

## Quality assurance procedures to prepare and update a university curriculum

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### ABSTRACT

This research presents an easy and effective mechanism to follow up on three elements: (scientific developments, technical achievements and the actual needs of current and future labor market), which plays a major role in defining study plans and elements of the approved disciplines in universities. It also defines the indicators mathematical function on the efficiency of study plans and the level of responsiveness to the criteria and quality standards, and their compatibility and suitability for the vision, mission and objectives of the institution.

**Keywords:** Quality assurance, Educational process, University education, Curriculum

### INTRODUCTION

The educational process has achieved in the first decade of this century, tremendous strides in the four components: curriculum, teacher, student and teaching environment (Alheelah and Mahmoud, 2005) . It also has changed the locations of these elements in terms of importance and priority mechanisms with a view to assess the success of the teaching process in achieving their objectives (Ali and Nabeel, 1997). While the crucial element in this assessment depends on the teacher who Supervised and implements the process. In general teacher is the main source of information for his students.

Later focus moved to the learning environment as a basis for providing basic education process management and leadership, and this shift is due to the computer use as an effective tool in the educational process and the emergence of multimedia applications in the supply and delivery of information and the use of automated tests in the measurement process and evaluation (Don, 1997).

At the end of the last century, student occupied the central role of the educational process as the element that educational process created for him, and the retreat of the other three elements in the process of evaluating the success of the educational process, and this is due to the application of quality standards set by international standards as the ISO quality system in many universities and higher education institutions in the world (International Standard, 2007), which stipulates that the principle behind the standards of quality is customer satisfaction (student in the case of universities).

More recently, however, curriculum came as a priority in the planning, implementation and evaluation of the

educational process being linked to a solid with the other elements of the educational process and reflects the extent to keep pace with rapid developments of science and technology and the growing needs of the labor market skills and expertise in the areas of new fields required by the development plans and the continuing escalation of the pace of the economy World (Cairo,2005).

**Backgrounds:** Due to the specificities of higher education institutions, many colleges and universities have formation of specialized committees in the academic departments to carry out academic and other cultural and social activities and sports [9]. Although these committees partially achieved the objectives set for it, the work of these committees depends on individual performance, and the absence of clear and documented procedures for the conduct of its work and determine the responsibility of its members, and a lack of standardized forms and records for follow-up and communication.

In general these committees are working independently of each other, which lead to an overlap of these committees working procedures.

As an example, the committee of curriculum will be responsible for the preparation component of the curriculum and its update continuously [1] to achieve this goal must be functioning as follows:

1. Determination of academic specialization and classification of the articles of the compulsory and optional courses, and describe its nature as a theoretical course, lab, or both. And the assigning of the credit hours for each course and identify the target group for each course. In other words, determine the general parameters of the curriculum.

2. Determining the detailed description of each course, to include topics that meet the objectives of the course topics and the distribution of these topics over each semester, and output achieved and measurement methods for students achievement in that course.
3. Determine sources of education and learning for each course to achieve its objectives, including the texts and references that help students to absorb material and topics in-depth. Ensure that these sources are accessible to the student, both in the library and bookstore.
4. Identification of human resources specialists and experts to implement the elements of the course, which requires hiring, trained faculty members to cover all curriculum fields.
5. Follow-up to the success of the curriculum in achieving the goals set during its implementation during the semester, and evaluation through the exam period, and after graduation. Which requires the flow of continuous feedback in the near term and long term?

All of these tasks require clear documented procedures, to determine the responsibilities of the members of the curriculum Committee and their roles, as well as determine the relationship of this Committee with other committees and persons working in the section. It must be linked to a number of actions with the standardized forms to determine the inputs and outputs of the committee's work and how to measure and evaluate its achievements.

This underlines a clear understanding of the functions of the curriculum, verification mechanisms as a target to build, develop and follow a coherent curriculum and keep abreast of scientific and technical achievements and fill the market needs present and future.

**Case study:** The researchers list the main objectives of a curriculum committee in a department and prepare required procedures to achieve these objectives. This study applied to the Faculty of Science and Information Technology at the University of Alzaytoonah of Jordan. The general direction taken by the accreditation body in the Jordanian Council of Higher Education to build and manage quality systems in higher education institutions and universities of Jordan [5], the university administration and the adoption of this approach provided the appropriate atmosphere for study and find solutions to scientific and practical tasks of the curriculum Committee in academic departments.

**Proposed solution:** The proposed solution depends on four main references:

- instructions adopted at Alzaytoonah University of Jordan [8], Specify the grounds for building a department curriculum
- Commission on Accreditation Council for Higher Education of Jordan, which sets the standards that the universities adhered to for a certificate of quality and
- International standards specified
- Decisions taken by the Faculty of Science and Information Technology at the University [8], which adopt the construction quality management system in college.

This research provides a precise vision of the needs that must be available to curriculum committee to achieve its objectives in building and updating appropriate curriculum plan and keep up with and meet the following quality standards:

**i. Interactive Relations:** Clearly, a correct understanding of the correlation between the plan of study and other elements of the educational process, and the role of this plan in all phases of the educational process, and ways to ensure feedback to ensure corrective actions to carry out preventive measures.

Figure (1) reflects the interdependence of the elements of the educational process and the main role to the study plan which, being a dynamic variable during the execution of the educational process, it affects and is affected by other elements, It has a direct effect on the performance of the teacher and the student's level of achievement and the society benefit from the learning outcomes and its influence which will change the condition from planning stage to execution stage Hence, the preparation of the plan of study and further development and modernization of specialization requires joint efforts by everyone, including faculty, students, society and governance in the administrative department and faculty.

There are three sources of feedback: student, faculty member and the community. Where the student is a source of two types of feedback:

1. Immediate feedback: It controls the process of the study plan during the implementation and regulate the positive relationship between faculty member and student.
2. Strategic feedback, which serve the goal of developing a study plan and update all its components.

Society is also a vital source of strategic feedback, there are two categories rely on Strategic feedback: (1) academics: professionals working in institutions of higher education in the community and (2) Groups:

working in the industrial and commercial enterprises and service in the public and private sectors. The opinion of faculty member responsible for the implementation of the study plan, educational resources for each course which constitutes the cornerstone in evaluating the study materials to be considered, its content, nature, teaching methods and tools.

**ii. Procedures:** Determine the procedures to be followed, documented, clarified the allocation of responsibility for each activity within the procedures and time required to achieve that important elements of the work of the study plan committee. The linking of the task of building and updating the study plan to identify and document the detailed description of the subjects of each course and the nature of this article, classification, and determine the academic level of the target group to this course and the definition of sources of education and learning as well as the human resources needed to achieve integration and creates the conditions for the construction of scientific study plan according to the required specifications.

Figure (2) illustrates the sequence of operations as well as inputs and outputs necessary to complete the requested operations that meet the specific objectives of the Committee work.

Documenting the procedure must include the following items:

1. Objectives: A set of objectives to be achieved through this action is to update the curriculum, its subjects and standards, identify educational resources and the selection of human resources to achieve the plan.
2. Domain: A domain that is covered by the measure and includes all subjects taught by academic department.
3. Terminology: Is the definitions of the terms may be ambiguous or unambiguous.
4. References: The official documents and instructions adopted by the procedure.
5. Responsibility: where to identify those responsible for the implementation of this measure or part of the operations it contains.
6. Operations: The set and the sequence of operations to be implemented to achieve the measure which is responsible for each process, as shown in Figure (2).
7. Criteria for success: A set of mechanisms to assess implementation and achievements through appropriate mathematical analysis, as well as the minimum allowed to consider that the procedure achieved its objectives
8. Accreditation: It identifies the person responsible for the adoption of this measure, and date of adoption.

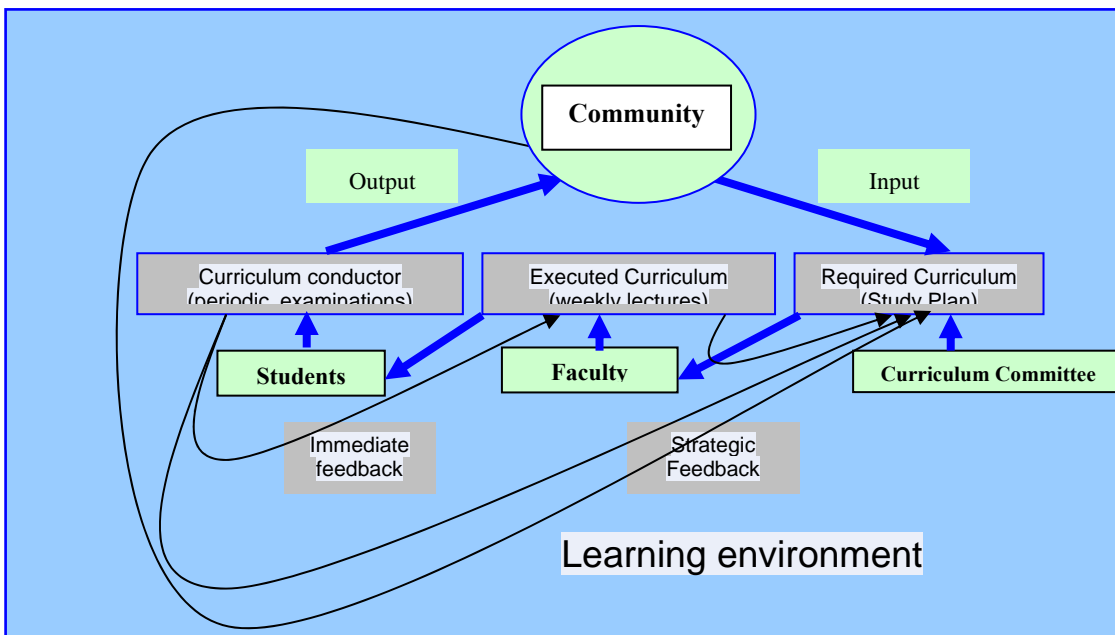


Fig 1 The reciprocal relationship of the components of the educational process and the impact of the study plan on this process.

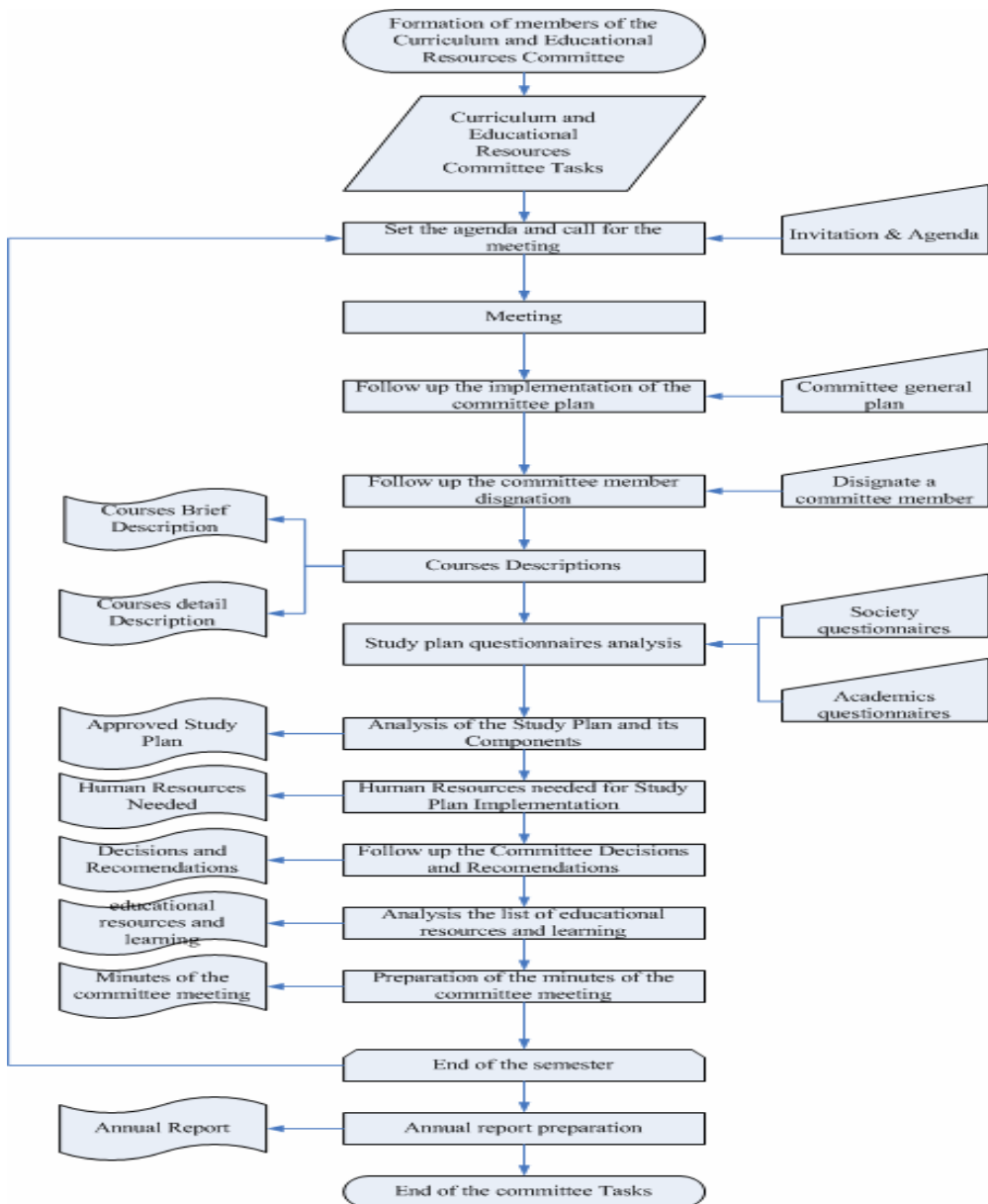


Fig 2 flow diagram of the Study Plan Committee procedures

iii. **Input and Output of the Procedure:** The input and output of the procedure are standardized forms that must be adopted in the documentation of all records, statements, resolutions and recommendations resulting from the procedure, the importance lies in the accurate identification of data and information required to be certified, does not allow or away from the diligence to be achieved, which relies in its structure on specific information from collected data, which in turn leads to the ease of examination and treatment and to draw conclusions

from them easily. This should include the following information of each model [11]: data and department logo, and also include basic information as (model number, title, version, date of issue, and the number of pages, as shown in Figure (3)). The researchers identified thirteen forms, including five inputs for the measures to develop and update the curriculum, and eight models as an output of the procedure. Table (1) illustrates these forms and place of saving and length of time needed to save these documents [12].

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<b>List of Educational Resources and Learning</b>			
<p>Department    <input type="checkbox"/> MATH            <input type="checkbox"/> CS                    <input type="checkbox"/> CIS                    <input type="checkbox"/> SE</p>			

Fig 3. Sample form: List of educational resources

Table 1. Models, input and output procedures for building and updating the curriculum

Code	Form Title	Form Location	Period
PF01/C4100A	Flow diagram of the procedures	Coordinator	Continuous
QF01/C4101A	The agenda of the Committee	Coordinator	3 Years
QF01/C4102A	General plan of the Committee	Coordinator	3 Years
QF01/C4103A	Mandated follow-up of the Committee member achievement	Coordinator	3 Years
QF01/C4104A	Community groups Questionnaire	Coordinator	3 Years
QF01/C4105A	Academic Questionnaire	Coordinator	3 Years
QF01/C4106A	Minutes of the Committee meeting	Coordinator	3 Years
QF01/C4107A	Department approved study plan	Coordinator	3 Years
QF01/C4108A	Courses detailed description	Coordinator	3 Years
QF01/C4109A	Courses brief description	Coordinator	3 Years
QF01/C4110A	List of educational resources	Coordinator	3 Years
QF01/C4111A	Human resources needed to achieve the Study Plan	Coordinator	3 Years
QF01/C4112A	Follow-up committee decisions and recommendations	Coordinator	3 Years
QF01/C4113A	Committee annual Report	Coordinator	3 Years

## CONCLUSION

This research presents a mechanism and tools to develop and update academic department curriculum in universities to achieve message and goals which it

was created through these sections, also meet the accreditation requirements and achieve international standards in the adoption of quality systems. It set out solutions to the problems and shortcomings faced by the committees prepare and update the plans

through the identification of mechanisms for extracting feedback information and follow-up study in four stages: planning, implementation, evaluation and use.

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