

Book (Cover)

National Standards of Educational Testing

Preface

According to NIETS board of directors' policy to establish a national standard of educational testing, the total of 8 individuals have been appointed as drafting committees of National Standard for Testing Service to ensure that the operation is well-organized to fulfill NIETS objectives. Professor Sirichai Kanjanawasee, who serves as the president, is responsible for determining the details of each standard to cover the structure and progress of NIETS which contributes to international standard practices.

The National Standard of Educational Testing, which was reviewed by the educational specialists, consists of 5 standards 1) The Standard of Test Administration 2) The Standard of Test Personnel 3)The Standard of Test Development 4) The Standard of Test Printing, Delivering, Marking and Processing 5) The Standard of Test Reporting and Its Application

NIETS highly hopes that these established national standards of educational testing will help us achieve our mission and become nationally and internationally accepted.

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Chapter 1 Introduction

The Background of Standard Establishment

The National Institute of Educational Testing Service (Public Organization) is a state-run organization which was established according to the Royal Decree for the Establishment of the National Institute of Educational Testing Service (Public Organization). Its aim is to become the central organization with administrative duties regarding educational research, development and assessment along with educational testing services. Additionally, NIETS is expected to be the cooperation center in educational testing at national and international levels. In order for the institute to hold independent, flexible and effective administration authority, the National Institute of Educational Testing Service was, therefore, established and deemed as a public organization with main authorities as follows.

1. To organize a system of the test and methods and develop tools of educational measurement and evaluation.
2. To organize national education testing and evaluation and collaborate with schools to promote the testing service in several educational service areas.
3. To organize educational testing service and academic and vocational testing service and use the results as a part for credit transfer which is applicable under the same educational system.
4. To conduct research and disseminate innovative practices relating to educational measurement and evaluation.
5. To become an information center of educational testing, support and offer test reporting services to other relevant organizations at national and international levels.
6. To improve and promote educational measurement and evaluation -- training people in educational measurement and evaluation, monitoring the quality of graduated students as well as certifying the system, method and tools of educational measurement and evaluation.
7. To become a cooperation center in educational measurement and evaluation at national and international levels

In order to make the educational testing administration -- the management of testing procedure and related personnel, the development of tools for measurement and evaluation, the test reporting and its application -- acceptable at national and international levels, it is necessary for NIETS to establish a national standard of educational testing service. The drafting committee of National Standard for Testing Service is, thus, appointed to determine the details of each standards and lead to practicality for tangible results. All five established standards are described as follows

1. Test Administration Standard is a standard to ensure that the testing administration is clear, practical and acceptable at national and international levels.
2. Test Personnel Standard is a standard to ensure that every individual related to the test has an internationally-acceptable qualification.
3. The Standard of Test Development is a standard to ensure that the examination used for measurement and evaluation has been developed systematically by using standardized and reliable procedures along with empirical information to create the test which meets three qualities -- precision, accuracy and equity

4. The Standard of Test Printing, Delivering, Marking and Processing is a standard to ensure that the printing system of the test and answer sheet are under supervision by adopting clear working procedures. Security measures are also employed to ensure that the content of the test remains confidential. In the test marking process, the system should operate precisely and able to detect errors should they occur. The test reporting is expected to provide detailed explanation of the score. The score conversion is done properly to compare it with other previous tests every year.

5. The Standard of Test Reporting and Its Application is a standard to ensure that the quality of test reporting together with its application is precise, accurate and unbiased.

1. The Standard of Test Administration

1.1 Test Administration System

1.2 Information-providing service

1.3 Service-providing

1.4 Security assurance

1.5 Researching and developing the test management system

2. The Standard of Test Personnel

2.1 Policy-making Section

2.2 Creating-and-developing tools for evaluation Section

2.3 Controlling Test Quality Section

3. The Standard of Test Development

3.1 Setting up the scope of test development

3.2 Test Specificity

3.3 Test Development Procedures

3.4 Test Coherence Checking

3.5 Test Quality Checking

4. The Standard of Test Printing, Delivering, Marking and Processing

4.1 Test Printing System

4.2 Test Delivering System

4.3 Test Marking and Evaluating System

4.4 Test Database Analyzing System

4.5 Test Analyzing and Checking System

4.6 Test Reporting System

4.7 Test Processing and Applying

5. The Standard of Test Reporting and Its Application

5.1 Test Reporting System

5.2 Test Announcing System and Regulations

5.3 Test Disclosure System

5.4 The Scope of Test Results' Application

Chapter 2 National Standard of Educational test

1) The Standard of Test Organizing

Objectives

- 1) To provide a reliable system which can be used in a practical manner
- 2) To provide an efficient system which is acceptable at both national and international levels

Standard 1.1 Test Administration System

1.1.1 Policy

NIETS' policy and strategy is to have a clear administration system along with clear organizing committees who can be verified.

1.1.2 Testing Personnel Management System

1. NIETS has quality requirements for every position appliance.
2. NIETS has announcements and documents which clearly mentions the roles and duties of every position.
3. NIETS holds an organization meeting frequently.
4. NIETS arranges a practical training program for every staff one day before the examination.
5. NIETS has an evaluating system for every section
6. NIETS has a summarizing meeting of every section after every examination

Standard 1.2 Standard of Information Providing and Test Publicizing

1.2.1 Information

1. NIETS has specific information.
2. NIETS has certain regulations of publicizing details about the test.
3. NIETS has prepared the frequently asked questions for the inquiry of beneficiaries.
4. NIETS has been disclosing essential details about the test to beneficiaries periodically

1.2.2 Test Publicizing

1. NIETS has a testing information management system.
2. NIETS has produced documents, video presentations and handbooks with details about the test procedures in several national education testing service, for example, O-NET, N-NET, I-NET, and V-NET.
3. NIETS has been publicizing in a direct manner by providing the test objectives and specifying the target test group via NIETS' website and other media including SMS, printed materials, radio and television.
4. NIETS has been providing details regarding the test date, time, duration, place together with directions on how to do the test to test takers in advance periodically.
5. NIETS clearly provides details about rules and regulations which involves identity documents, required items and not-permitted items.
6. NIETS provides details regarding the punishment and penalty provision if test takers show signs of cheating or any other practice which is against the rules and regulations.

Standard 1.3 Service

1.3.1 Service providing system

1. NIETS has specified a standard of service and appointed committees for supervision at every process.
2. NIETS has specified a service system.
 3. NIETS uses technology to provide convenience as well as added the FAQ section on the website.
 4. NIETS uses different channels to announce information to clients or beneficiaries by
 - (1) posting a notification at testing locations
 - (2) posting a notification at official places
 - (3) posting on NIETS' website
 5. NIETS uses different means for providing information such as NIETS' website, call center, comment box and email.

1.3.2 Report and complaint system

1. NIETS has set up a section and appointed committees responsible for the operation.
2. NIETS has certain rules and regulations of receiving complaints and reports within a period of time.
3. NIETS uses different means to receive complaints, for example, NIETS' website, call center, and comment box.

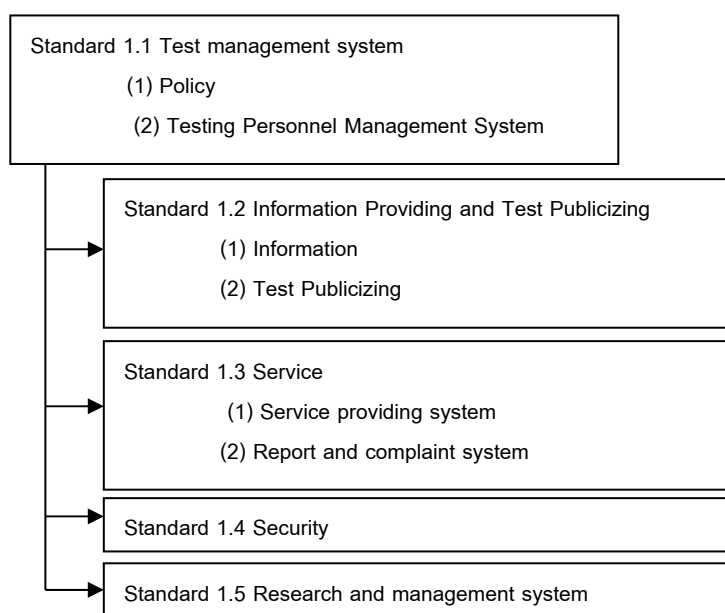
Standard 1.4 Security

1. NIETS has a test storage managing system and an item bank
2. NIETS has a security check system for every test-related material and fully secures the process of test development, test storage, test application, test delivery until the test destruction.
3. NIETS has employed a strict practice to secure the test development and test making process systematically.

Standard 1.5 Research and management system development

1. NIETS does research on test management system.
2. NIETS uses research results to develop the test management system.

Chart 2 Testing management



2) Test Personnel Standard

Objectives

1. To acquire qualified employees who are acknowledged and accepted at national and international levels to make the test.
2. To provide the test-related employees with qualifications and responsibilities that meet the international standard.

By synthesizing the qualifications of employees at national and international levels in order to determine the qualifications of test-related employees of the National Institute of Education Testing Service (Public Organization) (NIETS), 3 groups of qualified personnel are required for operating efficiently and smoothly which are shown as follows;

2.1 Policy formulation team

2.2 Creating and developing evaluation team

2.3 Test controlling standard team

Standard 2.1 Policy Personnel

Constituents

2.1.1 Board of Directors of The National Institute of Education Testing Service (NIETS)

2.1.2 Examination Board

2.1.1 Board of Directors of the National Institute of Education Testing Service (NIETS)

Constituents

1. The President, the Council of Ministers appointed from the qualified experts, has proficient and highly experienced in education, science and technology, administration, humanities or social science but not in charge of government officers.
2. Four members of the board; Secretary General of the Basic Education Commission, Secretary General of the Higher Education Commission, Secretary General of the Vocational Education Commission, and The Director of the National Education Standards and Quality Assessment
3. Specialized Committee up to five Members; Council of Ministers appointed from the qualified experts, have obviously proficient and experienced in education, science and technology, administration, humanities social science or any related fields which beneficial for the institute. Three members or more are not in charge of government officers.

Responsibilities

1. Formulate the policies for administration and consent action plans of the institute
2. Consent investment plan, financial plan, and annual budget of the institute
3. Certify the developing teachers and educational personnel of other institutes training in educational evaluation in accordance with the institute standard
4. Evaluate performances of the institute's Director and officers in accordance with the institute's criteria
5. Supervise the working process and general administration in regard to the formulation of rules and regulations as well as announcements in the following aspects.
 - (A) General administration of the institute, divisions and frameworks.
 - (B) Determining the positions, special qualifications, rate of salary, wage and other budget of officers and employees.
 - (C) Selecting, employing, appointing, evaluating, relieving, discipline and punishment, discharging, complaining and appealing of officers and employees.

- (D) Managing finances, supplies and properties including accountancy and selling lost value asset
 - (E) Supplying officers and employees' welfare and privileges
 - (F) Determining authority and function range of the internal auditors
 - (G) Selecting the director, performance, and assign a deputy
6. Submit annual report and assumption to the Council of Ministers to implement in accordance with this Royal Degree
 7. Maintain necessary or further actions to achieve the institute's objectives

2.1.2 Examination Board

Constituents

1. Content expert
2. Measuring and evaluating expert
3. Statistics and analysis expert
4. Other related field experts

Responsibilities

1. Submit policies and national testing services to the Board of Directors of The National Institute of Education Testing Service
2. Promote and support the operating, and develop services and testing standards of the National Institute of Education Testing Service
3. Control and operate in accordance with National testing standard, and report to the Board of Directors of The National Institute of Education Testing Service
4. Propose a report to the Board of Directors of The National Institute of Education Testing Service
5. Appoint a group of staff to do some duties in accordance with the Board assigned
6. Do some duties in accordance with the Board assigned

Standard 2.2 Creating and developing evaluation personnel

Constituents

- 2.2.1 Creating curriculum and evaluation framework team
- 2.2.2 Developing evaluation equipment team
- 2.2.3 Servicing testing team

2.2.1 Creating curriculum and evaluation framework team

There are 2 teams which can create curriculum and evaluation framework;

1. Institutes or professional organizations that are responsible for content in each subject

In the case of creation and approval by the direct organization, there is no personnel specification, but the organization should propose and approve.

2. Appointed team from The National Institute of Education Testing Service (Public Organization)

Constituents

1. Content expert
2. Teaching experienced personnel in each subject
3. Creating and developing test expert
4. Evaluating expert

Responsibilities

1. Create curriculum and evaluation framework
2. Determine levels of essential or risk of testing as follows;

- High stake
- Medium stake
- Low stake

2.2.2 Developing evaluation equipment team

Constituents

1. Test Creating team
2. Test screening and editing team
3. Master copy test making team
4. Test printing team
5. Test resulting team
6. Statistics analysis team
7. Test collecting team

Personnel qualification

1. Know and understand the responsibilities
2. Concentrate on the duties to achieve the objectives
3. Be able to work in a team and cooperate with other people smoothly
4. Be able to keep secrets and covertness
5. No conflict of interests

1. **Test Creating team**

Responsibilities

1. Create standard tests
2. Create criteria

Personnel qualification

1. Know and understand the content of tests
2. Have experiences in teaching or doing researches in the subjects
3. Be able to understand course standard and test creating framework
4. Have an experience in creating test in accordance with test creating standard
5. Open-minded to admit other comments for your evaluating equipment
6. Be able to give reasonable suggestions, and adjust evaluating equipment in accordance with comments from other considerations

2. **Test screening and editing team**

Responsibilities

1. Check the language and interpret
2. Check the pattern of test
3. Check the accuracy and appropriateness of test in both questions and answers
4. Check the duration of the examination

Qualification

1. Know and understand the content in each subjects
2. Have literacy and communication skills
3. Be able to edit the test into the standard form
4. Have experience in creating test and be accepted
5. Have experience in teaching in each subject and evaluating it

6. Be able to give beneficial and neutral suggestions to create the test

3. Master copy test making team

Responsibilities

1. Check the accordance with course standard or subjects
2. Check the accuracy or completeness of the content, language appropriateness, and test partiality
3. Make the master copy of the evaluating that is ready for printing
4. Define the criteria

Qualification

1. Understand the content, figures and illustration for accuracy, consistency and appropriateness
2. Be able to create and manage the content for students
3. Understand psychology of perception

4. Test Printing team

Responsibilities

Print the test in accordance to the right form

Qualification

1. Be able to print the correct evaluation equipment neatly in the right form
2. Have good reputation or surety

5. Test resulting team

There are 2 types of test resulting team as follows;

Type 1 Marking the objective test by using a computer as the test is commonly in form of multiple choices, or true or false. This type requires a program for marking.

Responsibilities

Marking in accordance with criteria and methodology

Qualification

Having experience in computer programming and be able to use the program to mark with criteria

Type 2 Marking the subjective test. This type requires competence as a test creating team. Marking team must understand the questions and answer guidelines, and use the criteria to mark with fairness.

Responsibilities

Mark the result with criteria

Qualification

1. Know and understand the subject content
2. Know and understand the criteria
3. Neutral mark without partiality
4. Open-minded to admit other comments and be able to correct or prevent any possible mistake

6. Statistics analysis team

Responsibilities

1. Analyze the used test quality with criteria
2. Store quality test in the Item Bank

Qualification

1. Know and understand statistics and analysis of various testing
2. Understand the test content
3. To be able to report and present the analysis result

4. To be able to work in team

7. Test collecting team

Responsibilities

1. Store and use the evaluation equipment in accordance with the regulations
2. Cooperate with other related teams

Qualification

1. Know about computer database and how to store in The Item Bank
2. Know and understand specific details about each item, and be able to choose items to combine them into a set of test in accordance with the criteria
3. Be able to cooperate with other related teams

2.2.3 Test administration team

Constituent

1. Test delivery team
2. Invigilator team

Qualification

1. Punctual
2. Cautious
3. Sacrifice
4. Keep secrets
5. Responsible

1. Test delivery team

Responsibilities

Delivering the test to the place by following the procedures.

Qualification

1. Carefully beware of any possible mistakes
2. Give precedence to accuracy and punctuality
3. Have high responsibilities
4. Give precedence to the documents
5. Always follow up the overall operation closely
6. Sacrifice and have flexible work hours
7. Give precedence to the overall operation

2. Invigilator team

Responsibilities

Invigilate and control the examination in accordance with the regulations

Qualification

1. Punctual
2. Keep secrets
3. Give precedence to the regulations
4. Carefully give precedence to the related documents

Standard 2.3 Test Standard Controlling Team

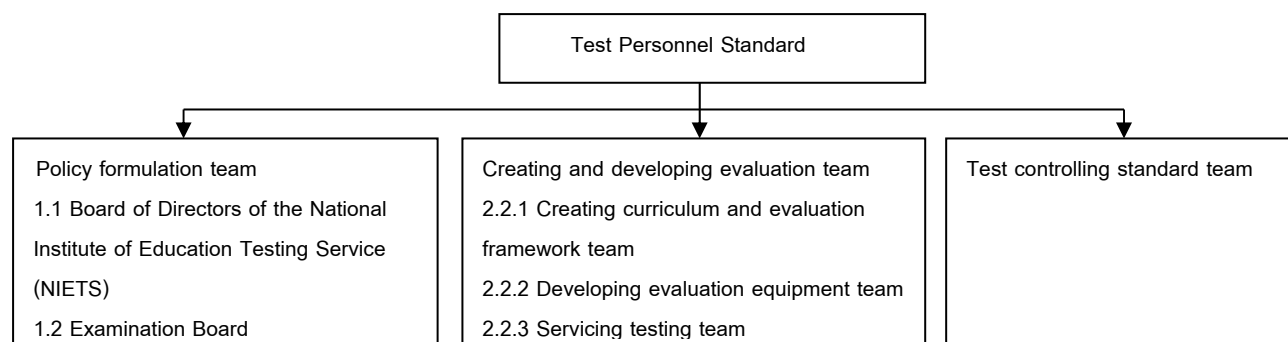
Responsibilities

Control every test procedure in accordance with the regulations

Qualification

1. Sensitive to the situation
2. Carefully beware of any possible mistakes
3. Make the right decision quickly
4. Cooperate thoroughly in time
5. Keep secrets of operation
6. Report the situation on time

Chart 3 Test Personnel Standard



3) The Standard of Test Development

Objectives

1. To make the test development more systematic by adopting clear and reliable procedures with empirical information
2. To meet the qualities of the test in terms of correctness, accuracy and fairness

Standard 3.1 Determine the domain of test development

1. Specify the test objectives which correspond to the project/test planning
2. Clearly specify the target group in order to meet the test objectives
3. Specify the essential content details for assessment which run parallel with the national education standards, curriculum standards and/or learning standards relating to the vocational practice as mentioned in the test objectives.

Standard 3.2 Test Specification

1. Clearly determine the scope of construct by providing information on each construct along with their details.
2. Analyze the content and check for its validation to assure the domains of knowledge
3. Develop test specifications and create a plan based on test objectives as well as the analysis on the domains of knowledge

Standard 3.3 Test Construction

1. Create a document showing the procedures of test construction together with a handbook as a guide to direct and make a test which meets the assessment objective
2. Create a test with qualities that follow the regulations of item specification
3. Assemble or combine the test by using the framework as a guide to make the test which can be assessed through Test Specification and the handbook

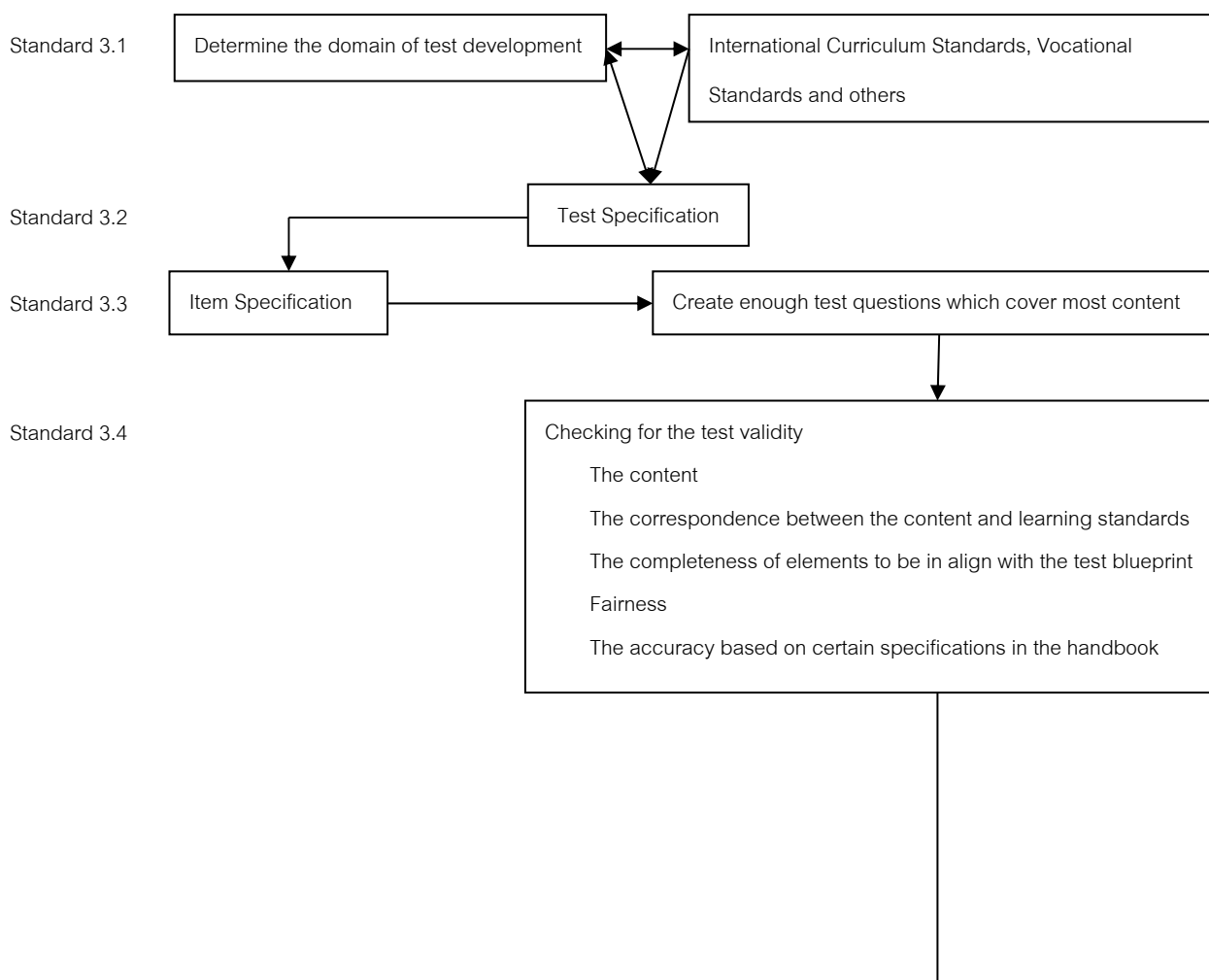
Standard 3.4 Checking for the test validity

1. Examine the test construction to see whether the item specifications are parallel with the blueprints
2. Check the scope of content covered in the test, the correspondence between the content and learning standards of the curriculum, the completeness of elements in the test and fairness without guiding answers in the question or check whether the test meets its specification

Standard 3.5 Checking for the test quality

1. Examine the appropriateness and accuracy of the test in terms of test logic, test paper and other related materials by adopting a guideline for external checking which includes the required qualifications of the examiners and test reporting
2. Consider the quality of test development from the academic foundation regarding fairness, standard and quality standard. Test specialists are responsible for correctness of the test.
3. Report the resolution, suggestions and answers to fix the problem and make a report or choose the appropriate items for the test and pass on to the printing process and its application.
4. Sign to approve the accuracy of every page in the original test in these aspects:
 1. Instructions and requirements are written correctly.
 2. Texts and the language used in the test are correctly done.
 3. The answer sheets are accurate.

Chart 4: The Procedures of Test Development



Standard 3.5

3.5.1 Checking for the test quality

Correctness of the test

Correctness of the text, letters, instructions, restrictions and answer keys

3.5.2 Sign of approval

4. Standard of Test Printing, Delivering, Checking, Evaluating and Processing

Objectives

1. To have a systematic and explicit control on test printing and delivering procedure and to provide strict safety regulations for confidentiality not to be unveiled.
2. To have accurate and standardized principles when marking tests by using the right knowledge with the right fields and to have systematic and explicit examination marking process which could detect any errors.
3. To be able to conduct a report on the mean score, have the proper score evaluation methods and be able to evaluate and compare raw scores with mean scores.

4.1 Test Printing System

1. Must provide document which could show that every step in test printing has strict safety regulations for confidentiality not to be unveiled.
2. Must assign a person in charge of test printing process: manuscript, answer sheets, test printing control and sealing process.

4.2 Test Delivering System

1. Must provide document which could show that every step in test delivering process has strict safety regulations for confidentiality not to be unveiled.
2. Must assign a person in charge of test delivering process: answer sheets, any examination-related document and instrument, test and answer sheets enumeration

4.3 Test Checking and Evaluating System

1. Must provide document which could show that every step in test checking and evaluation process has strict safety regulations for confidentiality not to be unveiled.
2. Must assign a person in charge of test checking and evaluation process: fast and effective score marking process, methods to detect any errors arise in test checking and evaluating process.

4.4 Test Database Analyzing System

1. Must analyze data from the test in order to be able to describe the examination situation such as, the number of students who take part in examination categorized by their educational status on the overall look or schools' size or any variable topics vary by students' interest on the rather small scale.
2. Must analyze data from the test to evaluate if there any unjustified indications on it in order to develop and gain students' trust by following these:
 - Review the test to see whether there is any unjustified indication on it or not by applying well-known theories to the exam within the interest of students or public such as, partiality on the examination resulting from the civilization in local region or school's size presenting the difference between students who take a test in a city or rural, or students who are from different schools' size.

- Review the test's property to see whether the exam could be easily guessed or not in order to answer the question related to the test form (multiple-choice or write down exam)

Standard 5: The Standard of Result Reporting and Distribution

Objectives

1. To ensure result reports' accuracy and suitability for proper applications.
2. To ensure proper, suitable, and fair usage of test results.

Standard 5.1 Test result reporting system

1. Test result reports provide details that contain sufficient information that involved individuals are able to comprehend.
2. Reason for choosing the type of scores in result reports is specified.
3. Clear explanation of each score's meaning is given.
4. The pattern of the report suits the objectives of the tests, clearly explains the scores, and is suitable for use.
5. Scores are compared using the same standards under the circumstances of different test environments such as the tests and participants.
6. The time range in which the result reports can be used is specified.
7. Warnings are given to result report readers in case of possible misunderstanding from any information in the report.

Standard 5.2 Test result distribution measure and system

1. Announcement of test results covers the objectives and participants of the tests.
2. Announcement of test results is aided by technology and other means of communication.
3. Roles and duties of rightful test result announcers are clearly determined.
4. Test result consulting system is established.
5. Manuals and documentations regarding the use of test results are provided.
6. Staff are prepared to answer expected questions from involved individuals.

Standard 5.3 Test result information disclosure system

1. Disclosure of test result information has clear regularity. Rights in requesting test results at the level of details that can be disclosed, and in using test results are specified.
2. The extent and levels of details in information disclosure are specified (What can be disclosed? How detailed?)
3. Manuals explaining how to request individual test results are provided.

Standard 5.4 The extent to the use of test results

1. The scope and time range of test result usage are established.
2. Responsible individuals in establishing the scope and time range of test result usage are determined.

Standard 5.5 Tracing and verification system

1. Accurate and swift process in correcting errors in test result reports is specified.
2. Process to inform involved individuals of incorrect and improper use of test result reports is identified.
3. Means to prevent incorrect and improper use of test result reports are identified.

4. Means to appeal for incorrect and improper use of test result reports are identified.

Chapter3 Conclusion

These 5 standards NIETS has established will connect the proceed of NIETS and the test making and make it more efficient as shown in the chart.

Chart 7 Practice of the national standard of educational testing service

1 Standard of test organizing

2 Standard of information providing and test publicizing

3 Standard of Test Development

4 Standard of test printing, delivering, checking, evaluating and processing

5 Standard of result reporting and distribution

Establish the standard and bound up the subject areas

Create the test

Check the test

Test paper -> unable to use -> rejected / -> able to use -> send to test storage

Check the test again

Create manuscript

Print

Put them in order

Test

Check

Test analysis

Result reporting

Word Definition

Justice The impartiality of causes that may have effects on education results for instance, district's civilization, urban and rural area, size of school, or geography.

Chart 5 Printing, Delivering, Checking, Evaluating and Processing

