Full Length Research Paper

A Systematic Approach: A Solution to Algerian Higher Education

Nadia Daghbouche*
Institut d'Anglais, University Khenchela; Route de El Hamma, Khenchela, (Algeria)

Since the attainment of Algeria's independence (1962) and more particularly since the 1971 reform of higher education, various national year Plans, commissions and national studies have considered the development of education at this level. Although all of them have demonstrated that there has been a subsequent growth (in numbers) at this level, most of them have proposed models of growth in the form of statistical projections and estimations for the 2000s. But until now, no attempt has been made to revise the system's weaknesses and deficiencies in a rational way, or to introduce a comprehensive overview which could help the government and higher educational leaders to pursue higher educational objectives.

Keywords: Higher education; system's weaknesses; deficiencies; rational way; systematic approach, feedback.

INTRODUCTION

The problem, at the higher education level in Algeria is not whether this system can train a cadre of manpower for national development, but, whether it has an adequate capacity to respond to the requirements of the new generation. It would seem that the question of self-reliance and the fulfillment of university functions as discussed in contemporary literature are still adversely affected by many pressures and factors in the Algerian university system. One of the central elements of the higher education sector is its relationship to society. The main problem is how the present system can respond purposefully to the development and needs of Algerian society itself, and promote the direct participation of universities in economic, social and cultural level. The analysis of Algerian tertiary education suggests that there are shortcomings in the system. Firstly, the increasing shortage of educated manpower and cadres in all spheres in the 1960s led the Algerian government and educational ministries to take into consideration the quantitative rather than the qualitative side of education. Manpower scarcity has become a real problem in the 2000s.Policies have focused on the supply of university students, rather than trying to relate the supply to demand, thereby closing the gap between education and employment needs. Since the reform of higher education in 1971, it would seem that little has been done in Algeria, towards advancing modern

*Corresponding author higherduc@live.fr

industrial training. This lack of national system of university education designed to control and orient the necessary manpower in relation to all economic sectors, has been accentuated by past government decisions to allow over production of graduates within the humanities and literary fields. It is also due to students themselves selecting non-technological studies. This has resulted in a serious scarcity of national manpower in scientific and technological fields.

It is thus recognized that Algerian universities have to date not been organized effectively to further national development. Many deficiencies characterise their past and present development. It is now proposed to offer an approach designed to help overcome these problems.

THE SYSTEMATIC APPROACH

Education and training systems are highly complex. What might be solution-seeking at one time could be problematic at another. At this point it is important to recall the previous experience of some industrialised western countries which, in the long-run, convinced developing countries that education and training systems most commonly fail to achieve certain goals due to the absence of adequate scientific planning. It is therefore useful to mention, that most of these countries have attempted to apply a systematic approach, beyond the bounds of electronics, engineering, military services and ecology, to the service of education and training. This new approach seems to be potentially successful in solving a system's problems if it is utilized in a comprehensive and rational manner. In practical dimensions, it can offer a solution to many technical, social and economic as well as educational problems. The writer

proposes to use this systematic approach in relation to Algerian higher education. This is in order to introduce an element of re-thinking in respect to some selected problems.

In the following discussion the term systematic approach is preferred to the term systems approach This is because the latter has connotations of management theory and methodology, not appropriate to the present discussion of Algerian higher education.

It is first proposed to define a successful system. A successful system can be identified by its simplicity and acceptability. The systematic approach embodies the concept of applying common sense to problems and situations. Mood (1975, p.284) argued that it is simply the idea of viewing a problem or a situation in its entirety with all its ramifications, with all its exterior connections and with full cognizance of its place and its content. Harlow (1971, p.146) defined it as: ' ... An alternative to traditional approaches to the design of courses of training and education'. Romiszowski (1970, p.72) indicated a system to be ' Any entity, conceptual or physical that consists of independent but, interrelated parts.'

From the above, it may be inferred that the systematic approach should be one feature of the 'planning process'. Planning, in this sense, means the process of selecting one alternative instead of others. As the use of the systematic approach is important in the educational field, it will be useful to describe two types, in using a systematic approach, there can be two bases. Firstly, the feed-forward mode and secondly, the feedback mode. In the feed-forward mode, the emphasis is on objectives. It relies on explicit procedures being used both to design and put the system into operation. In the feedback system, emphasis is less ambitious and less explicit. It is,

however, safer than the feed-forward system because it relies on the process of testing and recycling successive adjustments. This latter mode is felt to be more appropriate in the Algerian case. In any systematic approach, consideration has first to be given to the several steps required by it. Failure to do this can ! lead to the omission of key steps and a subsequently inadequate performance. The use of such a systematic approach involves goals, a database, and predictive procedure.

In the earlier section, it was stressed that the use of a systematic approach as a means of ensuring a re-thinking of the development process of Algerian universities could be one way of improving the several shortcomings of higher education in Algeria . In order to be comprehensively and rationally used, the Algerian university system, as it is now, must expand its limited academic, traditional programmes beyond its present bounds. This is because there is no hope of introducing effective planning or re-organization of the system if political, economic, social and cultural dimensions are neglected.

The following two phases are felt to be appropriate for the introduction of basic suggestions for the development of the Algerian university system. There would be little hope of bringing about a successful outcome considering what has been done up to the present. Phase one could be termed as the phase of 'General Awareness and Definition of the Problems of the University System in Relation to its General Surroundings'.

The first notion to establish is whether higher educational objectives are well understood and well defined. Government policies at this stage should be working towards creating more systematic communication flows between the different organizations and people in higher educational development in

Algeria Information, for example, about specialities needed for national development could be discussed in this first phase. The first step could make students, teachers, employers and the public aware of the kind of job opportunities and abilities required. Thus these new educational objectives and procedures have to be studied together.

There should be a wider general awareness of the problems of higher education and job opportunities. The general public should be informed and feel the urgency of these new educational objectives. When such groundwork has been achieved it will then be time for the government to prepare itself for implementation.

It is advisable, too, that sudden changes of educational policy which have characterised past Algerian governmental policy, should cease and only take place after prior discussion. It is suggested that there is a need to create a special team or network of small committees made up of academics from each university in Algeria . Their role will be informative and explanatory, in the hope that this will help eradicate problems that may emerge in the early phase of planning. This could involve university educational staff, economists, sociologists, members from the ministry of labour and work, parents and students. This wide coverage is necessary because the ranges of problems are numerous at this phase. The involvement and awareness of universities alone in national problems cannot guarantee the success of national development. It would thus be important that the public and diverse organisations also become involved, as their opinions will aid university development.

For a better systematic diagnosis of higher education demand and employment needs, it is suggested that it is necessary to study overall regional and local problems, such as geographical

disparities between the North and the South. This needs to be done in a systematic way in order to introduce the type of higher educational programmes related to job requirements for these regions. Again, this will involve the views of local wails, rectors, parents, teachers, students and employers.

An equally important consideration at this proposed first phase is the support and participation of university students. If a greater contribution is expected from universities to help solve national needs, student involvement is essential. Their participation in university affairs will increase their awareness and consciousness of local problems and realities. In this case, it is proposed that specialised staffs are provided to guide students and provide special systematic training for local development. It should therefore be possible to develop responsible, non-alienated mature students.

One basic principle that has to be adopted in this first phase is the continuous study of the effects of investment on the higher education system, and the deployment of financial provision throughout the different components of the system. A plan to distribute these resources shouted be designed in advance during phase one. This is in keeping with a systematic approach and process. Systematic early arrangements are important to overall implementation. It must be borne in mind that sometimes the availability or otherwise of finance for small-scale operations may have effects on large ones.

Phase two consists of introducing 'A Systematic Service-Oriented Approach' to the University Role in Algeria '. This second phase would help promote one of the objectives of the national five-year plan, which aims to solve local problems related to food, sanitation, health problems and manpower shortages.

The principles to be observed at this phase are the side effects which occur when a programme is implemented for selected areas. A more systematic approach would ensure that when assessing small or large experiments or projects, careful attention would be given, at an early stage, to possible, unpredictable changes. If, for example, the decision is made by government and educational leaders to expand the supply of university students in technological and scientific fields: it will not be sufficient merely to start estimating the number of students in these fields and building the necessary technological and scientific sections. What is needed is a systematic estimate as to whether the people and resources currently operating would still be available in the years ahead.

At this second phase, higher educational objectives which were discussed in phase one, must begin to be related to rural/urban and local projects. They should be adjusted end made to support the specific conditions of regional and national development. In this, the writer suggests the creation of national departments of geology, agronomy, and mines (including north and south Sahara regions) in each university centre. These would probably promote and extend the awareness and the role of university education to national needs. These steps would allow this system to offer its assistance to small and large projects. It could also create new forms of university curriculum, based on the development and utilisation of local skills.

To bring the university into contact with the surrounding environment at phase two, the Algerian educational ministry should devote its efforts, not to prestigious architecture (as with the buildings of the university of Constantine), but to the systematic provision of more commodities and

facilities, which are indispensable elements for the developing of mature students and better staff. The improvement of the maintenance of existing university facilities such as the provision of drinking water are not matters of complex engineering, but of provision control and revision. So little systematic attention has been given to the provision of such facilities that it will be necessary to form a special welfare service section in each department to deal with these deficiencies and to resolve them.

Furthermore, too little systematic attention has been given to a university's role in developing Algerian culture and religious forms of education, In Algerian universities, a comprehensive plan to integrate cultural and religious programmes at a higher level should be implemented. This could help to provide ways of identifying culture, values, traditions and religion. Systematic planning to university staff could help students, as well as other primary and secondary institutions and local communities, by providing adequate books, brochures and other materials to develop their knowledge, it is suggested that a theological-centre or department be established in each university, as well as centres of music and art, to help develop creative ways to educate students and people about their country.

To encourage the participation of parents, employers and others, a systematic extension of evening class provision, already in existence, could provide further access to universities. To alleviate the pressure from the increasing number of qualified secondary students enrolling at university and to reduce the number of full-time students, an increase in part-time schemes for students could be implemented. This would also make more use of part-time teachers.

University staffs are rapidly becoming Algerian's, but in order that the university system can continue to produce more productive graduates and resolve the problem of quality of teaching staff, the university should implement a systematic staff training programme to produce more Algerian teachers. Firstly, universities must develop an advanced level programme to produce people with PhD's and other high-level professorial qualifications. More international co-operation and greater systematic use of highly qualified Algerians could facilitate such programmes. Secondly, there is a need to develop the role and activities of university teachers, in respect to rural/urban work. Thirdly, it is important to increase research opportunities and raise the motivation of university teachers to work on development programmes. Fourthly, postgraduate research facilities and salaries have to be improved to reduce the 'brain drain and related problems.

To encourage and improve the university teaching staff, a systematic -problem-centred approach to methods of teaching and research will have to be developed. It is necessary to decentralise and decrease differences within regions in Algeria . It is suggested that to attract university teaching staff and students to work or study in the different university centres and towns, incentives should be offered such as increased salaries and better accommodation for those willing to do so.

The above suggestions cannot be implemented if a rigid university system and structure sti11 dominates. The role of educational and university planners and policy makers in this second phase is important in terms of demonstrating the necessary systematic capacity for change. !n order to complete this second, 'service--oriented' phase for the development of the 'university's role in Algeria, policy-

makers must maintain the following systematic links, if manpower needs and social demands are to be balanced:

- Links between secondary and higher education;
- Links between higher education and employment;
- Links between higher education and overall national planning;
- Links between higher education and scientific research;
- Links between higher education and society

The above suggestions are not exhaustive, but they should help universities play a more significant and effective role in national development. These steps would best be developed if a more systematic approach would be adopted in relation to higher education in Algeria.

REFERENCES

Archer, M.S. (1979): The Social Origins of Educational Systems, London, Sage.

Armitage, P.H. (1975): The Recent History of Planning Teacher Numbers, In Dobson, L. et al (1975) Management in Education, Reader 2, England, Ward Lock Educational /Open University Press.

Blaug, M. (1976): Education and the Employment Problem in Developing Countries, Geneva, and I.L.O.

Bowles, F.H, (1977): Stages Of Educational Development, In Thompson K.W. et al. (1977) Higher Education and Social Change, Promising Experiments in Developing Countries, VOL 11: Case Studies, U.S.A., Praeger Publishers.

De Kiewit G.W. (1971) December: The Emergent African University: An Interpretation, Overseas, Liaison, And Committee, Washington, America Council on Education.

Department Of Education In and Science (1970): Students Numbers In
Higher Education in England and Wales, a Projection with Some Discussion of Its Cost Implication, Educational Planning Paper NO.2, London, H.M.S.O.

Dore, R. (1971): The Diploma Disease, Education, Qualification And Development, London, George Allen and Unwind.

Fingerling, I. and Saha, Ill. (1983): Education and National Development, a Comparative Perspective, Great Britain, Pergamum Press Ltd.

Froese, L. (1971): University Reform: A Comparative Analysis Of The American Russian and German Universities, In World Year Book of Education 1971/72, Special Issue on Higher Education in a Changing World, London, Evans Brothers.

Haag, D. (1982): The Right To Education: What Kind Of Management? Studies and Surveys in Comparative Education, Paris, UNESCO.

Havelock, R.G and Huberman, A.M. (1977). Solving Educational Problems: The Theory and Reality of Innovation In Developing Countries, a Study Prepared For the International Bureau of Education, Paris, UNESCO.

Hacket, I. (1971): Demographic Changes as a Factor Influencing The Development of Higher Education, In World Year Book Of Education 1971/72, Special Issue on Higher Education In A Changing World, London, Evans Brothers.

Hinzen, H. And Hundsdorfer, V.H.H. (1979): The Tanzanian Experience, Education for Liberation and Development, Hamburg, UNESCO Institute for Education and Evans Brothers Ltd.

Leca J. et al. (1976): Regimes, Institutions and Political Algeria, National Foundation Press Political (French).

Lindley, R.M. et al. (1981): Higher Education and the Labour Market, Programme of Study into the Future Of Higher Education, Guildford University, the Society for Research into Higher Education.

Mebtoul, A. (1981): Growth of Algerian Economic Structures During The Period 1967-80, the Social Dinamique Reader, 2, Algiers, O.P.U. (In French).

Mood, A. M. (1975): On Some Basic Steps in the Application of Systems Analysis to Instruction, In Dobson L. EA (1975), Management in Education, Reader 2, England, WardLock, Educational / Open University Press.

Najman, D. (1972): Education in Africa, What Next? An Essay, France, Deuxmille.

Nelson, H.D. (1978): Algeria, a Country Study, Washington, America University.

Norbert Weiner (1950): The Human Use of Human Beings, Boston, Houghton.

Pierre Latil (1953): La Pensée Artificielle – Paris – Galliweerd.

Robert Vallée (1990): The Circle D'Etude Cybernetiques « Systems Research » 7.

Romiszowski, A. (1970): A Systems Approach to Education And Training London, Kogan Page.

Romiszowski, A. J. (1981): Designing Instructional Systems: Decision-Making In Course Planning and Curriculum Design, London, Kogan Page.

Sanyal, B.C. and Kinunda, Mj (1977); Higher Education for Self – Reliance, The Tanzanian Experience, Paris, I.I.E.P.

Sanyal, B.C. and Verluis, j. (1976): Higher Education, Human Capital and labour Market Segmentation in the Sudan, I.I.E.P., Occasional Papers No. 42, Paris, U.N.E.S.C.O.

Sanyal, B.C. et al. (1982): University Education and the Labour Market In The Arab Republic of Egypte, Oxford, UNESCO / I.I.E.P. Pergamon Press.

Sherer, J. (1971): Changes Influencing the Development of Higher Education in the U.S.A., In World Year Book of Education 1971/72, Special Issue on Higher Education In A Changing World, London, Evans, Brothers.

Sohiman, A. (1981): Education, Labour Market and Human Capital Models, Swedish Experiences and Theoretical Analyses, A Published Dissertation for the Doctor's Degree in Social Sciences, Stockholm, University Of Stockholm.

Steve Joshua Heins (1993): The Cybernetics Group: Construting A Social Science For Postwar America, Cambridge, M.I.T Press.

Techler, U. et al. (1980): Higher Education and the Needs of Society, A Study Prepared For the International Labour Office Within The Framework Of the World Employment Programme, Berks, N.F.E.R.

Thompson, A.R. (1981): Education and Development in Africa, Hon-Kong, Macmillan Press, Ltd.