

## **Textbook Evaluation Through Quality Indicators: The Case of Pakistan**

Khalid Mahmood\*, Muhammad Zafar Iqbal\*\*  
& Muhammad Saeed\*\*\*

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### **Abstract**

Curriculum is the main course of action that can ensure the supply of effective and efficient human resource for the development of a nation and a progressive society. Textbooks are the visible, tangible and practical manifestation of the curriculum. These are designed to teach students what the educators believe must be taught. Textbook development and evaluation has always been the subject of debate in Pakistan, due to a variety of reasons. One of the major reasons in this regard is non-availability of explicit criteria for textbook evaluation. The study was designed to identifying indicators of quality textbooks and developing criteria for review, evaluation and approval of quality textbooks in Pakistan. Considering textbook as a product, Garvin's (1988) framework for quality products was used as basis for identification of the indicators and Delphi technique was employed to reach to consensus on them. Based on final indicators, a textbook evaluation criterion was developed. To make the criterion explicit, rubrics for each compliance indicator was developed

*Key words:* Textbook, quality, indicators, evaluation, rubrics

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### **Introduction**

Currently education system in most of the countries is going through some kind of curriculum reforms. There are several obvious reasons why curriculum reform is so often at the core of education development programmes today. One of the most important reasons is that the information age has brought technology to schools or at least to the lives of the young and the old in our societies. What ever the reason behind all these curriculum reforms, the most affected part of this process is the textbook- the widely used tool for curriculum interpretation and implementation. Textbooks are one of the major teaching and learning resources used in schools. Development and production of textbooks is a continuous process which needs continuous and rigorous research and development. Review and

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\*PhD Scholar, Allama Iqbal Open University, Islamabad.

\*\*Faculty of Education, Allama Iqbal Open University, Islamabad.

\*\*\*IER, University of the Punjab, Lahore.

revision of textbooks based on field-testing and research yield results leading to quality textbooks. Every country including Pakistan has some kind of mechanism to evaluate textbook.

Development and production of textbooks is a continuous process, which needs continuous and rigorous research and development. Evaluation/ review of textbooks based on field-testing and research will yield results leading to quality textbooks. In Pakistan, the Curriculum Wing (CW), Ministry of Education is the apex national institution that formulates and approves curricula for all subjects up to class XII. The CW is empowered to prescribe and withdraw textual materials for schools in Pakistan (Government of Pakistan, 1976). Textbook evaluation is one of the key responsibilities of CW. Textbook development and evaluation has always been subject of debate in Pakistan. There are a variety of reasons for this, but non-availability of explicit criteria for textbook evaluation is one of the main concerns. To make the evaluation process more effective, there is a need to identify agreed upon indicators of a quality textbook.

Textbooks have an enormous influence on what is taught in primary, elementary and secondary classes and how it is taught. According to John (2001) “a majority of teachers use textbooks as their principal curriculum guide and source of lessons” (p.32). Tyson (1997) found “those new and in-experienced teachers, or those who lack adequate time for lesson planning, may actually teach from the first page of the textbook to the last, skipping little or nothing” (p. 89). Sheldon (1988) believes textbooks are heavily utilized by teachers and he identified three main reasons for this: a) developing their own classroom materials is extremely difficult and an arduous process for teachers; b) teachers have limited time in which developing new materials might not be possible; and c) external pressure which restricts many teachers in introducing their own developed materials. For the proper implementation of any school curriculum, textbooks become part and parcel of the education system. Especially, in developing countries, it has been a regular practice to consider textbooks as the only source of teaching learning process to be undertaken in schools. For most of the teachers, a textbook is an authentic material to present in the classroom, while for most students it has become a common practice to be burdened with a bag packed with their prescribed textbooks on their way to school. In Pakistan, “the textbook is the only available learning material in most schools. Additional materials like teaching aids, supplementary reading materials and school libraries are virtually non-existent” (Govt. of Pakistan, 2006, p. 2).

In most of the countries textbooks are written by experts with the assistance of publishers and these textbooks are evaluated by a government agency. In Pakistan, role of textbook development rests with the provincial or regional Textbook Boards, and Private Publishers. These boards and private publishers try to publish the textbooks according to the guidelines

provided in the national curriculum, given by the Curriculum Wing of Ministry of Education. The role of textbook evaluation performed by the Curriculum Wing is to ensure that textbooks are aligned with the curriculum guidelines provided to the boards and publishers.

To facilitate evaluation processes rubric are considered as a vehicle to ensure the quality and objectivity in the process. The more specific a rubric is to an indicator of a quality textbook, the more useful it is the evaluators and the publishers and/or writer. The descriptors associated with the criteria should reference specific requirements of the quality textbook and clearly describe the quality of work at each level on the rubric. The criteria used to evaluate the textbook should be shared as the guidelines are introduced to help publishers begin with the end. Rubrics and models should also be referenced while the textbook are being completed to help publishers/authors revise their work. They should also be used after the textbook is complete, not only to evaluate the product, but also to engage publishers /authors in reflection on the work they have produced.

## **Objectives of the Study**

It is generally known in educational circles in Pakistan that there are deficiencies in the manner in which textbooks are approved by the Curriculum Wing, Ministry of Education and therefore in the textbooks themselves. The study reported in this paper was guided by the following two objectives;

- a) To identify indicators of quality textbooks through literature and good practices employed internationally in the field.
- b) To develop rubrics for the evaluation of textbooks in Pakistan based on identified indicators of quality textbooks.

## **Methodology**

The data was collected from the sources given below and developed indicators along with the rubric for quality textbooks.

1. *Documents analysis*: It includes reports on textbook evaluation, criteria used by ministries, private organizations, school boards, schools etc. in different parts of the world, along with technical reports on textbooks development and evaluation, researches in the field, etc.

Document analysis of educational files, records, and reports can prove to be an extremely valuable source of data (Bell, 2005). It is “a technique that enables researchers to study human behaviour in an indirect way through analysis of their communication” (Fraenkel & Wallen, 2006, p.483), including textbooks. In this study, document analysis provided a major source for collecting data.

Through a comprehensive review of literature and meeting with experts, indicators for various aspects of a quality textbook were identified. In order to get more clarity on listing indicators of quality textbooks, three cases of textbook evaluation/review processes, United States of America that follows decentralized, and Namibia and Philippines that follow centralized curriculum, were included in the study.

2. *Description and finalization of the identified indicators:* In view of the indicators identified in the light of Garvin's (1987) eight dimensions of quality products was made. Accordingly these indicators were shared with the curriculum and textbook experts. As result of these meetings a detailed list of indicators of quality textbooks along with description of these indicators was finalized.

Rubrics for each compliance condition were developed with help of experts in the field of curriculum and textbook development.

3. *Sampling:* Basically, it was a developmental study. In order to determine the sample in developmental studies Sim & Wright (2000) recommend Judgmental Sampling Technique. Cohen et al. (2008) suggest this technique for studies like this study. According to them, this technique helps "access ... 'knowledgeable people' i.e. those who have in-depth knowledge of issue may be by virtue of their professional role, power, access to networks, expertise or experience etc." (p.115). Keeping in view the nature of the study and the kind of population involved in it, the Judgmental Sampling Technique was used for Curriculum and/or Textbook Experts. A total of twenty five (25) experts were included in the study with a balance representation of above-mentioned; textbook writers, curriculum developers, faculty of the departments of education teaching curriculum development and evaluation, and members of National Textbook Review Committees (NTRC) of the Curriculum Wing, Ministry of Education.

Consensus on the identified list of the indicators of the quality textbooks was sought during the meeting by using the Delphi Technique. The experts were free to add or delete any indicator from the prepared list. In order to finalize the identified indicators, consensus among the experts and the key stakeholders was necessary. For this purpose, Cohen et al. (2008) recommend the Delphi technique, as they state "this technique is particularly useful in institutions where time is precious and where it is difficult to arrange a whole group meeting" (Cohen et al., 2008, p. 309).

4. *Review of literature:* If we look at textbook development and evaluation process in Pakistan, Since 1971 to 2000, development of Textbooks for classes I to XII has been the sole responsibility of the four provincial Textbook Boards: Punjab Textbook Board, Lahore; Sindh Textbook Board, Jamshoro; N.W.F.P. Textbook Board, Peshawar; and the

Baluchistan Textbook Board, Quetta. Later on the National Book Foundation and Directorate of Curriculum Research and Development, AJK, were included in this list. Earlier the West Pakistan Textbook Board, Lahore and the East Pakistan Textbook Board, Dhaka played this role since 1962, the year of their establishment. The Textbook Boards receive the curriculum from the Curriculum Wing, Ministry of Education, Islamabad. Textbooks related to higher education or for classes above XII are developed, published and marketed by private sector publishers or concerned universities.

From 2000 onwards both the Textbook Boards and private publishers develop textbooks following guidelines given in the National Curriculum and present these books to MoE for their review and approval. MoE constitutes a National Curriculum Review Committee (NCRC) for this purpose. Each time a new series of textbook is presented, a new NCRC is constituted. Textbook development and approval procedures are given in following Figures 1 and 2 for Textbook Boards and private publishers respectively. In this regard, some of these guidelines about vocabulary, logical language, details and approaches for teaching are specifically for textbook writers.

“While developing textual material graded vocabulary should be used. The language should be simple, clear and logical. The time limit for the course completion should be considered. The book should be student centered as well as teacher centered and avoid unnecessary details while developing the material. (Govt. of Pakistan, 2002, p.16)

MoE also provides some guidelines regarding organization of textbooks and content selection,

“The sequential development of topics as suggested in the curriculum should be kept in mind. The activities and guidelines for teachers should be given at proper places. There should be glossary at the end of the textbook to clarify the key terms”. (Govt. of Pakistan, 2002, p.16)

These are the broad guidelines being provided by MoE to authors. Nevertheless, there is still need to provide detail backbends or sources from where authors can educate themselves in order to follow these guidelines.

In order to look at textbook development mechanisms in other parts of the world and to identify indicators of quality textbook, in the following lines textbook evaluation in three countries has been discussed to elicit the indicators that describe quality textbooks in those countries. Each of three countries is from different continent; North America (USA), Asia (Philippines) and Africa (Namibia). The other basis of the selection of these countries was to look at examples from both centralized/national and decentralized curricula.

## **Decentralized curriculum and textbook development: The case of United States of America**

The American Textbook Council (2009) reviews educational materials. General review guidelines are often requested by curriculum supervisors, school boards, teachers and others in charge of the selection of textbooks. Some reviewers seek fully quantifiable standards, exact readability gauges, and "scientific" formulas. However, some fundamentals are kept in mind while reviewing and evaluation of textbook.

### *a. Basic parameters for the matter presented in the textbook*

Accuracy in information, fair and unbiased treatment to various groups in society, appropriate reading level for the students who will be using the material, the book has written in a clear and comprehensible manner, the book has written in a style that will be interesting and hold the student's attention, the review questions and other end-of-chapter exercises support the material presented in the narrative, the pictorial and sidebar materials are relevant to the subject matter.

### *b. Content and style*

The council asks for evaluation and review of content and style, one must look at; a) systematic development of ideas, b) depth of the topics, c) liveliness of narrative in style and richness with experiences of people, d) correspondence between the narrative and the illustrations, sidebars, supporting biographies, or primary source references, e) literature included or referenced, and f) variety of primary sources included, either as a complete reference or in a meaningful excerpted passage.

### *c. Instructional activities*

Here the council recommends analysis of the instructional activities with respect to: a) opportunities provided for students to be actively engaged in the learning process, b) variety of and varied activities, c) students of differing abilities can find opportunities for success in learning the content, d) questions provided for students help students to analyze the information and to think critically; that is, to reflect, hypothesize, analyze, verify, synthesize, e) activities provide for curriculum integration and correlation, f) students have opportunity to discuss or debate ideas presented in the textbook, and g) activities become more challenging as the year progresses.

### *d. Evaluation and assessment materials*

Examine evaluation and assessment materials with respect to: a) both formal and informal assessment strategies suggested, b) these suggested

strategies enable students to hypothesize, analyze, and draw conclusions about the subject matter they are studying, and c) assessment strategies include student writing exercises.

### **Centralized curriculum & textbook development – The case of Philippines**

Government of Philippines established National Book Development Board (NBDB) under a Republic Act with the foremost mandate to: a) formulate, adopt, and implement the National Book Policy and the National Book Development Plan; b) provide capability-building services for the agency's stakeholders, such as publishers, authors, printers, and other publishing entities that will need its support (National Book Development Board, 2008). NBDB reviews textbooks under textbook review service. Department of Education (DepED), Government of Philippines, selects and/or supplies only those textbooks to schools that have passed the content evaluation and quality production standards of the NBDB. The department is also responsible to publishing a list of sight words appropriate to specific grade levels in both English and Filipino to guide textbook writers. The Textbook Policy also focused on the following four major areas during content evaluation

- Coverage of Learning Competencies
- Accuracy of content (i.e., conceptual, factual, pedagogical, grammatical, etc.)
- Appropriateness of presentation, language, and visuals to target users, to society, and to culture
- Language used is grammatically correct and can be easily understood by target users

The DepED developed also a manual of textbook style and standards to ensure quality of textbook in Philippines. The manual layout includes the following:

- “General and technical standards (size, paper stock, cover stock, preferred binding)
- Cover specifications ( use of logos, font, font size, general layout, qualifiers)
- Printing specifications (font types and size, suitable per grade level)” (DepED, Textbook Policy, 2004, p.6)

Major test of the textbooks in this evaluation is that textbooks are research-based and are aligned with the set Philippine Elementary learning Competencies (PELC) and Philippine Secondary School Competencies (PSSLC), i.e. the textbooks should conform to preset standards.

### **Centralized curriculum & textbook development – The case of Namibia**

National Institute for Educational Development (NIED), Ministry of Education, Namibia provides guidelines for textbook evaluation and approval in the country. A textbook after approval from the Ministry of Education, title of textbook is included in the “Textbook Catalogue” which is the official document of the Ministry of Education containing all approved titles of printed textbooks and teaching & learning materials to be used in Government schools for grades 1 to 12. The catalogue provides teachers with information on relevant, affordable and educationally sound teaching and learning materials.

NIED, Ministry of Education (2005), apart from prizing of the textbook, identified four major aspects of textbooks; a) physical characteristics, b) contents, c) pedagogical, and d) language levels.

For physical characteristics, NIED (2005) focuses three aspects; a) durability, b) typeface and size, c) layout and appearance, d) cost. In order to ensure that books are durable, to prevent continuous re-supply and to maintain standards for all suppliers, NIED has set minimum standards regarding a) paper (Bond 70 or 80 gm), b) binding (up to 120 pages – saddle-stitched in the centre of the pages & more than 120 pages – only thread-sewn). For Typeface and size, NIED (2005) focuses on relevance of the captions and labeling of illustrations and their clarity and largeness for learners intended. Regarding Layout and appearance, the NIED stresses upon textbooks with respect to aesthetic, general layout, width of margins, etc. For Cost point of view, the institute suggested reasonableness of the cost and its comparability with respect to similar materials. (5 Yes or 1 No)

For content, NIED (2005) looks at consistency of the approach used in the book with the syllabus, extent to which a) relevant knowledge, skill, and objectives are catered for in the textbook, b) the content reflect current knowledge and culture, c) content of the book factually accurate, d) the textbook is free of biases unacceptable to teachers, learners, communities and the Ministry of Education policies, e) the materials reflect the contributions and perspectives of various ethnic and cultural groups where appropriate, f) the textbook free of sex stereotypes and encourage a positive attitude towards gender, g) the textbook encourage a positive attitude towards environmental and population issues.

For language levels, NIED scrutinize textbook with respect to a) their appropriateness of reading and comprehension levels for the learners who will be using it, and b) defining new and critical concepts in a glossary or explained when they are first introduced in the text.

From pedagogical aspects the NIED evaluates textbooks based on the extent to which, a) the content of the book likely to be clearly understood by the learners, b) the tests and other assessment devices (such as practice exercises, end-of chapter questions and other assessment devices, experiments, etc.) in the book are helpful to the teacher and learner, c) the



design of the materials allows teachers to use them differently according to the needs of different learners, d) the textbook cater for skills development toward data analysis and problem solving, e) the use of the textbook or material easily manageable by the teacher, f ) the book include activities that learners are capable of performing and will find stimulating, interesting and rewarding, g) the book use appropriate tables, diagrams, charts, sketches and photographs to explain the content, h) the book support learner-centered approach to teaching (assuming that this is the approach the national curriculum favours), i) the book of appropriate length, j) the use of the book or material easily manageable by the teacher, k) the book include activities that learners are capable of performing and will find stimulating, interesting and rewarding, and l) the book uses appropriate tables, diagrams, charts, sketches and photographs to explain the content.

### **Indicators of Quality Textbook**

According to Hussain & Mahmood (2002), intensive utilization of textbooks results in impressive expectations from the materials utilized in them especially with respect to: a) “comprehension in term of content and pedagogy; gradually ascending vocabulary; ambiguity free sentence structures” (p.36) ; b) “relevant, attractive and self explanatory illustrations; nature and pleasant design, horizontal and vertical coordination” (p.37), etc. These seem key features of quality textbook. There is also a general perception that most of the textbooks are usually selected on the basis of their easily accessible surface features (Donovan & Smolkin, 2001; Peacock & Gates, 2000; Shymansky, et al 1991). Apart from the surface features, Project 2061's evaluation organized the instructional characteristics of effective materials (textbooks) into broad categories that include;

#### **Taking account of student ideas**

Textbooks should help teachers in attending the ideas that students already have and to help students gain a better understanding of key concepts and skills. This will help in concept building. Concepts are key building blocks for the structure of knowledge of various academic disciplines. All concepts possess at least four components i.e. attributes, examples, definitions and hierarchical relation (Tennyson & Park, 1980).

#### **Engaging students with relevant contexts, experiences, and phenomena**

Textbook should use a variety of contexts-from visual models to symbolic representations of hands-on activities and first-hand experiences-to build formal ideas and skills.

### **Promoting student thinking about phenomena, experiences, and knowledge**

Textbooks should help students make sense of their experiences and ideas. Textbooks that provide carefully chosen and sequenced questions and tasks can help students reflect on, clarify, and explain their reasoning and ideas.

### **Developing and using scientific and mathematical ideas**

Textbooks should provide a wide range of problem-solving and practice tasks to help students see the link between concepts and skills.

The review of the above-mentioned three cases and literature suggested eight basic indicators for a quality textbook and these include: a) conformance of the textbooks with curriculum policy, b) text reliability and validity, c) appropriate vocabulary, illustrations and format, d) alignment of the text within the book and across the series of the subject, e) text encourages critical and creative learning, f) assessment and evaluation, g) teacher guide and other learning material, and h) bias free text. Later on, during meetings with experts four more indicators were identified and these are; i) encourage use of technology, j) acceptability, and k) environment.

### **Garvin's quality products framework for identification of quality textbook**

Garvin has written a lot on quality, and quality products (see Garvin, 1985, 1986, 1987a, 1987b, 1988, 1991, 2001, 2005, etc.). He proposed a well-known framework for thinking about 'product quality' based on eight dimensions: a) Performance, b) features, c) reliability, d) conformance, e) durability, f) serviceability, g) aesthetics, and h) perceived quality of the product. Considering textbook as a product, in this paper indicators described for quality textbook are grounded in Garvin's (1988) eight critical dimensions of quality that were considered by the authors as a framework for evaluation of textbooks. In the Table-1, the researchers have described indicators for a textbook to meet the requirements of a 'quality product' according to Garvin's eight dimension of quality.

Table 1  
Description of indicators of quality textbook with respect to Garvin's dimensions of quality product

Indicator	Description of the indicator according to Garvin for quality products	Description of the indicator for quality textbook
<b>1. Performance</b>	Primary operating characteristics e.g. speed, comfort, ease of use etc. for multiple performance features, and the relative importance of each.	Textbook's traits like help students in achieving the learning outcomes laid down in curriculum, and cater individual cognitive, social, cultural, religious, ethnic and other needs
<b>2. Features</b>	Extras, add-ons, or gimmick that enable a customer to somewhat customize a product.	Textbook's qualities including promote student thinking and suggests activities for further study through Teachers' Guide, Teaching Kit, E-material, and Assessment.
<b>3. Reliability</b>	Probability of a product malfunctioning or failing within a specified time period.	Expected usefulness of a textbook and nothing will be wrong with it within a time period for which it is being proposed. Textbook provides updated and accurate information-valid for the period for which it is prescribed, and offers clarity in conveying same meanings to every reader.
<b>4. Conformance</b>	Degree to which a product's design and operating characteristics meet to pre-established standards.	Extent to which a textbook meets pre-set standard; public and education policies, curriculum guidelines and objectives/ standards, national ideology and culture etc. The textbook also covers scope of the content given in the curriculum guidelines.
<b>5. Durability</b>	Length of time, or extent of use, before the product deteriorates and must be replaced; durability is a function of the product's operating environment and reliability. Durability has both economic and technical dimensions.	Economic dimension refers to physical state of textbook and technical dimension refers to content matter in textbook. Physical durability – paper quality and binding is acceptable, amount of use student gets from a textbook before it deteriorates, and guarantees content durability - matter in textbook, validity of information before it becomes obsolete

Indicator	Description of the indicator according to Garvin for quality products	Description of the indicator for quality textbook
<b>6. Serviceability</b>	Speed, ease, and convenience of making maintenance work or repairs and the courtesy and competency of service people.	Textbook serviceability refers to review of textbook and its delivery in classroom. From review dimension, serviceability refers time to time review to keep the textbook valid without changing its basic structure and from delivery dimension; serviceability refers availability of the textbook's teacher guide for classroom instruction. It takes up: a) the review of textbook - fit for long term use through midterm and minor, reviews and updating, and b) availability and capacity of professionals and reviewers
<b>7. Aesthetic</b>	Look, sound, smell, feel, or taste of the product based on personal taste; though subjective, some aesthetic judgments tend to be common.	For textbooks aesthetic dimension refers title, layout, format, illustrations, and other graphics-acceptability with respect to age / level / relevant to content and context. Good looking title that attract students of the age and grad for which it has been developed. So esthetics of textbook includes: a) title, binding, font size, page layout/format and illustrations, and b) other graphics-acceptability with respect to age / level / relevant to content and context.
<b>8. Perceived Value</b>	Subjective opinion about the product based on images or attitudes formed by advertising and/or the reputation of the producer.	For textbooks, perceived quality refers to positive perceptions of teachers, parents, and students regarding textbook appearance, content and publication quality.

## Findings

Based on the features of quality textbooks derived from Garvin's eight dimensions of quality products model in table-1 and indicators delineated through review of literature and meeting with experts in this regard, description of indicators is given in annexure –A. The identified indicators along with the description of theme were presented to a group of expert. The Delphi technique was used to obtain consensus of the experts. In

this regard a Focus Group discussion was held in Islamabad in August 2008. In the Focus Group meeting out of 25, twenty three experts participated from all over Pakistan including Azad Jamu and Kashmir. This group was drawn from selected experts with a balanced representation from all provinces, and AJK. In the meeting majority of the CW staff participated.

In the Focus Group the participation by the participants was good. They were very open even to talk about their own 'not good' processes. They also shared constrains they faced during textbook review and evaluation processes, especially non-availability of the kind of indicators shared with them by the researcher. As a result of discussion with focus group, description of the indicators was refined and one more indicator 'use of technology' was added in the list of indicators. As result of the exercise, following indicators, their key description, and compliance conditions along with rubrics for each the finalized compliance conditions were finalized for assessing the quality of a textbook.

### Rubrics for Textbook Review

For each of the compliance condition, rubrics have been identified at four levels. Each of these levels describe recommendations for quality textbooks.

**Level 4:** Completely fulfilling the compliance conditions with no revisions.  
Textbook approved

**Level 3:** Fulfilling the compliance conditions to a large extent, with minor revisions or refinement of material including assessment, exercises, activities and illustrations

**Level 2:** Partially fulfilling the compliance conditions, and need major revisions in textual material, including assessment, exercises, activities and illustrations

**Level 1:** Fulfills few or no compliance conditions and most sections require rewriting.

Table 2

Compliance condition-wise rubrics for each of the indicators of a quality textbook

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
I-Curriculum Policy	Aligns with the constitution of Pakistan	Endorses the ideology of Pakistan based on Islamic values	Does not promote the ideology of Pakistan based on Islamic values as specified in the National Constitution of Pakistan	Partially promotes the ideology of Pakistan based on Islamic values as specified in the National Constitution, Need for including more references and	To a large extent promotes the ideology of Pakistan based on Islamic values as specified in the National Constitution .	Fully promotes the ideology of Pakistan based on Islamic values as specified in the National Constitution

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
				examples/illustration	refinement	
		Promotes democratic citizenship	Does not promote democratic norms	Text and illustrations depict limited information and ideas to promote democratic norms	Text and illustrations depict information and ideas to promote democratic norms to a large extent with need for refinement.	Text , illustrations and activities fully promote democratic norms
		Encourages national cohesion and integration	Does not promote sense of patriotism, appreciation of the free enterprise system, and the respect for rights of other country fellows	Partially promotes sense of patriotism, appreciation of the free enterprise system, and the respect for rights of other country fellows.	To a large extent promotes sense of patriotism, appreciation of the free enterprise system, and the respect for rights of other country fellows	Fully promotes sense of patriotism, appreciation of the free enterprise system, and the respect for rights of other country fellows
	Matches intent and objectives of the Curriculum Policy of Pakistan	Aligns with national education policy	No (less than 30%) conformance with the national education policy	Limited (31-60%) conformance with the national education policy	Extended (61-80%) conformance with the national education policy	In full (more than 80%) conformance with the national education policy
		Corresponds to the National Curriculum Framework	Not meeting (less than 20%) guidelines of the National Curriculum Framework	To some extent meeting (21-40%) guidelines of the National Curriculum Framework	To large extent(41-90%) meeting guidelines of the National Curriculum Framework	Fully (more than 90%) meeting guidelines of the National Curriculum Framework
		Aligns with curriculum objectives	No alignment (less than 40%) with curriculum objectives	Limited alignment (41-60%) with curriculum objectives	To large extent (61-90%) aligned with curriculum objectives	Fully (more than 90%) aligned with curriculum objectives
2-Curriculum Scope	Covers scope of the content mentioned in the curriculum	Covers the depth of the content given in the curriculum document	In complete (less than 40%) coverage of the scope of the contents	To some extent (40 to 70) coverage of the scope of the contents	To large extent (71 to 95%) coverage of the scope of the content	Complete (more than 95%) coverage of the scope of the content
		Covers all aspects of the curriculum	Lists set of expectations to be covered in the chapter/unit of textbook	In addition to Level 1 provides end of chapter/unit assessments to measure these	In addition to levels 1&2 provides activities / patterns to encourage understanding the concepts which are in	Includes levels 1,2 &3 and provides logical linkages of the activities in line with expectations and

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
					line with expectations and assessments patterns	assessments
3-Text Reliability, Accuracy, Validity	Provides up to date, credible and correct information for the period for which it is to be prescribed ( <i>durability</i> )	Provides examples and illustration from latest and relevant data.  Relevance of stories, narratives, and illustrations.	Less than 50 % information is accurate and has to be supported by updated supplementary materials.  Not very relevant (less than 40%) coverage of the contents	50 to 70% information used in the text is accurate  Sufficiently (40 to 70%) relevant coverage of the contents	More than 71-90% information in the text is accurate  Significantly (71 to 95%) relevant coverage of the scope of the content	100% information in the text is accurate with reference of sources  Completely (more than 100%) relevant coverage of the scope of the content
	Free of misconceptions text ( <i>reliability</i> )	Interprets data with self explanatory illustrations and metaphors	Not relevant examples and illustrations	Partially relevant and unambiguous line diagrams along with examples and illustrations	Relevant examples, illustrations and line diagrams that are free of misconceptions	Relevant and clearly interpreted data and self explanatory illustrations and metaphors
	Provides Laboratory Experiences ( <i>performance</i> )	Encourages use of laboratory experiences	Requires no exposure to laboratory experiences for students	provides inadequate laboratory experiences for students, or alternatives to laboratory experiments	Provides adequate laboratory experiences for students, refinement required.	Provides high quality laboratory experiences for students. The labs are extensive, varied and promote student inquiry
	Usable at least for the period of curriculum revision cycle without making major structural changes in it ( <i>serviceability</i> )	Structure of the textbook based on concept-building  Use classic examples and less new examples to explain the content	No essential attributes that highlight the concept  No classic example, more new examples that might change rapidly with the passage of time	Provides appropriate but insufficient essential attributes that distinguish the concept.  Limited classic examples, more new examples that might change rapidly with the passage of time	Provides appropriate and sufficient examples of the concept that are accurate and related to the essential attributes, need for refinement.  Appropriate classic example and new examples that might change rapidly with the passage of time	Provides appropriate sufficient examples of the concept that are accurate and related to the essential attributes.  Appropriate classic examples, less new examples that might not change rapidly with the passage of time
	High levels academic	Who the author(s) of the	Author is a credible local	Author is a credible	Author is a national	Author is a national

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
	credential of authors ( <i>reliability</i> )	resource is (are).	'voice' with no demonstrable writing experience.	'national' voice'– he/she has limited writing experience with one or two samples	'credible voice'– he/she is consistent in writing with more than 2 published samples	'credible voice'– he/she is consistent in writing with more than 3 published samples of approved textbooks
4- Vocabulary, Illustrations & Format	Uses words from graded vocabulary and defines new terms ( <i>conformance</i> )	Vocabulary is functional, thematic, authentic, and practical.	Vocabulary is much higher/lower than the level for which Textbooks has been written	Vocabulary at the level for which Textbooks has been written	Vocabulary is one step down the level for which Textbooks has been written	Vocabulary is two steps down the level for which Textbooks has been written, along Glossary of subject terminology & new words (other than textbooks for languages)
		New words and language structure in language Textbooks, in each unit/chapter	New words and language structure in language Textbooks, more than 15% in each unit/chapter	New words and language structure in language Textbooks, more than 10% in each unit/chapter	New words and language structure in language Textbooks, about 10% in each unit/chapter	New words and language structure in language Textbooks, less than 10% in each unit/chapter
		An appropriate language style and level for presenting the information.	Incorrect symbols, graphics, and diagrams those are subject-related	Correct symbols, graphics, and diagrams those are less than 50% subject-related	. Correct symbols, graphics, and diagrams those are more than 50 and less than 90% subject-related	100% Correct symbols, graphics, and diagrams are subject-related
	Contains illustrations from local environment and allied with text ( <i>Perceived Quality</i> )	Opportunities for students to "see themselves" reflected in the materials through examples, illustrations, and readings.	No example, illustrations, name, picture, etc. from local context. Poorly drawn illustrations	Little number (less than 30%) of examples illustrations, name, picture, etc. are from local context	Adequate number (more than 30 but less than 70%) of examples illustrations, name, picture, etc. are from local context	Majority (more than 70%) of examples illustrations, name, picture, etc. are from local context



Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
	Contains good quality photographs and sets attractive title, page and font size, page layout, and color according to grade ( <i>aesthetics</i> )	General appearance of the textbook is attractive and inviting	Format is not visually appealing and inappropriate for the level	Format is visually adequate but lacks appeal for the age level	An attractive book that engages the students but needs refinement to come up to level 4	The use of illustrations, photos, maps, graphs and other visuals to enhance the text. Durable binding, and proper grammage of paper according to size and grades
5- Horizontal and vertical alignment of the text	Uses sequential activities, content of the same grade books for explanations, examples, and exercises and provides challenging but enjoyable exercises ( <i>performance</i> )	Activities that help students make connections among the subjects being taught at a particular level	No use of sequential activities	Uses sequential activities and content of the same grade books for explanations. There is need for more challenging and age relevant interest based activities	Uses sequential activities, content of the same grade books for explanations, examples, and exercises with a few challenging activities, need for refinement	Uses sequential activities, content of the same grade books for explanations, examples, and exercises and provide challenging and enjoyable exercises
	Creates links of the content with one grade below and above ( <i>conformance</i> )	Tests previous knowledge activities that require students to recall previously learned concepts, definitions, etc. at the start of each section.	Does not test Previous Knowledge activities that require students to recall previously learned concepts at the beginning of each section.	Limited material to test previous knowledge activities that require students to recall previously learned concepts, definitions, etc. at the beginning of each section	Tests previous knowledge activities that require students to recall previously learned concepts, definitions, etc. at the beginning of each section. New concepts are presented in logical and sequential way	Test Previous Knowledge activities that require students to recall previously learned concepts, definitions, etc. at the beginning of each section. New concepts are presented in logical and spiral way
	builds upon prerequisite skills and ideas Connects to everyday experiences and prior learning ( <i>feature</i> ) ( <i>conformance</i> )	Opportunities to make connections between the subject as well as to connect the learning to other subject areas with	Presents activities that have no link with students' prior learning	Present activities that relate to the student's environment. and prior learning, need for creating links with real life examples	Present activities that relate to the student's environment. and prior learning, Introductions to chapters, sections, activities that	Present activities that relate to the student's environment, and prior learning, Introductions to chapters, sections,

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
		examples those are familiar to the students.			require students to recall real-life examples before introducing new ideas, need for refinement.	activities that require students to recall real-life examples before introducing new ideas and concepts. Activities that clearly scaffold learning.
6- Critical and Creative Learning	Presents materials and exercises / questions at a variety of cognitive levels ( <i>performance</i> )	A range of activities that require students to carry out authentic learning opportunities including tasks those are appropriate to the subject.	Low range of activities at various levels of cognition	Medium range of activities touches various level of cognition	Appropriate range of activities touches various level of cognition along with quality of review questions reflects higher level thinking skills, need refinement.	Highly appropriate range of activities touches various level of cognition along with quality of review questions reflects higher level thinking skills and provides research-based open-ended tasks
	Encourages by applying relevant contexts, experiences, phenomena and thinking over ( <i>feature</i> )	Activities that require students to analyze data.	No activities that require students to use creative thinking skills.	Limited activities that require students to use creative thinking skills and communicate their learning.	Activities that require students to use creative thinking skills and communicate their learning, need refinement.	Sufficient activities that require students to hypothesize, analyze, and make conclusions and generalizations and suggests activities for further study;
		Activities that ask for students to consider their actions and the consequences of them.	No open-ended tasks that require students to -solve. Problems	Tasks that require students to collaborate in problem-solving activities.	Open-ended tasks that require students to problem-solve, possibly using a model.	Open-ended tasks that have content validity and require students to problem-solve, possibly using a model.

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
	Provides opportunity to think critically about controversial issues ( <i>aesthetics</i> )	Activities that encourage students to role-play, debate, write about, and in other ways think about controversial issues.	No use of role play debates materials and activities to address sensitive/controversial issues	End of chapters or units that encourage students to role-play, debate, write about, and in other ways think about controversial issues.	Culminating tasks that encourage students to role-play, debate, write about, and in other ways think about controversial issues, need for refinement	End of chapters, units, or assessment integrated tasks that encourage students to role-play, debate, write about, and in other ways think about controversial issues.
7-Technology	Provides opportunities to incorporate student use of technology ( <i>durability</i> )	Encourage use of technology	No focus on the use of technology.	Use of technology indicated but not integrated.	Provides opportunities for use of technology and integrates with activities	Provides and encourages the integration of technology and content.
		Activities that require students to learn aspects of technology directly; e.g. learning a specific piece of software.	No activities that require students to use technology in problem-solving; e.g., calculators	Activities that require students to use technology in problem-solving, information gathering; e.g., calculators, simple graphing programmes	Activities that require students to use technology in problem-solving, information gathering, and communicating; e.g., calculators, simple graphing programmes, word processing, puzzle solving activities.	In addition to level 3 activities those require students to use electronic media for research.
8-Assessment and Evaluation	Allows for the authentic demonstration for learning at all levels (reliability)	Exercises/ end of chapter questions at least one for each Specific Learning Objectives through a variety of questions and opportunities for students to reflect on their work.	Lacks a variety of authentic student demonstrations of learning, only recall questions	Partially supports a variety of authentic student demonstrations of learning, that range from simple recall to understanding questions	To a large extent supports a variety of authentic student demonstrations of learning, that range from simple recall to questions that require students to apply their understanding	Fully supports a variety of authentic student demonstrations of learning, that range from simple recall to questions that require students to communicate the results of problem-solving, analysis,

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
						critical thinking, etc
		Opportunities for students to demonstrate their learning in a variety of ways throughout the entire course.	No opportunities for students to demonstrate their learning through tests.	Opportunities for students to demonstrate their learning through tests.	Opportunities for students to demonstrate their learning through tests, and presentations	Opportunities for students to demonstrate their learning through tests, performance, projects, and presentations; and opportunities for students to create tasks that allow them to demonstrate their work..
9-Bias Free	Free from Gender, Ethnic, Religious, Sectarian, Geographical, Cultural, Occupational biases ( <i>performance</i> )	Conformity to social & cultural norms	Discriminates against sex, race, ethnic, creed, parental status, physical conditions, and/or stereotyping.	Exhibits bias to more than one of the protected categories.	Exhibits bias to at least one of the protected categories.	Does not discriminate against sex, race, ethnic, creed, parental status, physical conditions, and/or stereotyping.
		Covers a spectrum of accomplishments and contributions by all sexes, ethics groups and	Pronouns and descriptors of both sexes are not used equally	Limited number of pronouns and descriptors of both sexes are used equally Nouns, adjectives, terms and illustrations are non-stereotypical and non-prejudicial	Pronouns and descriptors of both sexes are used equally and nouns, adjectives, terms and illustrations are non-stereotypical and non-prejudicial, need refinement.	In addition to level 3, no feeling of exclusion, estranged or social diminishing of students of either sex and various cultures and physical conditions excluded
		Free from minority, sectarian and regional biases.	Portrays only one culture.	Provides meaningless multicultural experiences.	Provides partially meaningful multicultural experiences.	Provides fully meaningful multicultural experiences.
	Presents different points of view/contributions ( <i>performance</i> )	Different points of view in various stories, narratives, information text, etc. to shows diversity	No use of inclusive language.	Limited use of inclusive language.	Use of inclusive language but presents only one side of a controversial issue	Use of inclusive language and presentations of both sides of a

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
		and allows for inclusion				controversial issue
	Sensitivity to People with Disabilities	Sensitive to students with physical, mental, emotional, or learning disabilities	Does not portray people with disability.	Meaningless attempt to include people with disabilities	Meaningful attempt to include people with disabilities	Is sensitive to people with disabilities and portrays them as valuable members of society.
10- Environment	Considers safety and/or environmental concerns ( <i>durability</i> )	Safety warnings for students that may be written and/or expressed symbolically.	Text and Illustrations do not show considerations for safety or environment concerns	Text and illustrations infer activities those are safe for students. There is need to include direct references to safety and environment friendly concerns	Text and illustrations are environment friendly and promote safety concerns, need for refinement	Text material, activities, and illustrations that demonstrate safety, care, and respect for the environment
11- Teacher Guide and other learning materials	Accompanied by teacher guide, e-material, learning aids and assessments ( <i>feature</i> )	provide information on scope and sequence of the book	Materials provided without directions.	Suggested lessons indicating goals for the lesson.	Organized lessons without incorporating teacher materials	Organized structures clear directions and expectations, background information, meaningful resource materials
		Features that provide information on various aspect to support teaching learning processes	Provide information on assessment only.	Provides information on assessment and teaching strategies	Provides information on assessment and teaching strategies, and plan to accommodate students learning styles.	Provides information on assessment and teaching strategies, and plan to accommodate students learning styles and other related resources.

## Conclusions

Relatively little research has been conducted on the textbook evaluation process both in Pakistan and elsewhere. This is surprising that textbooks are the significant part of the teaching learning process for both students and teachers all over the world; nevertheless, relatively less work has been done to provide a strong research base to the field. In this study

effort was made to explore processes of textbook development and evaluation/ review of the countries following either centralized/national curriculum or regional curriculum based on national standards of education. The prime objective of this exploration was to develop a list of indicators that are recommended by the experts and are followed in textbook development in various part of the world.

This study was relatively unique in the field of textbook development and evaluation/review in a sense that it did not only review the prevailing practices around the globe but also came up with a concrete list of indicators along with rubrics to gauge the indicators. Education culture of Pakistani system is not research oriented. The study also facilitated the participants to learn about internationally accepted norms for quality textbooks. In view of the context of the study, although we faced difficulties and obstacles, in spite of all this, the study generates new knowledge in the context of key indicators along with rubrics to evaluate textbooks in Pakistan. Owing to socio-cultural and political diversities, the indicators identified in this study may not be exactly used in other countries but these may provide baseline for further study in regard to textbook evaluation their own contexts. Furthermore the rubrics developed under the study would need some changes or refinement after their implementation by the institutions dealing with textbooks evaluation / review.

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*Annexure-1*

**Description of indicators of quality textbook in the light  
Garvin's eight dimensions for quality products**

Indicator	Key description	Reference of Garvin's eight dimensions
<b>Curriculum policy</b>	Matches objectives of the Curriculum Policy of Pakistan	Conformance
	Aligns to Philosophy and Intent	Perceived quality
<b>Curriculum scope</b>	Covers scope of content mentioned in the curriculum	Conformance
	Structures in a way that can be used with minor reviews and updates	Serviceability
<b>Content reliability</b>	Provides up to date, credible and correct information for the period for which it is to be prescribed	Durability
	Free of misconceptions text	Reliability
	Usable at least for the period of curriculum revision cycle without Requiring major structural changes	Serviceability
<b>Vocabulary, illustrations &amp; format</b>	Uses words from graded vocabulary and defines new terms	Conformance
	Uses language appropriate for the student and the subject	Serviceability
	Contains illustrations from the local environment and allied with text	Perceived value
	Clear unambiguous line diagrams, and good quality photographs	Aesthetics
	Attractive title, page and font size, page layout, and color according to grade sets	Aesthetic
	Selects durable binding, and proper weigh of paper according to size and grades	Durability
<b>Horizontal and vertical alignment of the text</b>	Uses sequential activities, content of the same level/grade books for explanations, examples, and exercises and provides challenging but enjoyable exercises	Performance
	Creates links of the content with one grade below and above	Conformance
	Connects to everyday experiences and prior learning	Feature
<b>Critical and Creative Learning</b>	Presents materials and exercises / questions at a variety of cognitive levels	performance
	Encourages by applying relevant contexts, experiences, phenomena and thinking over	feature
	Provides opportunity to think critically about controversial issues	Aesthetics

Indicator	Key description	Reference of Garvin's eight dimensions
<b>Assessment and evaluation</b>	Allows for authentic demonstrations for learning at all levels Integrating tasks/culminating activities Presents opportunities for students to self-assess	Reliability Performance Feature
<b>Acceptability</b>	High levels of academic credential of authors Locally available, affordable price <i>perceived value</i> deliverable within available duration for the grade Provides opportunities to incorporate use of technology by students	Reliability Performance Durability
<b>Environment</b>	Safety warnings for students are written and/or expressed symbolically	Feature
<b>Bias Free</b>	Free from Gender, Ethnic, Religious, Sectarian, Geographical, Cultural, Occupational biases. Presents different points of view/contributions Shows diversity and allows for inclusion	Performance Performance Feature
<b>Teacher Guide and other learning material</b>	Accompanied by teacher guide, e-material, learning aids and assessments Allows teachers to use a variety of instructional strategies Considers safety and/or environmental concerns	Feature Serviceability Durability

Textbook development and evaluation has always been subject of debate in Pakistan. There are a variety of reasons for this, but non-availability of explicit criteria for textbook evaluation is one of the main concerns. Through a comprehensive review of literature and meeting with experts, indicators for various aspects of a quality textbook were identified. In order to get more clarity on listing indicators of quality textbooks, three cases of textbook evaluation/review processes, United States of America that follows decentralized, and Namibia and Philippines that follow centralized curriculum, were included in the study. Decentralized curriculum and textbook development: The case of United States of America. In many cases evaluation differ according to the target aims of evaluation whether it is curriculum evaluation, teacher evaluation, student evaluation or more recently textbook evaluation. In this study textbook is taken as curriculum for evaluation. At this initial level, we have to know what the term "evaluation" means. Evaluation is a systematic process to investigate data, which is gathered through different instruments and from different sources to determine effectiveness of that data. Textbook is a source of knowledge and used for transferring and imparting knowledge to students of different age groups. Textbook provides a key to subject matter for those who are completely new to that discipline. The Agency for Healthcare Research and Quality (AHRQ) Quality Indicators (QIs) are one Agency response to this need for a multidimensional, accessible family of quality indicators. They include a family of measures that providers, policy makers, and researchers can use with inpatient data to identify apparent variations in the quality of either inpatient or outpatient care. Except in the case of patients who are readmitted soon after discharge from a hospital, the quality of inpatient care is unlikely to be a significant determinant of admission rates for ambulatory care sensitive conditions. Rather, the PQIs assess the quality of the health care system as a whole, and especially the quality of ambulatory care, in preventing medical complications.