InnOvaciOnes de NegOciOs 3(1): 127 - 140, 2006

Quality evaluation of the educational systems & educational administration and institutions (Evaluación de calidad de un sistema educativa: aspectos educativos e institucionales)

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Key words: Education, evaluation, quality

Abstract. The quality evaluation of educational systems as well as educational administration and institutions are described and discussed. Different analytical and conceptual approaches to these points are given. Conclusions are drawn and future lines of research in these topics are suggested and pointed out.

Palabras claves: Calidad, ducación, evaluación

Resumen. La calidad de los sistemas educativas, asi como la administración educative y las instituciones son descritas y discutidas. Se presentan distintos acercamientos analíticos y conceptuales para estos puntos. Se presentan conclusions y además, se señalan las futures líneas de investigación en este respecto.

Introduction

Since 1950s, education including teaching and learning has seen itself experiencing many great changes. These changes, in effect, have taken place due to different approaches, methods, techniques and designs formed and developed and adopted. Various learning and teaching designs have been applied. New tools and techniques that have been developed to support those approaches have resulted in relatively different findings. For instance, the Teaching and Learning Technologies Programme of the 1990s concentrated most of its funding on the sciences and social sciences, leaving the arts and humanities

in a poor third position; whereas the digitization programmes launched by the major research libraries around the globe have concentrated on rare and unique collections, which seem targeted predominantly at the historian. Even when it comes to the use of off-the-shelf packages, or generic approaches to e-learning it appears that there are noticeable differences in what the disciplines seem to use.

Consequently, the articles published in the last half of the century have raised new issues reflecting the growing chasm of attitudes, understanding, and funding which we witness also in education when it comes to the differences in the disciplines. But is this true, or are we simply perpetuating a myth? The ubiquitous nature of some of evaluating organizations seems to imply that some applications have a universal appeal, and one would be hard-pushed to notice any discernable differences between the disciplines and their use of such blunt student support systems. So, some of the world's foremost educational practitioners with acknowledged leadership and competence in building educational systems based on the use of new technologies have to make up their mind to evaluate the existing educational systems not to deviate from what they have been supposed to achieve.

A logical starting point may sound to answer the question of what exactly evaluation means. As my starting point let's take the definition presented by Elliot Stern (1992) who puts it as evaluation is referred to any activity that throughout the planning and delivery of innovative programmes enables those involved to learn and make judgements about the starting assumptions, implementation processes and outcomes of the innovation concerned. In effect, evaluation is a profession composed of persons with varying interests, potentially encompassing but not limited to the evaluation of programs, products, personnel, policy, performance, proposals, technology, research, theory, and even of evaluation itself.

Traditionally evaluation was categorized into formative (contributing to the redesign of the system) and summative (considering the system for purchase), but recently it can occur at the following points:

- while a system is being built
- once a system is built, but before it is installed in any organisation
- while a system is being installed in a 'test' organisation
- once a system has been running in a 'test' organisation for some time
- while a system is being installed in a wider setting
- once a system has been running for some time

All of these can contribute to the redesign of the system by IT managers etc. The differences in the utility of the evaluation will depend partly on the used and partly on the information provided to the different stakeholders.

Statement of problem

According to the pertinent literature on the quality evaluation of educational systems, the question is not whether or not evaluation is not necessary or not, but the question is in what form it should be accomplished not to ignore the shortcomings of other evaluation models already presented. In order to answer this question, several researches have embarked on writing different articles on the issue. However, the problem is that each of them has taken one particular aspect and left the others untreated. No general tailored principles have yet been suggested to be relatively practicable to the universality of educational systems. To exemplify the issue, one of these projects was the Minerva/ADAPT project [35], funded by the European Union. Within the scope of this project, systems like MOT were developed to create a test environment for AEH authoring systems, so new techniques could be integrated and tested in a real life setting. That report stresses the importance of continuous research in the field of AEH and discusses several evaluations of AEH systems to ultimately offer recommendations to the community of researchers involved in the field. Another example is Devedzic [43] gives an analysis of the key issues in next-generation web based education. He refers to problems like the need for sharing and reuse of material, the proliferation of standards for communicating and the ability of end-users (teachers) to deal with ICT as the key challenges for the field. Others, like Cristea and Garzotto [36], accentuate the soundness of the design being the most important factor in AEH authoring. This research, in effect, aims to fill the gaps formed by the new challenge of having to evaluate several systems instead of one generic application. Instead a generic evaluation framework is constructed so any educational system can be evaluated. As such, this research also assists in the conclusions and recommendations covariate in one way or another supporting the commonalities of quality evaluation. Recapitulating, the main problem this report focuses on is the lack of evaluation frameworks for generality coping with a variety of educational systems throughout the world.

Review of literature

The developments of recent years have created a need for more systematic quality assurance of the educational systems. In effect, all these changes occurred due to the institutions' increased autonomy, international

developments, the sharp rise in the number of students, new teaching methods, a changing environment for study and rising expectations in general with regard to transparency and documentation. In effect, evaluations and other surveys have demonstrated that institutions work in a targeted way on quality issues, but their work is often somewhat lacking in systematisation and coherency, documentation, follow-up of decisions and linkage to management. Therefore, the Evaluation Research Society (ERS) merged in the US in 1986 (in Azcutia, 1999; Cristea and Garzotto, 2004) to create the American Evaluation association (AEA). This society set though not officially adopted a series of standards for program evaluation. The members reviewed the relevant data, and then they independently prepared and circulated drafts of the material for use in their reports. The reports were presented and discussed in 1993. Then through those feedbacks they held a broad meeting in 1994. The necessity to strengthen work on quality has long been recognized both by the political authorities and by the institutions themselves. So each year this need has been felt more than ever.

In 2003, the Ministry of Education and research has laid down certain guidelines such as the regulation requiring institutions start grants to private institutions of higher education to enable them to satisfactorily document work on quality assurance and reveal poor quality. They have been required to have routines to ensure continuous improvement of the system and to embrace all processes of significance for the quality of studies, from provision of information to potential applicants to the completion of courses.

To delve into the relevant literature, a worthy work which can be recited here is the International Association for the Evaluation of Educational Achievement (IEA) which is an international association made up of education research and evaluation centres carrying out comparative studies about educational achievement at the international level. Of course, it is not a governmental body although its members are official representatives of their countries or of their respective educational systems, for which reason a large percentage of them are institutions linked to their corresponding educational authorities or sponsored by them. The IEA was established in 1959 and presently it has 56 member-countries from five continents.

Therefore, it has been carrying out comparative international studies about the performance of educational systems in the last 40 years in different areas, among which, particularly, reading and writing literacy, mathematics, sciences, preschool education, civic education or new technologies (Degenhart, 1990). Educational achievement is measured taking into account different context and process variables, with the aim of seeking explanations and interpretations for differences in achievement levels, without limiting this effort to developing

indicators or disseminating tables ranking the participating countries according to their achievement.

According to this general goal, the studies carried out by the IEA have two priority purposes. First, they are intended to provide meaningful information about the achievements of the various educational systems in relation to relevant reference groups. Second, they are intended to analyze the reasons for differences detected through them. With this purpose in view, comparisons of two types are made, one directly derived from scores and another one based on the relation between the prescribed curriculum and the one actually imparted at schools and the performance of the students. The IEA has carried out several studies focused on different subjects. In general, subjects regarded as basic, such as reading and writing, sciences and mathematics, have been their main targets, although other areas have also been covered, such as preschool education, civic education and the use of new information technologies in schools. One of the novelties it introduced recently is a "cycle of studies" through which longitudinal analyses and comparisons can be made in certain priority areas along time. In the development of its studies, the IEA has faced the need to prepare internationally valid tests that are acceptable to the participating countries. These tests are typically accompanied by context questionnaires to be filled out by students, teachers and principals with the aim of capturing the large diversity of conditions and situations prevailing in different countries as precisely and reliably as possible. After years of this work, the IEA has managed to develop and apply contrasted and 14 advanced technical procedures that later on were adopted by other international projects. Some of the concepts it developed, such as one referred to as "learning opportunity," have paved the way for new approaches to evaluating performance and carrying out educational research.

The main feature of the studies carried out by the IEA, which have influenced similar studies internationally, is the fact that they are based on detailed previous curricular analyses. By now, experts are very familiar with the distinction these studies have established among the three levels of curricular development – prescribed, imparted and actually achieved – that serve as the basis for their conceptual framework. This is, of course, one of its greatest challenges, as it requires the development of evaluation tools that take into account the cultural diversity aspect and the many curricular approaches and projects adopted.

Quality and quality assurance system

Although there is a plethora of complicated issues in the pertinent literature, there is no clear and simple definition of educational quality. Criteria

may vary according to objectives and disciplines, and assessments apply to conditions that often cannot be qualified. Besides, quality changes with the development of disciplines, educational activities and environments, while different stakeholders place varying emphasis on different aspects of it.

Yardsticks for evaluation of quality assurance systems

The question is whether the quality assurance system must involve only one part of the system or the whole institution, applying to the areas of activity that are related to educational quality. These areas in effect are as follows. The manner in which work on educational quality is made an integral part of the institution's strategic work, the way in which the institution assesses its educational quality and gets a feedback of its work quality is one of the essential areas of activity in rising the qualitative standards of educational systems. Moreover, the way in which authentic dada collection is retrieved, embarking on measures that ensure broad participation, with clearly defined distribution of responsibility and authority for various stages of the work, and the vogue in which systems of education ensure a focus on total learning environment and the active role given to students to contribute to working on quality and the total learning area.

Method

An obvious place to start is to look at which methods which have already been used in the process of evaluation, and what sort of studies has been performed with them. The diverse influences feeding into the issue provide a wide range of existing evaluation methods for practitioners to use and adapt. These methods include heuristic evaluation, experiment based evaluation, interviews & questionnaires, focus groups and customer feedback, longitudinal trials and semi-realistic ethnography (sociology), ethnography (sociology), conversation analysis and interaction analysis (Ethno-methodology), and breakdown analysis (computer science / philosophy).

To an extent, heuristic evaluation is concerned, it can be considered as an inevitable part of any system design process, as designers do something and then try to figure out if they like it. It is seldom mentioned explicitly in the literature, but can be seen in trials of systems by their designers. In effect heuristic evaluation as Nielsen (1993) maintains that such a model depends to a great extent on an evaluator's biasness in terms a set of design principles and usability attributes in his mind. That is, the evaluator's evaluation is led by his immediate reactions, intuitions and predictions based on those principles already

flourished in his mind. So, it is these factors which define the desirable properties of a usable interface, and typically include: consistency; feedback; user control; user's model; clarifying metaphors (Principles); learnability; memorability; error recovery; efficiency; and subjective satisfaction (attributes). These can be used as an intrinsic part of a Heuristic evaluation, or as a useful framework for categorising interface characteristics after any evaluative method.

To evaluate different educational systems, evaluators mostly prefer and rely on experiments as quite widely used methods. These are used to collect quantitative data about a single specific factor, attempting to screen out other influences. However, as with user testing, there are significant problems with the decontextualised and artificial nature of these experiments. All in all, in order to obtain various qualitative data about the users' experiences with systems either immediately or a little while after use, various methods involving direct user reactions can be used. One of the easiest ways to do that is to employ interviews & questionnaires, focus groups and customer feedback (Social Psychology). The preference to use these methods has been particularly due to the fact that they have been considered as a way to capture data prior to further analysis and to improve a commercial product by collecting customer feedback. However, the subjectivity of this method, the way in which users' opinions have been directly collected- might have brought about certain merits and demerits to them. It has made them useful, but also limited. Though one can ignore the shortcoming by using a large group of people and by wording questions so they contain various 'consistency checks').

Longitudinal trials considered as sociologically speaking termed as a semi-realistic ethnography which lie somewhere between the unsituated lab experiment and the messy, real-world ethnographic study often involve having one's colleagues (or a similar accessible, controllable group) use a system for a prolonged period of time, before it is tried out on real users. Such studies can suffer from being rather inward-looking, in that they end up focussing on their own research teams, and as Harper (1992:36) comments, research labs are "peculiar fish bowls" due to "the forms of working relationships one finds therein". However, such methods are often highly instructive in practice, given some degree of care as to their wider applicability.

The best and the most realistic way of evaluating a system seem to be for an evaluator to go into the place of work, watch real users using it over a prolonged period, and to collect data documentarily and to illustrate the nature of work in process by using audio and video-tapes of work practices, field notes as to the most significant practices carried out by the participants, descriptions and diagrams of the work setting, and samples of various artefacts. This method is what we call it ethnography in sociology. This approach has been used on its own

to inform systems design (Bentley et al, 1992) or as a way of providing data for further analysis using distributed cognition (Rogers, 1994), activity theory (Kuuti & Arvonen, 1992), social psychology (Star & Ruhleder, 1994) and other methods. Traditionally, ethnography required a long period of immersion - months or even years - in the study setting before the ethnographer could perform an informed analysis (not often practical in a systems design project). However, as Hughes et al. (1994) discuss, methods such as "quick and dirty ethnography" (a brief study, typically a few days, with specific questions in mind as to the nature of the work) can still provide useful amounts of data in a shorter time.

Another ethnomethodological approach is conversation analysis and interaction analysis which study real group interactions as revealed by their (directly recorded) conversation and actions. The aim is, in fact, to study the users' categories directly, rather than imposing a theoretical framework. They focus on the detailed features of interaction (at various levels), either on conversations alone or on interactions between people and between people and technology.

Still another way to tap directly elicited data essential to a quality evaluation is the method mostly employed in computer science/philosophy termed as breakdown. It is defined as any incident where the user has caused to focus on the system rather than the task (Winograd & Flores, 1986). This is a useful method not only for studying group interactions and conversation transcripts to highlight such breakdowns but also for identifying key problems associated with user-system (or user-user) communication (Urquijo et al., 1993). However, the focus is necessarily restricted, disregarding many other interesting aspects of collaborative work, such as the distribution of roles and power amongst the group members. Like many of the other methods above, it might be usefully used in conjunction with others.

Evaluators' autonomy with respect to the educational administration

One can imagine of several possible forms of autonomy including the followings autonomies of:

Objectives: The evaluating team has to be autonomous in setting their objectives though rarely found in the world.

Approaches: The evaluating team might adopt an approach to efficiency-oriented ness of the range of expenditure and the quality of performance on the part of the educational systems. This evaluation includes both implicit and explicit variables involved in the efficiency of educational systems such as the extent to which education systems hinge on applying mass media, and hi- tech instructional instruments, in-service training courses, the type of management of

schools, the strategies the principals put into effect in their schools. Another approach might be pedagogical concentrating directly on improvement of the quality of education. LOGSE (1997:55) states that "evaluation of the education system is a strictly educational factor which contributes to qualitatively better education" (preamble) and that "it favors the quality and improvement of education" This approach seeks to ascertain the quality of the education service and to that end appraises the role of the various components of the system: the educational administration itself, the management and organization of schools, the teachers, the pupils, the curriculum, the teaching methodologies, and so on.

Scope of evaluation: It refers to the extent to which an educational administration has the power to determine the object and the limits of the evaluation. In other words, to answer the question of what to assess -academic performance, schools, the degree of success in teaching the core curriculum, the determination of effectiveness and efficiency indicators, the effectiveness of innovations and reforms, etc.

Methods: methodologically two distinct quality and quantitative methods seem to be significant both of which tend to improve the quality of education and managerial policies. While the former is more concerned with qualification of the educational systems, the latter is more concerned with quantification of the data which are here the learners' behaviors and performances. By which the basically analyze the academic achievements of pupils as an indicator of quality. The statistical orientation and the implementation of periodic assessments prevail. There have been definite improvements in this mode in recent years; nowadays the ultimate aim is to improve achievement as a matter of equity, since rigorous assessment of the achievement is the first step towards attaining quality education for all. Greater concern has also been shown to make educational results in civic values part of the achievement that is assessed -i.e., what attitudes and civic and ethical values does the education system instill in future citizens? The relative weight of qualitative and quantitative methods in the evaluation of the system is another aspect in which the decisions of the educational administration can influence the work of an evaluation institution.

Autonomy of organization

This affects the power of the institution to equip itself with the organization that it considers best suits its purposes. In many education systems the administration reserves to itself the organization of evaluation institutions. For example, LOGSE provides that "the government shall determine the organization of the National Institute for Quality and Evaluation" (section 62.3).

Autonomy of resources

This refers to the degree of autonomy vouchsafed the evaluation institution to procure resources of all kinds -human, material and financial. In the case of the INCE, the LOGSE provides that "the government shall determine what means of all kinds are to be allocated to it" (section 62.3), and the Decree regulating the INCE provides that the Ministry of Education and Culture "shall ensure that the National Institute for Quality and Evaluation has the budgetary allowance necessary for it to carry out and coordinate the tasks with which it is entrusted" and that "the Governing Board may establish priorities in the utilisation of available resources".

The use and dissemination of results

This is an issue that directly concerns the educational administration, and hence it may be more problematical to allow an evaluation centre a degree of autonomy.

Relations between evaluators and the educational administration

The first subject is what is the necessity of evaluation? If yes, should a single institution be responsible for the evaluation of the education system? What are the standards of evaluation? Should the evaluator be from inside the educational system or from the outside of the system?

Has anywhere in the world such an integrated, global and comprehensive evaluation of the education system? If so, who will be in charge of coordinating the different evaluating bodies, like evaluation institutes and the education inspectorate? As there is no integral concept of system evaluation that brings together the aims and the contents of the various partial assessments, educational administrations face the challenge of building up a coherent whole from the various partial evaluations of the system.

Hasn't the time come to dream of the desirability of setting up pluri-annual evaluation plans as an element of continuity and stability against possible changes in the educational administration?

Hasn't the time come to dream of decision-making by the educational administration or the evaluation institution on specific aspects: assessment of learning of values and metacognitive skills, determination of the system of education indicators, etc.?

Hasn't the time come to dream of providing the evaluation institution with human, material and financial resources to perform a sound and fact-based evaluation?

Hasn't the time come to dream of removing the influence of the pressure of adopting given evaluation policies exerted by the educational administration?

Who has to adopt the responsibility of the educational administration for the quality of education?

If there such acceptability, such an evaluation makes it possible to reform concrete aspects of the organisation and management of education systems with a view to achieving quality education in equitable terms. But if there is no such a system to accept all these responsibilities, what can be best solution to the problem?

The most readily remembered one would be self-evaluation. To do such a self-assessment, the most logical question is raised whether the evaluation organization has to adopt a utilitarian approach or illuminating approach? The utilitarian approach is normally adopted when the information should be used for the running of the education system by its administrators, whereas the illuminating approach is used when the information should be used for a contribution to public debate and the democratic functioning of society. In effect, both are needed because in terms of the former evaluation has been considered to be an essential element in gathering and disseminating clear, objective and reliable information on the situation of the education system and its components; while in terms of the latter it is through adopting an illuminating approach that we can establish a well-informed society, and it is through such a society that we can provide a decisive impulse for improving the quality of education.

To use and disseminate information with both frameworks, there are certain constraints on the way to fulfilling that ambition. These limitations are as follows: differences between technical reports (for experts), informative reports (for society at large) and restricted reports (for educational administrators) on one and the same survey. Anyone believing it impossible to present exactly the same data in different ways may be led to suspect bias in the information disseminated in the different reports. The educational administration has a key role in defining procedures and strategies for dissemination of evaluation results. Is a final report enough? Should there be meetings of experts to make the results known?

Furthermore, as the supposition is that any purposefully done enterprise is expected to be followed by some effects, any evaluation regardless of its underlying approach is assumed to be of its effects. Comparisons between evaluation and the extent to which it leaves its effects are necessary to be done in education to generate compensatory measures that will assure quality of education in equitable conditions. If the ultimate aim is to achieve not just quality

education but quality education for all, then the evaluation must identify those areas of the system where supporting action is necessary. This means that comparisons (of areas and territories, of socio-economic strata, etc.) are essential to generate equity-oriented education policies. Nevertheless, comparisons present serious problems for the educational administration when it comes to making the results of such comparisons known; a good example of this are ranking lists of schools in recent years, which have provoked bitter disputes among the sectors concerned.

Of course, there are two indispensable requirements for comparisons in education: firstly, clear specification of the necessary conditions for a fair comparison - in other words an assurance that the comparison is made in conditions of equality; and secondly, that added value in education is taken into account - that is, consideration of basic conditions which may mean that a poorer end result is more praiseworthy than a better one if the contribution to the education of the pupils has actually been greater. However, these comparisons have to be kept in line with a few principles are intended to supersede any previous work on standards, principles, or ethics adopted by the evaluating society, but they are not intended to replace the standards supported by evaluators or by the other disciplines in which evaluators participate. These principles according to American Evaluation Association are as follows:

A. Systematic Inquiry: This refers to systematic set of scientific procedures taken step by steps, adherence to the highest technical standards appropriate to the methods the evaluators employ in terms of data-based inquiry to provide accuracy as well as credibility of the evaluative data they yield. Moreover, it refers to the extent to which evaluators explore with the client the merits and demerits of the questions raised and those of the approaches to answering them. Finally, it refers to the extent to which evaluators leave the details of their methods and approaches as well as their limitations open to critics to do their critiques and criticize them.

B. Competence: It refers to the extent to which the evaluators do have the capability, skill and experience to accept such a great responsibility. The evaluators should show their cultural competence in seeking their awareness of their own culturally-based assumptions, their understanding of the worldviews of their culturally-different participants, and the use of appropriate evaluation strategies and skills in working with culturally different groups. Moreover, it refers to some aspects ranging from the extent to which evaluators are brave enough to confess their constraints to the degree to which they try to attain their data from informants as much directly as possible. Finally, it refers to the extent to which evaluators seek continually to maintain and improve their expertise-based

performances through holding coursework and workshops, self-study, and self-evaluation.

C. Integrity/ Honesty: It refers to honest negotiation with clients whether laymen or professionals concerning what they do, what their tasks, costs, limitations, scope of the possible results are. It refers to confession of any changes occurred in the originally negotiated project plans and why those changes have happened, the extent they can affect the evaluation results.

D. Respect for people: It refers to a set of prerequisites to be met by the evaluators to keep security, dignity and self-worth of people as their clients. These requisites are as follows: 1. understanding the contextual elements of evaluation including geographical, political, and economical settings; 2. awareness of the consequences regarding the risks, harms which may befall after evaluation; 3. knowledge of the social face and respect to clients when evaluating a program.

E. Responsibilities for general and public welfare: It refers to inclusion of relevant perspectives and interests of the full range of clients, consideration of both immediate and broad assumptions, implications and potential side effects, provision of direct knowledge for people to know what the processes and results of the evaluation might be.

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