A variety of teaching materials (paper course material, CD-ROMs, distant learning platform)
- English

The educational materials are presented in the form of CD-ROMs that include demonstration exercises, practical exercises and a thesaurus (reference documents, bibliography, sites, etc.) pertaining to each module. Each of the
modules is linked to one or several tutors. A distant learning platform serves as an interface for various types of interactions between the students and the team of trainers (validation exercises, questions, forum, etc.).

Under the aegis of a coordinator appointed from among its number, each national team conducts a series of group activities leading to the progressive elaboration of a national sector diagnosis document. The mechanism is under the scientific responsibility of Dr Momodou Mustapha Fannéh, a professor at the University of The Gambia and Dr Jean-Pierre Jarousse, former Professor at Rennes 2 University and scientific supervisor for the Pôle de Dakar.

**Duration of training**

This training takes place over a little less than 14 months (from May to June) and comprises slightly less than 76 days of training at a rate of 8 hours a day.

A total of 607 hours of training divided into 7 distant learning modules, one face-to-face module, 5 themed group sessions, one group project and one individual project on country data.

**Diploma/Certificate**

The training on Education System Management and Sectorial Policies is a State course for which 60 credits can be delivered (i.e. a full year of a Master's degree programme), following validation of the modules and examinations, and it is possible to continue on to obtain a Master of Education degree.

In order to take further training and graduate with a full and complete Master's degree, the entry-level prerequisite is a Bachelor's degree (3 years of university), or training of a recognised equivalent level, in the field of social science.

Candidates who do not hold a Bachelor’s degree in social science and who wish to obtain a Master’s degree must apply for equivalency or a waiver, specifying the programme(s), the number of hours and the marks obtained from all years of post-secondary studies they have completed.

A certificate of participation shall be issued to all persons accepted into the training who cannot submit proof of the required level of education.

**Access to the platform**

The SAMES training is hosted by a Pôle de Dakar distance learning platform ([http://www.iipe-poledakar.org/moodle/](http://www.iipe-poledakar.org/moodle/)). Guest access may be obtained by sending an email to the training administrator (td.kinkin@iipe-poledakar.org).

**Partner Institutions**

This training was developed in partnership with University Cheikh Anta Diop of Dakar (Faculty of Education – FASTEF – and the UNESCO chair in education sciences – CUSE).

Certain modules have been developed and offered in partnership with other specialised institutions (UNESCO IIEP, UIS, CONFEMEN/PASEC).

Financing for the training is provided by the institutional partners of the Dakar sectorial analysis unit (Pôle de Dakar) for this project (GPE, Agence Française de Développement, Agence Universitaire de la Francophonie) and by contributions from national capacity-building projects (local donor coordination).

The distant learning component of the training is supported by the AUF which:

- helped develop the project and provided training for the project's actors in management of distant education,
- provides free access to its French-language digital campuses for our students, and
- hosts the international group sessions.
Conditions for use of the modules by other stakeholders

In keeping with our goal of extending the training offer at the regional level, and in order to make them available for use in other languages besides French, the distant learning modules have been placed under a "Creative Commons" license that specifies the obligation to mention their authors, forbids commercial use and obliges all other parties to offer any new product to the public with the same "Creative Commons" options.

Partnerships

AUF - Agence Universitaire de la Francophonie
GPE (former Initiative Fast Track Secretariat)
CONFEMEN/PASEC – The CONFEMEN education system analysis program
IHEP Paris - International Institute for Educational Planning
UIS – UNESCO Institute for Statistics

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