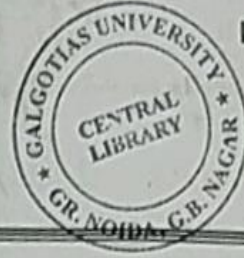


भारतीय मानक  
Indian Standard



IS 16533 : 2016

शिक्षा प्रबंधन प्रणाली — शैक्षिक  
संगठनों के लिए गुणवत्ता की  
आवश्यकताएँ

Education Management System —  
Quality Requirements for  
Educational Organizations

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Education, Education Services and Other Related Services Sectional Committee, MSD 09

## FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Education, Education Services and Other Related Services Sectional Committee had been approved by the Management and Systems Division Council.

All educational organizations, large and small, have an established way or system of providing education service. An education management system is the way an educational organization directs and controls its activities associated with establishment of its policy and objectives for providing quality education and then achieving these objectives.

The adoption of an education management system should be a strategic decision of an educational organization. The design and implementation of an organization's education management system is influenced by its learning environment, changes in that environment, or risks associated with

- a) its varying needs,
- b) its educational objectives,
- c) service it provides and competence required,
- d) its processes, and
- e) its size and organizational structure.

In general, a quality management system is about identification of various processes (activities), why and how these are performed and documenting those processes, which are necessary for effective operation of the system. Further, as objective evidence some records have also to be established and maintained.

Education management system helps an educational organization to build in systems so that it is able to provide quality education consistently which result in enhancing students' satisfaction and competitiveness.

The first step necessary in establishment of an education management system is the commitment and involvement of top management. If the top management is not committed, then the intended benefits of establishing this system cannot be realized. It is not the purpose this standard to impose a totally new way of managing the education business. One should integrate this standard into its existing practices. The educational organization needs to identify what this standard requires and how these requirements relate to activities of the organization. This comparison should identify the areas requiring further development of education management system. Probably many of the requirements are already being met or perhaps partially met. For example, when placing job advertisements for teachers, the job description, are written down; when an instruction is written on how some activity is to be carried out, a work instruction is being created. Similar other examples may include the students' assessment plans, etc.

Having determined how the requirements of this standard apply to an educational organization, the next step is to look at the activities and record what is actually being done. It has to be seen which requirements of this standard, are already being met and those which are not. It is important to realize that there should be no reason to substantially change the way the organization is functioning.

After doing this gap analysis and knowing the quantum of work, it has to be decided as to how much can be done within the organization? This depends upon availability of competent personnel, time and other resources. This will determine whether external assistance is required and if yes, to what extent and in which areas?

For the gaps identified, it has to be determined whether the documentation is compulsory as per requirements of this standard, for example, documentation of "Educational Quality Policy", "Procedures on corrective action", "Preventive action", "Document control", etc. If some documentation is required, responsibility should be assigned. It is important that all people in the organization are involved in this process and one individual should not be made responsible for carrying out all jobs. It should also be ensured that documentation as per the requirements of this standard and also those necessary for effective operation of the education practices are established.

*(Continued on third cover)*

*Indian Standard*  
**EDUCATION MANAGEMENT SYSTEM — QUALITY  
REQUIREMENTS FOR EDUCATIONAL  
ORGANIZATIONS**

## 1 SCOPE

### 1.1 General

This standard specifies quality requirements for an Education Management System where an educational organization

- a) needs to demonstrate its ability to consistently provide education service that meets students' requirement conforming with applicable statutory and regulatory requirements, and
- b) aims to enhance the satisfaction of students and other key stakeholders through effective application of its education system, including processes for continual improvement of the system and assurance of conformity to students' and other key stakeholders' requirements and applicable statutory and regulatory requirements.

### 1.2 Application

All requirements of this Standard are generic and are intended to be applicable to all educational organizations, regardless of type, size and education service provided.

Where any requirement(s) of this standard cannot be applied due to the nature of an educational organization and its service, this can be considered for exclusion.

Where exclusions are made, claims of conformity to this standard are not acceptable unless these exclusions are limited to requirements within 7, and such exclusions do not affect the organization's ability or responsibility to provide education service that meets student and applicable statutory and regulatory requirements.

## 2 REFERENCE

The standard given below contains provision which, through reference in this text, constitutes provision of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard is encouraged to investigate the possibility of applying the most recent edition of this standard.

<i>IS No.</i>	<i>Title</i>
IS/ISO 9000 : 2005	Quality management systems — Fundamentals and vocabulary

## 3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS/ISO 9000 shall apply, in addition to the following:

**3.1 Education** — A form of learning in which the knowledge, skills, values, beliefs and behaviour of a person or group of people are transferred to learners through teaching, training and/or research.

NOTE — Education takes place in formal or informal settings.

**3.2 Educational Organization** — Any person or group of people and facilities providing education.

*Examples:*

Primary/upper primary grade schools, secondary/senior secondary grade schools, undergraduate collegiate schools, universities, post-graduate schools/institutions, trade and vocational schools, industrial training facilities, professional development courses, open and distance learning (self-study programmes), continuing education, military academies, technical institutes, etc.

NOTE — All educational and training organizations and courses, whether on-site or off-site, are within the scope of this standard.

**3.3 Education Service** — The results generated by activities at the interface between the educational organization and the student and by organization's internal activities, to meet students' educational requirements.

**3.4 Learning** — Acquiring knowledge, understanding, skills, preferences, values and behaviour.

**3.5 Learner** — Person engaged in learning.

**3.6 Student** — Learner who attends an educational institution.

**3.7 Management System** — Set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives.

### NOTES

1 A management system can address a single discipline or several disciplines.

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2 The system elements include the organization's structure, roles and responsibilities, planning and operation.

3 The scope of a management system may include the whole of the organization, specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.

**3.8 Top Management** — Person or group of people, who directs and controls an educational organization at the highest level.

NOTE — Top management looks after the day-to-day activities of the organization.

**3.9 Educational Quality Policy** — Overall intentions and direction of an educational organization to quality as formally expressed by its top management.

**3.10 Educational Quality Objectives** — Something sought, or aimed for, related to organization's education service quality.

**3.11 Key Process** — Process essential to the educational organization, its mission, objectives and education services.

**3.12 Stakeholder (Interested Party)** — Individual, group or organization with a direct or indirect interest in the educational organization, including its management and outcomes, or the processes involved, or both.

*Example:*

Students, parents/guardians, owners, people in an organization, associates, facilitators, employers, sponsors or society.

**3.13 Key Stakeholders** — All users and beneficiaries of the products and services of an educational organization. They consist of learners and all other interested parties whom the institution is obliged to serve by virtue of its objectives.

*Example :*

Students, parents/guardians, owners, staff members, sponsors.

NOTE — This term does not imply a commercial relationship.

**3.14 Associate** — Entity or person not employed by the educational organization, but working under its auspices to provide education services.

*Example*

Organizations or independent contractors, such as instructors, instructional designers, evaluators, project managers, or career counsellors

NOTE — An associate is not a staff member of the educational organization.

**3.15 Sponsor** — Organization or individual that provides financial or other support for the student or

that has a vested interest in the outcome of the education service.

NOTE — This includes corporations, government agencies, relatives, employers, etc.

**3.16 Facilitator** — Person who works with students to assist them with learning.

NOTE — A facilitator is also often referred to as a teacher, a trainer, a coach, a tutor, or a mentor.

**3.17 Competency** — Knowledge, understanding, skill or attitude that is observable or measurable, or both observable and measurable, which is applied and mastered in a given work situation and in professional development or in personal development, or in both professional and personal development.

**3.18 Curriculum** — Plan prepared by the educational organization which describes the aims, content, learning outcomes, teaching and learning methods, assessment processes, etc, relating to education process.

**3.19 Evaluation** — Normative as well as self-referenced approach to analysing the learning process, learning indicators or learning outcomes measured against the learning goals.

**3.20 Transfer of Learning** — Application of what has been learnt during the education service to other situations

## 4 EDUCATION MANAGEMENT SYSTEM

### 4.1 General Requirements

The educational organization shall establish, document, implement and maintain a management system for education services and continually improve its effectiveness in accordance with the requirements of this standard.

The educational organization shall

- a) determine processes for the education management system and their application throughout the organization (*see* 1.2);
- b) determine the sequence and interaction of these processes;
- c) determine criteria and methods needed to ensure that both the operation and control of these processes are effective;
- d) ensure the availability of resources and information necessary to support the operation and monitoring of these processes;
- e) monitor, measure (where applicable), and analyse these processes; and
- f) implement actions necessary to achieve planned results and continual improvement of these processes.

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These processes shall be managed by educational organization in accordance with the requirements of this standard.

Where an educational organization chooses to outsource any process that affects conformity to requirements, the organization shall ensure control over such processes. The type and extent of control to be applied to these outsourced processes shall be defined within the education management system.

#### NOTES

1 Processes needed for the education management system referred to above include processes for administrative activities, provision of resources, lesson planning, curriculum mapping, teaching-learning; grading, testing, student performance, remedials, analysis and improvement.

2 An outsourced process is identified as one needed for the educational organization's education management system but chosen to be performed by a party external to the educational organization. In case it has to do with a learning service, the external party would be a learning service provider.

3 Ensuring control over outsourced processes does not absolve the educational organization of the responsibility of conformity to students' requirements, and to statutory and regulatory requirements. The type and extent of control to be applied to the outsourced processes can be influenced by factors such as

- a) the potential impact of the outsourced process on the educational organization's capability to provide education service that conforms to requirements;
- b) the degree to which the control for the process is shared; and
- c) the capability of achieving the necessary control through the application of 7.4.

## 4.2 Documentation Requirements

### 4.2.1 General

The education management system documentation shall include the organization's vision, mission, values and

- a) documented statements of an educational quality policy and educational quality objectives;
- b) a quality manual;
- c) documented procedures and records required by this standard; and
- d) documents, including records, determined by the educational organization to be necessary to ensure the effective planning, operation and control of its processes.

#### NOTES

1 Where the term "documented procedure" appears within this standard, this means that the procedure is established, documented, implemented and maintained. A single document may address the requirements for one or more procedures. A requirement for a documented procedure may be covered by more than one document

2 The extent of the education management system documentation can differ from one educational organization to another due to

- a) the size of the educational organization and type of activities,

- b) the complexity of processes and their interactions, and
- c) the competence of personnel.

3. The documentation can be in any form or type of medium.

### 4.2.2 Quality Manual

The educational organization shall establish and maintain a quality manual that includes

- a) educational quality policy and educational quality objectives;
- b) background of the organization;
- b) organization structure;
- c) linkages/affiliations/recognitions;
- d) profile of senior management;
- e) facilities;
- f) the scope of the education management system, including details of, and justification for, any exclusions (*see* 1.2);
- g) the documented procedures established for the education management system, or reference to them; and
- h) a description of the interaction between the key processes of the education management system.

Records and documents shall be available for tracking students' progress on key educational measures and assessments.

### 4.2.3 Control of Documents

Documents required by the education management system shall be controlled.

Records are a special type of document and shall be controlled according to the requirements given in 4.2.4.

A documented procedure shall be established to define the controls needed

- a) to approve documents for adequacy prior to issue,
- b) to review and update as necessary and re-approve documents,
- c) to ensure that changes and the current revision status of documents are identified,
- d) to ensure that relevant versions of applicable documents are available at points of use,
- e) to ensure that documents remain legible and readily identifiable,
- f) to ensure that documents of external origin determined by the educational organization to be necessary for the planning and operation of the education management system are identified and their distribution controlled, and
- g) to prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

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#### 4.2.4 Control of Records

Records established to provide evidence of conformity to requirements and of the effective operation of the education management system shall be controlled.

The educational organization shall establish a documented procedure to define the controls needed for the identification, storage, protection, retrieval, retention and disposition of records.

Records shall remain legible, readily identifiable and retrievable.

### 5 MANAGEMENT RESPONSIBILITY

#### 5.1 Management Commitment

Top management shall provide evidence of their commitment to the development and implementation of the education management system and to continually improve its effectiveness by

- a) communicating within the organization the importance of meeting interested party requirements,
- b) establishing the educational quality policy,
- c) ensuring that educational quality objectives are established,
- d) conducting management reviews, and
- e) ensuring the availability of resources.

#### 5.2 Student Focus

Top management shall ensure that students' and other key stakeholders' requirements are determined and are met with the aim of enhancing their satisfaction (see 7.2.1 and 8.2.1).

Faculty and management shall determine students' educational requirements by integrating the requisites from educational accreditation bodies, professional societies, licensing agencies, communities, and other interested parties into curricular requirements that include learning outcomes and specific performance indicators.

#### 5.3 Educational Quality Policy

The top management shall establish educational quality policy which, through the use of formal planning efforts and the provision of resources, shall support the educational organization's vision, mission, values, goals, and strategies for achieving the goals.

Top management shall ensure that the educational quality policy

- a) is appropriate to the purpose of the organization,
- b) includes a commitment to comply with

educational requirements and continually improve the effectiveness of the education management system,

- c) provides a framework for establishing and reviewing educational quality objectives,
- d) is communicated and understood within the organization, and
- e) is reviewed, atleast annually, for continuing suitability.

### 5.4 Planning

#### 5.4.1 Educational Quality Objectives

Top management shall ensure that educational quality objectives, including those needed to meet the requirements for the education service [see 7.1 (a)], are established at relevant functions and levels within the educational organization. The educational quality objectives shall be measurable and consistent with the educational quality policy.

#### 5.4.2 Education Management System Planning

Top management shall ensure that

- a) the planning of the education management system is carried out in order to meet the requirements given in 4.1, as well as the educational quality objectives, and
- b) the integrity of the education management system is maintained when changes to the education management system are planned and implemented.

### 5.5 Responsibility, Authority and Communication

#### 5.5.1 Responsibility and Authority

Top management shall ensure that responsibilities and authorities are defined and communicated within the educational organization.

#### 5.5.2 Management Representative

Top management shall appoint a member of the educational organization's management who, irrespective of other responsibilities, shall have responsibility and authority that include

- a) ensuring that processes needed for the education management system are established, implemented and maintained,
- b) reporting to top management on the performance of the education management system and any need for improvement, and
- c) ensuring the promotion of awareness of students' and other key stakeholders' requirements throughout the educational organization.

NOTE — The responsibility of a management representative can include liaising with external parties on matters relating to the education management system.

### 5.5.3 Internal Communication

Top management shall ensure that appropriate communication processes are established within the educational organization and that communication takes place regarding the effectiveness of the education management system.

## 5.6 Management Review

### 5.6.1 General

Top management shall review the organization's education management system, at planned intervals (at least once in a year), to ensure its continuing suitability, adequacy and effectiveness. This review shall include assessing opportunities for improvement and the need for changes to the education management system, including the educational quality policy and educational quality objectives.

When new or revised curricula are adopted, the education management system shall be reviewed by top management to evaluate any impact on existing education service and support systems, student satisfaction, assessment criteria, and evaluation results.

Records from management reviews shall be maintained (see 4.2.4).

### 5.6.2 Review Input

The input to management review shall include information on

- a) results of audits,
- b) student and other key stakeholders' feedback,
- c) process performance and education service conformity,
- d) status of preventive and corrective actions,
- e) follow-up actions from previous management reviews,
- f) changes that could affect the education management system,
- g) recommendations for improvement, and
- h) students' performance data (results).

### 5.6.3 Review Output

The output from the management review shall include any decisions and actions related to

- a) improvement in the extent to which planned activities are realized and planned results are achieved by the education management system and its processes,
- b) improvement of the education service related to students' requirements, and

- c) resource needs

## 6 RESOURCE MANAGEMENT

### 6.1 Provision of Resources

The educational organization shall determine and provide the resources needed

- a) to implement and maintain the education management system and continually improve its effectiveness, and
- b) to enhance students' and other key stakeholder's satisfaction by meeting their educational requirements.

#### Examples

- a) establish information channels for identifying resources needed;
- b) plan resource acquisition and verify that delivered resources are suitable and fit for use;
- c) provide procured resources effectively to the teaching staff, the administrative staff, employees, and students; and
- d) evaluate the effectiveness of resources, including processes performing below acceptable levels.

NOTE — Instructors identify and request resources when and where needed to support effective education service delivery.

### 6.2 Human Resources

#### 6.2.1 General

Personnel performing work affecting conformity to educational quality requirements shall be competent on the basis of appropriate education, training, skills and experience.

NOTE — Conformity to educational quality requirements can be affected directly or indirectly by personnel performing any task within the education management system.

#### 6.2.2 Competence, Training and Awareness

The educational organization shall

- a) determine the necessary competence for personnel performing work affecting conformity to education service quality requirements;
- b) where applicable, provide training or take other actions to achieve the necessary competence;
- c) evaluate the effectiveness of the actions taken; and
- d) ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the educational quality objectives, and

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maintain appropriate records of education, training, skills and experience (see 4.2.4).

### 6.3 Infrastructure

The educational organization shall determine, provide and maintain the infrastructure needed to achieve conformity to education service quality requirements. Infrastructure includes, as applicable,

- a) buildings, workspace and associated utilities including facilities for differently abled learners;
- b) process equipment (both hardware and software); and
- c) supporting services (such as transport, communication or information systems).

#### NOTES

1 The infrastructure and equipment should meet applicable safety standards, such as, building safety, fire safety etc.

2 Where appropriate, the transport facilities should meet applicable safety standards including regular maintenance and upkeep of vehicles. Special attention should be given to drivers and other support staff with regard to their skill, behaviour and health condition.

3 Where appropriate, the establishment/organization should meet applicable standards of nutrition, safety and hygiene (preparing, storing and serving) for facilities like canteen.

### 6.4 Work and Learning Environment

The educational organization shall create and maintain psychologically safe and an inclusive environment conducive to work and learning.

Assessments (formative and summative) shall be made, at least annually (preferably quarterly), of the degree to which adverse learning conditions prevented planned learning activities from being realised and planned learning results from being achieved.

Outputs from these assessments shall be included in the management review (5.6.2) and serve as part of the basis for continual improvement (8.5).

#### 6.4.1 Health and Safety Policy

The educational organization shall determine, maintain and comply with a Health and Safety policy towards a safe and healthy campus, that contributes to student, staff, and community well being:

- a) The policy shall address the improvement of working environment to promote a positive social and work climate including promotion of holistic health, healthy eating, concept of balanced diet and food safety, mental, emotional and spiritual well being
- b) It shall also address
  - 1) Gender sensitivity and safety issues related to females;

- 2) Environmental sensitization;
- 3) Health and sanitary services, management of infectious diseases;
- 4) Prevention of habits like substance abuse), including tobacco and alcohol;
- 5) Prohibition of videography and photography;
- 6) Emotional issues including cyber bullying, anger management, stress management;
- 7) Theft, eve teasing, bullying, violent behaviour, abuse of technology; and
- 8) Issues relating to children having special needs.

c) The organization shall have a sound emergency response mechanism in place in order to deal effectively with emergent situations like natural disasters (such as, earthquakes, floods, cyclone), fire outbreaks, accidents, violence, falls, stampedes, incidents of hostage, kidnapping, terror attacks, suicide attempts, strikes, medical emergencies, management of epidemics, etc. An emergency response team shall be constituted for the purpose with requisite training and records maintained.

d) The organization shall also have appropriate procedures and training for all staff members to implement emergency and crisis plans and handle such unforeseen situations. Mock drills at periodic intervals shall be conducted and records maintained.

6.4.2 Environmental friendly practices shall be identified and followed, as appropriate.

## 7 EDUCATION SERVICE REALIZATION

Education service is the product category realized in educational organizations. The dominant element is information transacted in the context of knowledge facilitation, skills and development of competencies.

NOTE — Service includes tangible products (for example classroom material, library materials, programmed instruction, and training delivered on compact disc etc).

### 7.1 Planning of Education Service Realization

Planning of education service realisation shall be consistent with the requirements of the other processes of the education management system (see 4.1).

In planning the education service, the educational organization shall determine the following, as appropriate:

- a) educational quality objectives and educational quality requirements;



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- b) the need to establish processes and documents, and to provide resources specific to the education service;
- c) required verification, validation, monitoring, measurement, inspection and test activities specific to the education service, and criteria for education service acceptance; and
- d) records needed to provide evidence that the education service realisation processes and resulting learning meet requirements (*see* 4.2.4).

The output of this planning shall be in a form suitable for the educational organization's method of operations.

#### NOTES

1 A document specifying the processes of the education management system (including the education service realization processes) and the resources to be applied to a specific education service, project or contract can be referred to as a education quality plan.

2 The educational organization can also apply the requirements given in 7.3 to the development of education service realisation processes.

The educational organization shall plan the design, development, and expected results of the education service, including

- a) preparing and maintaining student learning plans,
- b) ensuring appropriate teaching methods,
- c) defining evaluation criteria,
- d) conducting learning assessment,
- e) defining and conducting improvement procedures, and
- f) providing support services.

3 Process control is part of the management review (*see* 5.6) and is aimed at ensuring that education service requirements are well defined, understood, enforced, and fully met.

Control methods shall be consistent with accepted quality practices.

Control method effectiveness shall be verified and records maintained.

## 7.2 Student Related Processes

### 7.2.1 Determination of Requirements Related to the Education Service

The educational organization shall determine

- a) requirements specified by the student and other key stakeholders, including the requirements for delivery and post-delivery activities;
- b) requirements not stated by the student but necessary for specified or intended use, where known;
- c) statutory and regulatory requirements applicable to the education service; and
- d) any additional requirements considered necessary by the educational organization.

NOTE — Post-delivery activities include, for example, articulation between education levels, job placement services, or contractual obligations such as certification of competencies or skills.

### 7.2.2 Review of Requirements Related to the Education Service

Top management shall review the quality requirements related to the education service. This review shall be conducted prior to the educational organization's commitment to provide education service to the student and shall ensure that

- a) education service quality requirements are defined,
- b) application or admission requirements differing from those previously expressed are resolved, and
- c) the educational organization has the ability to meet the defined requirements.

Records of the results of the review and actions arising from the review shall be maintained (*see* 4.2.4).

Where requirements are changed, the educational organization shall ensure that relevant documents are amended, accepted, agreed upon and signed, and that relevant personnel, including those updating student-teacher files, are made aware of the changed requirements.

### 7.2.3 Student Communication

The educational organization shall determine and implement effective arrangements for communicating with students and parents/guardian, as appropriate, in relation to

- a) service information (academic calendar and planners),
- b) enquiries, application, admission, or registration, and
- c) student feedback, including student complaints

## 7.3 Design and Development

All requirements of this clause are intended to be applicable to each education service/course offered by the educational organization.

### 7.3.1 Design and Development Planning

The educational organization shall plan and control the design, development, and expected results of the education service, including

- a) preparing and maintaining student learning plans,
- b) ensuring appropriate teaching methods,
- c) defining evaluation criteria,

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- d) conducting learning assessment,
- e) defining and conducting improvement procedures, and
- f) providing support services.

During the design and development planning, the educational organization shall determine

- a) the design and development stages,
- b) the review, verification and validation that are appropriate to each design and development stage, and
- c) the responsibilities and authorities for design and development.

The educational organization shall manage the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility.

Course instructors shall actively participate in the design and development of education processes.

Procedures shall exist to ensure that all applicable education service materials match education service quality requirements.

Each delivery medium process shall be documented.

Assessment of educational quality requirements include potential or actual performance requirements for determining the following:

- a) how students become competent in the required knowledge and skills,
- b) how learning requirements are met,
- c) which service methods are most effective at meeting the educational requirements,
- d) what skills are needed to meet the educational requirements, and
- e) how learning is assessed.

A needs analysis report shall provide input to the instructional design process, describe the results of the needs assessment, and state the goals for improvement.

Needs assessment results shall be used in the design and development review process.

The development process shall be documented. The documentation shall include the sequence of steps in the development process, the personnel involved, the review processes, and associated criteria.

Expected outputs of design and development planning shall be updated as appropriate, as the design and development progress.

NOTES

1 Where empirical validation of instruction is not practicable, a peer review process may be adopted.

2 There may be a specific process statement for each instruction delivery medium, or a generic process for all media. These processes may include the sequence of steps in the development process, the personnel involved, the review processes, and associated criteria.

3 Design and development review, verification and validation have distinct purposes. They can be conducted and recorded separately or in any combination, as suitable for the education service and the educational organization.

### 7.3.2 Design and Development Inputs

Inputs relating to educational quality requirements shall be determined and records maintained (see 4.2.4). These inputs shall include

- a) functional and performance requirements;
- b) applicable statutory and regulatory requirements;
- c) where applicable, information derived from previous similar designs; and
- d) other requirements essential for design and development.

The inputs shall be reviewed for adequacy. Requirements shall be complete, unambiguous and not in conflict with each other.

### 7.3.3 Design and Development Outputs

The outputs of design and development shall be in a form suitable for verification against the design and development input and shall be approved prior to release.

Design and development outputs shall

- a) meet the input requirements for design and development
- b) provide appropriate information for purchasing (see 7.4) and service provision,
- c) contain or refer to education service acceptance criteria, and
- d) specify the characteristics of the education service that are essential for its safe and proper use.

NOTE — Information for education service provision can include details for the preservation of the education service and its constituent parts.

### 7.3.4 Design and Development Review

At suitable stages, systematic reviews of design and development shall be performed in accordance with planned arrangements (see 7.3.1)

- a) to evaluate the degree to which the results of design and development meet requirements, and
- b) to identify any problems and propose necessary actions.

Participants in each identified stage shall review the design and development results *versus* the corresponding requirements (for example, professional profiles, competence certification).

Records of the results of the reviews and any necessary actions shall be maintained (*see* 4.2.4).

NOTE — Records of complex matters can be the Minutes of formal meetings.

A design review process shall be used for all education service design. This review shall be accomplished by those who are responsible for the design, interested parties, and persons not responsible for the design. Consideration shall be given to the fact that design review is an advisory activity. It is intended to verify the work of the design development team.

The design process shall be evaluated and reviewed in terms of the education service outcome desired. This review shall be based upon the experience of successful projects and information from the subsequent development and implementation phases. A development report or checklist shall be generated to document the procedures used to ensure that the education service meets the design specifications.

Functions responsible for authorizing the progression of the design to the next phase shall be identified.

Criteria for acceptance, in terms of readiness for use in education service, shall be specified and can include the following:

- a) approval of the prose, illustrations, and visual presentation by editorial and graphics specialists;
- b) approval of the technological soundness by a technology specialist; and
- c) trials of both the education service and the criterion-referenced assessments with students from the target population, and revisions made on the basis of students' experiences; at least one of the trials shall be conducted in an environment similar to that in which the education service will be delivered, including support materials for students as well as procedures and support materials for preparation of instructors.

Procedures shall describe how the development process shall be reviewed and revised based upon successive project-by-project experience with the process, including any student/parent/guardian's complaints that become available during the process.

#### 7.3.5 Design and Development Verification

Verification shall be performed in accordance with planned arrangements (*see* 7.3.1) to ensure that the

design and development outputs have met the design and development input requirements. Records of the results of the verification and any necessary actions shall be maintained (*see* 4.2.4).

Design verification shall be performed in one or several stages according to the design and development plan.

This activity shall be performed internally by any specialist who has not participated in the design and development review, or externally, to carry out an independent verification of the review.

The design and development output stage shall match the design and development input specifications.

#### 7.3.6 Design and Development Validation

Design and development validation shall be performed in accordance with planned arrangements (*see* 7.3.1) to ensure that the resulting education service is capable of meeting the requirements for the specified application or intended use, where known.

Wherever practicable, validation shall be completed prior to the delivery or implementation of the education service.

This process is carried out to ensure that planned characteristics of the education service are met by the resulting curriculum or syllabus design.

Validation shall be performed generally on the final design stages.

NOTE — Among others, pilot testing and certification are accepted validation methods.

#### 7.3.7 Control of Design and Development Changes

Design and development changes shall be identified and records maintained. The changes shall be reviewed, verified and validated, as appropriate, and approved before implementation. The review of design and development changes shall include evaluation of the effect of the changes on constituent parts and education service already delivered. Records of the results of the review of changes and any necessary actions shall be maintained (*see* 4.2.4).

Curricula, syllabus review, and any resulting revisions shall be identified, documented, authorized, and communicated.

### 7.4 Purchasing

#### 7.4.1 Purchasing Process

The educational organization shall ensure that purchased products and services conform to specified purchase requirements. The type and extent of control applied to the supplier/service provider and the purchased products and services shall be dependent upon the effect of the purchased products and services

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on the subsequent education service realization or the final service, based on

- a) value added to the educational organization's activities and ability to meet its performance requirements, and
- b) efforts to improve the suppliers'/service providers' own capabilities.

The purchasing processes shall include the timely, effective, and accurate identification of the cost of purchased products and services, based on criteria that conform to the educational organization's requirements.

The educational organization shall evaluate and select suppliers/service providers based on their ability to supply products and services in accordance with the educational organization's requirements. Criteria for selection, evaluation and re-evaluation shall be established. Records of the results of evaluations and any necessary actions arising from the evaluation shall be maintained (see 4.2.4).

#### 7.4.2 Purchasing Information

Purchasing information shall describe the service or product to be purchased, including, where appropriate,

- a) requirements for approval of products, services, procedures, processes and equipment
- b) requirements for qualification of personnel; and
- c) education management system requirements.

The educational organization shall ensure the adequacy of specified purchase requirements prior to communicating with suppliers.

#### 7.4.3 Verification of Purchased Products and Services

The educational organization shall establish and implement inspection or other activities necessary for ensuring that purchased products and services meet specified purchase requirements.

Where the educational organization or its students intend to perform verification at the supplier's/service providers' premises, the educational organization shall state intended verification arrangements and method of product or service release in the purchasing information.

Inspection of purchased services or products shall be made to ensure they meet specified purchasing requirements.

A record shall be made of inspection results and actions taken.

Records shall be kept of suppliers'/service providers' assessments and of any actions taken as a result.

## 7.5 Production and Service Provision

### 7.5.1 Control of Education Service Provision

The educational organization shall plan and carry out education service provision under controlled conditions. Controlled conditions shall include, as applicable,

- a) the availability of information that describes the characteristics of the service;
- b) the availability of work instructions, as necessary;
- c) the use of suitable equipment;
- d) the availability and use of monitoring and measuring equipment and devices;
- e) the implementation of monitoring, measurement and assessment; and
- f) the implementation of education service release, evidence of education service release, as well as delivery and post-delivery activities.

The educational organization shall establish acceptable measures for determining conformity with the learning objectives.

The availability of curricula, guidelines for students, suitable equipment, required laboratories, computer aids, monitoring, measuring and assessment devices, monitoring, measuring and assessment methods, and follow-up with the students shall be controlled.

Control consists of top management or their delegates monitoring learning processes to ensure learning goals are being achieved and that corrective actions are taken when problems are detected.

If a contract agreement requires further support for students after completion of their programme of studies, the educational organization shall indicate how such support would be given and monitored.

The aptitude, knowledge, skills, and ability of new students shall be assessed to ensure that the education service can be provided at an appropriate level and at an appropriate pace.

Advertising, course brochures, and other items produced by the educational organization shall state clearly how prior education, training, and experience are related to the proffered services.

Records shall be established and kept to identify the actual education service delivered to students.

### 7.5.2 Validation of Processes for Education Service Provision

The educational organization shall validate a processes for education service provision where resulting output cannot be verified by subsequent

monitoring, measurement or assessment, and, as a consequence, deficiencies become apparent only after the education service is in use or the education service has been delivered.

Validation shall demonstrate the ability of these processes to achieve planned results.

The educational organization shall establish arrangements for these processes including, as applicable,

- a) defined criteria for review and approval of the processes,
- b) approval of equipment and qualification of personnel,
- c) use of specific methods and procedures,
- d) requirements for records (*see* 4.2.4), and
- e) revalidation.

#### 7.5.3 Identification and Traceability

Where appropriate, the educational organization shall identify the education service by suitable means throughout service realization.

The educational organization shall identify the education service status with respect to monitoring, measurement and assessment requirements throughout service realization.

Identification and traceability of relevant information include, as necessary: curricula, course content unit codes, student identification records, student group schedules, text books/notes, laboratory equipment, and research contracts.

Archival documents that show evidence of students' academic status shall be consistent with the information required by the educational organization.

Where traceability is a requirement, the educational organization shall control the unique identification of the education service and maintain records (*see* 4.2.4).

#### 7.5.4 Student Property

The educational organization shall exercise care with student property while it is under the educational organization's control or being used by the educational organization. The educational organization shall identify, verify, protect and safeguard student property provided for use or incorporation into the education service. If any student property is lost, damaged or otherwise found to be unsuitable for use, the educational organization shall report this to the student and maintain records (*see* 4.2.4).

NOTE — Student property can include intellectual property and personal data.

#### 7.5.5 Preservation of Education Service

The educational organization shall preserve the

education service, including comprehensive student information during internal processing and delivery in order to maintain conformity to requirements. As applicable, preservation shall include identification, handling, packaging, storage, and protection. Preservation shall also apply to the constituent parts of the education service.

For resident students there is a special need for confidentiality of records relating to health, counselling, personal safety, lodging security, and food service, among others.

#### 7.6 Control of Monitoring and Measuring Equipment

The educational organization shall determine the monitoring, measurement and assessment to be undertaken and the monitoring, measuring and assessing equipment and devices needed to provide evidence that the education service conforms to determined requirements.

The educational organization shall establish processes to ensure that monitoring, measurement and assessment can be carried out and are carried out in a manner that is consistent with monitoring, measurement and assessment requirements.

Where necessary to ensure valid results, measuring equipment and devices shall

- a) be calibrated or verified, or both, at specified intervals, or prior to use, against measurement standards traceable to Indian or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded (*see* 4.2.4);
- b) be adjusted or re-adjusted as necessary;
- c) have identification in order to determine its calibration status;
- d) be safeguarded from adjustments that would invalidate the measurement or assessment result;
- e) be protected from damage and deterioration during handling, maintenance and storage.

In addition, the educational organization shall assess and maintain record of the validity of the previous measuring or assessing results when the equipment or devices are found not to conform to requirements. The educational organization shall take appropriate action on the equipment or device and any service affected.

Records of the results of calibration and verification shall be maintained (*see* 4.2.4).

When used in the monitoring, measurement and assessment of specified requirements, the ability of computer software to satisfy the intended application

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shall be confirmed. This shall be undertaken prior to initial use and reconfirmed as necessary.

NOTE — Confirmation of the ability of computer software to satisfy the intended application would typically include its verification and configuration management to maintain its suitability for use.

The educational organization shall establish valid tests or learning assessment tools.

Monitoring, measurement and assessment shall be performed during service to assure conformity with the study plans, curriculum, and education programmes.

These shall include student performance profiles, assessments of personnel records, written course assessments, observations with note whether instructors are following the plan and final examinations.

When tests, assessment tools, or software are found to be invalid, a record shall be made of all actions taken to correct the invalidity.

## 8 MEASUREMENT, ANALYSIS AND IMPROVEMENT

### 8.1 General

The educational organization shall plan and implement the monitoring, measurement, analysis and improvement processes needed

- a) to demonstrate conformity to education service quality requirements,
- b) to ensure conformity of the education management system,
- c) to assess the knowledge, skills imparted to the student, and
- d) to continually improve the effectiveness of the education management system.

This shall include determination of applicable methods, including statistical techniques, and the extent of their use.

Outcomes from monitoring, measurement and assessment shall be used to identify areas for improving the education management system and education processes.

Outcomes shall be compared with students' planned results.

NOTE — The aim of educational measurement, analysis, review, and improvement is to guide processes toward the achievement of key planned results of strategic objectives. They can also improve the ability to anticipate and respond to rapid or unexpected changes. They can provide feedback in time to adjust the education service as needed.

### 8.2 Monitoring and Measurement

#### 8.2.1 Student Satisfaction

As one of the measurements of the performance of the

education management system, the educational organization shall monitor information relating to student perception as to whether the educational organization has met student requirements. The methods for obtaining and using this information shall be determined.

NOTE — Monitoring student perception can include obtaining input from sources such as student satisfaction surveys, student data on delivered education service quality, user (key stakeholder) opinion surveys, and feedback from parent-teachers meetings/interactions

#### 8.2.2 Internal Audit

The educational organization shall conduct internal audits at planned intervals (at least once in a year) to determine whether the education management system

- a) conforms to the planned arrangements (*see* 7.1), to the requirements of this standard and to the education service quality requirements established by the educational organization, and
- b) is effectively implemented and maintained.

An audit programme shall be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods shall be defined. The selection of auditors and the conducting of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work.

A documented procedure shall be established to define the responsibilities and requirements for planning and conducting audits, establishing records and reporting results.

Records of the audits and their results shall be maintained (*see* 4.2.4).

The personnel responsible for the area being audited shall ensure that any necessary corrections and corrective actions are taken without undue delay to eliminate detected non-conformities and their causes.

Follow-up activities shall include the verification of the actions taken and the reporting of verification results (*see* 8.5.2).

#### 8.2.3 Monitoring and Measurement of Processes

The educational organization shall apply suitable methods for monitoring and, where applicable, measurement of the education management system processes. These methods shall demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action shall be taken, as appropriate.

NOTE — When determining suitable methods, it is advisable

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that the educational organization consider the type and extent of monitoring or measurement appropriate to each of its processes in relation to their impact on the conformity to education service quality requirements and on the effectiveness of the education management system.

The educational organization shall measure the performance and effectiveness of the education service delivery. Measurement of core and supporting education processes shall be carried out at appropriate stages during the delivery process.

Top management shall monitor the measured results to assure that performance levels are maintained and improved.

The methods used to measure the performance and the effectiveness of the processes shall be documented and archived.

#### 8.2.4 Monitoring and Measurement of Education Service

The educational organization shall monitor and measure the characteristics of the service to verify that education service quality requirements have been met. This shall be carried out at appropriate stages of the education service realisation process in accordance with planned arrangements (see 7.1). Evidence of conformity with the acceptance criteria shall be maintained.

Records shall indicate the person(s) authorising the release of education service for delivery to the student (see 4.2.4).

The release of education service and the delivery of education service to the student shall not proceed until the planned arrangements (see 7.1) have been satisfactorily completed, unless otherwise approved by a relevant authority.

Performance measurement shall focus on student learning. This requires comprehensive monitoring of student assessment data, performance data, process performance, operational performance measurement, and any other relevant data.

### 8.3 Control of Non-conforming Service

The educational organization shall ensure that the service that does not conform to requirements is identified and controlled to prevent its unintended use or delivery.

NOTE — Delivery of a service can include products that may be non-conforming.

A documented procedure shall be established to identify education service as well as final outcomes that do not conform to established design, regulatory requirements, or organizational objectives and instructional design; as well as to define the controls and related

responsibilities and authorities for dealing with non-conforming education service.

Monitoring shall be carried out at appropriate stages of the delivery of the education service to prevent its continued use or delivery in the non-conforming state.

Where applicable, the organization shall deal with non-conforming education service by one or more of the following ways:

- a) by taking action to eliminate the detected non-conformity;
- b) by authorizing its use, release or acceptance appropriately by a relevant authority,
- c) by taking action to preclude its original intended use or application;
- d) by taking action appropriate to the effects, or potential effects, of the non-conformity when non-conforming education service is detected after delivery or use has started.

When non-conforming education service is corrected, it shall be subject to re-verification to demonstrate conformity to the requirements.

Records of the nature of non-conformities and any subsequent actions taken, including corrections undertaken, shall be maintained (see 4.2.4).

#### 8.3.1 Control of Non-conforming Performance

Means shall be established by which individual student non-conforming performance is corrected in order to avoid the student's abandonment of the education programme. Under no circumstances a student be considered a non-conformity.

### 8.4 Analysis of Data

The educational organization shall determine, collect and analyse appropriate data to demonstrate the suitability and effectiveness of the education management system and to evaluate where continual improvement of the effectiveness of the quality management system can be made. This shall include data generated as a result of monitoring, measurement and assessment, and from other relevant sources.

The analysis of data shall provide information relating to

- a) student satisfaction (see 8.2.1),
- b) conformity to education service quality requirements (see 8.2.4),
- c) characteristics and trends of processes and services, including opportunities for preventive action (see 8.2.3 and 8.2.4), and
- d) suppliers/service providers (see 7.4).

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## 8.5 Improvement

### 8.5.1 Continual Improvement

The organization shall continually improve the effectiveness of the education management system through the use of the educational quality policy, educational quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

### 8.5.2 Corrective Action

The educational organization shall take action to eliminate the causes of non-conformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the non-conformities encountered.

A documented procedure shall be established to define requirements for

- a) reviewing non-conformities (including student complaints);
- b) determining the causes of non-conformities,
- c) evaluating the need for action to ensure that non-conformities do not recur,

- d) determining and implementing action needed,
- e) records of the results of action taken (see 4.2.4), and
- f) reviewing the effectiveness of the corrective action taken.

### 8.5.3 Preventive Action

The organization shall take action to eliminate the causes of potential non-conformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.

A documented procedure shall be established to define requirements for

- a) determining potential non-conformities and their causes,
- b) evaluating the need for action to prevent occurrence of non-conformities,
- c) determining and implementing action needed,
- d) records of results of action taken (see 4.2.4), and
- e) reviewing the effectiveness of the preventive action taken.



*(Continued from second cover)*

This standard can be used by internal and external parties to assess the educational organization's ability to meet the requirements of students and other interested parties; applicable statutory and regulatory requirements; and the educational organization's own requirements.

The quality management principles stated in IS/ISO 9000 and IS/ISO 9004 have been considered applicable to this Indian Standard. Further, user may refer to IS/ISO 9001 for the concept of process approach in quality management system and its requirements for understanding and implementing the education management system.

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