Standardization of textbook evaluation criteria through development of quality textbook indicators

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Introduction

Textbooks are regarded as the potentially implemented curriculum, the link between aims and reality.
(Schmidt, McKnight, Valverde, et al 1997; Valverde, Bianchi, Wolfe, Schmidt, & Houang, 2001)

Textbooks "tell children what their elders want them to know"
(Kalmus, 2004, p.13)

Textbooks serve as the main source of knowledge and help in developing the student's personality, in respecting his/her individual skills, stimulating interest in learning, and in supporting interactivity.
(Nogova & Huttova, 2006)

Objectives of the study

a) To identify indicators of quality textbooks through literature and good practices employed internationally in the field

b) Based on the results found in (a) above, to develop rubrics for the evaluation of quality textbooks in Pakistan

Design of the study
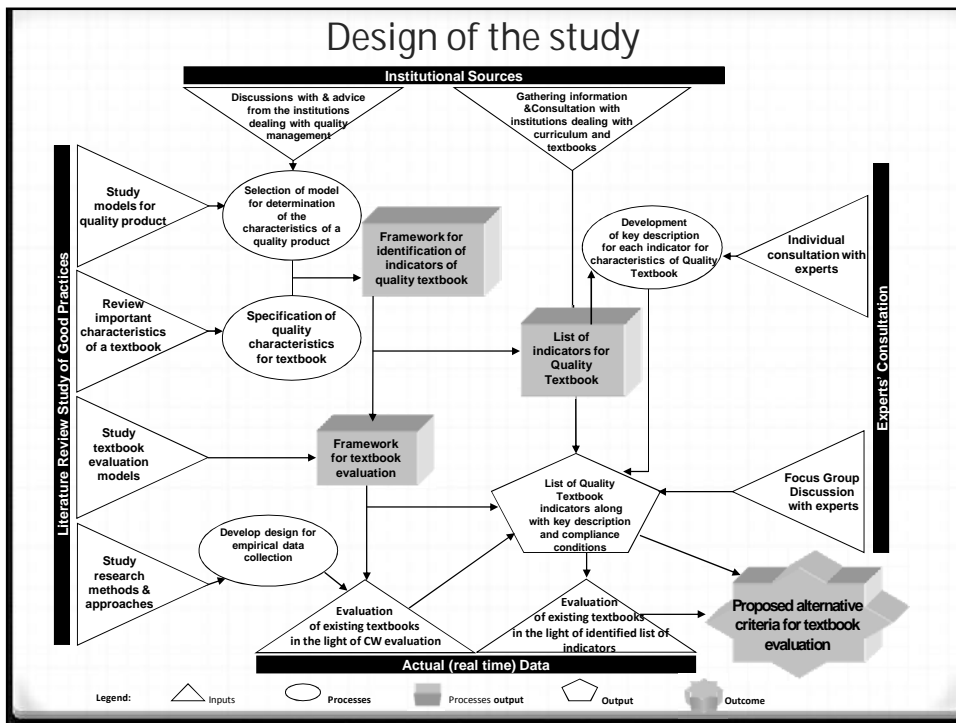
Research methodology

1. **Review of documents** for identification of indicators
2. **Develop description of the identified indicators** in the light of Garvin's (1987) eight dimensions of quality products **& finalize them with** curriculum and textbook
3. **Obtain consensus of experts** on the indicators and their description through Delphi technique (25 experts) at national level
4. **Develop rubrics** with help of experts in the field of curriculum and textbook development and get validation of these rubrics from other experts of the same filed.

Outcomes of the study

The study provided:
1. Agreed indicators of quality textbooks to guide prospective authors, editors, reviewers and evaluators.
2. A comprehensive criteria for textbook review and evaluations

Survey of best practices

Centralized Curriculum

1. The case of Malaysia
   1. Alignment of textbook contents with the curriculum
   2. Moral education, citizenship education, patriotism and thinking skills
   3. Graphics and textbook design
2. The case of Philippines
   1. Coverage of learning competencies
   2. Accuracy of content (i.e., conceptual, factual, pedagogical, grammatical, etc.)
   3. Appropriateness of presentation, language, and visuals to target users, to society, and to culture
   4. Language used is grammatically correct and can be easily understood by target users
3. The case of Namibia
   1. Physical characteristics
   2. Contents
   3. Pedagogical
   4. Language levels

Survey of best practices

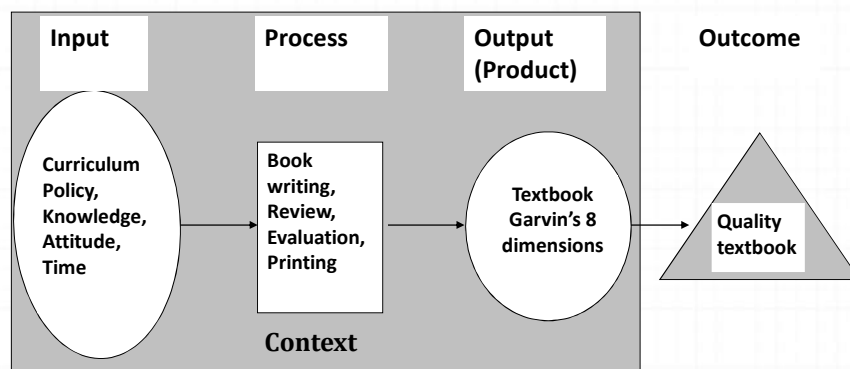Decentralized Curriculum

1. The case of Canada – Ontario
   1. Quality
   2. Use of technology
   3. Health and safety
   4. Environmental responsibility
   5. Language level
   6. Instructional and assessment strategies
   7. Bias
   8. Format
2. United States of America
   1. Basic parameters for the matter presented in the textbook
   2. Content and style
   3. Instructional activities
   4. Evaluation and assessment materials

The American Textbook Council is an independent national research organization that reviews history & social studies textbooks used in nation's schools

List of indicators

1. Curriculum policy
2. Content reliability
3. Vocabulary
4. Illustrations and format
5. Horizontal and vertical alignment of the content
6. Critical and creative learning
7. Assessment and evaluation
8. Use of technology
9. Environment
10. Freedom from biases

Framework for identification of the quality textbook indicators

Input	Process	Output (Product)	Outcome
Curriculum Policy, Knowledge, Attitude, Time	Book writing, Review, Evaluation, Printing	Textbook Garvin's 8 dimensions	Quality textbook

Context

Is Textbook a 'Product' or 'Service'?

- A product is generally considered to be the output of a process.
  - Textbook is the result of a multi-phase process.
- Learning materials including textbook is a product

  (Reint, 2002)

Garvin's eight dimensions of quality product

1. Performance
2. Features
3. Reliability
4. Conformance
5. Durability
6. Serviceability
7. Aesthetic
8. Perceived Value

Garvin's eight dimensions of quality textbook

1. Performance

Refers to traits that help students to achieving the learning outcomes laid down in curriculum, and that cater for individuals' cognitive, social, cultural, religious, ethnic and other needs

2. Features

Refer to traits like promoting students' thinking and suggesting activities for further study through Teachers' Guide, Teaching Kit, e-material, and Assessment

3. Reliability

Refers to the likelihood that a textbook will be useful as expected and nothing will be wrong within the time period during which it is intended to be used

Garvin's eight dimensions of quality textbook

4. Conformance

Refers to the extent to which a textbook meets pre-set standards. These are found in public and education policies, curriculum guidelines and objectives/standards, national ideology and culture etc. These pre-set standards are consistent with the scope of the content given in the curriculum guidelines.

5. Durability

Refers to the measure of textbook life or duration. It has both economic (physical state of textbook) and technical dimensions (content matter in textbook)

Physical state, durability is typically defined as the length of time a textbook can be used by students before it deteriorates beyond usefulness. This depends largely on paper, printing and binding quality.

From content matter perspective, durability refers to the validity of the information in the text before this information becomes invalid or obsolete.

Garvin's eight dimensions of quality textbook

6. Serviceability

Refers to the **review** of textbook and to the way of the **delivery** of its content in the classroom. **Review** refers to periodic content evaluation for keeping the book valid without changing its basic structure. **Delivery** refers to the availability of textbooks' teachers' guides to guide classroom instruction.

7. Aesthetics

Refers to the formulation of the title, layout, format, illustrations, and other graphics-acceptability with respect to age / level / relevant to content and context. Good looking title that attracts students of the age and grade. (Title, binding, font style and size, page layout/format and illustrations)

8. Perceived Quality

Refers to positive perceptions of teachers, parents, and students regarding textbook appearance, content and publication quality.

Quality textbook indicators

Indicator 1- Curriculum policy

Matches objectives of the Curriculum Policy of Pakistan *(conformance);* and aligns to Philosophy and Intent *(perceived quality)*

Indicator 2- Curriculum scope

Covers the scope of content specified in the curriculum *(conformance);* and structures in a way that can be used with minor reviews and updates *(serviceability)*

Indicator 3- Text reliability

Provides up to date, credible and correct information for the period for which it is to be prescribed *(durability)* and the textual content is free of misconceptions *(reliability)* and usable at least for the period of curriculum revision cycle without requiring major structural changes *(serviceability)*

Indicator 4- Vocabulary, illustrations and format

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 quality)*; sets attractive title, page and font size, page layout, and color according to grade *(aesthetic)*; and selects durable binding, and proper gramage of paper according to size and grades *(durability)*.

Indicator 5- Horizontal and vertical alignment of the text

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)*; and connects to everyday experiences and prior learning *(feature)*

Quality textbook indicators

Indicator 6- Cognitive development

Presents materials and exercises/questions at a variety of cognitive levels; provides first hand experiences; and structures material in a coherent and logical way *(performance); s*hows diversity and allows for inclusion *(features)*; and contains authentic learning opportunities appropriate to the subject (*reliability*)

Indicator 7- Critical and creative learning

Fosters critical and creative learning through applying relevant contexts, experiences, phenomena and thinking over learning process; suggests activities for further study; provides research-based assessment that has content validity *(feature)*; builds upon prerequisite skills and ideas *(conformance)*; and provides opportunity to think critically about controversial issues (*aesthetics*)

Indicator 8- Assessment and evaluation

Allows for authentic demonstrations for learning at all levels (*reliability*); integrating tasks/culminating activities (*performance*); and presents opportunities for students to self-assess (*feature*).

Indicator 9-Acceptability

High levels of academic credentials of authors *(reliability)*, locally available at affordable price *(perceived value)*; deliverable within available duration for the grade *(performance)*; and provides opportunities to incorporate use of technology by students (*durability*)

Indicator 10-Environment

Safety warnings for students are written and/or expressed symbolically *(feature)*.

Indicator 11-Bias Free

Free from gender, ethnic, religious, sectarian, geographical, cultural and occupational biases *(performance)*; presents different points of view/contributions (*performance)*; and shows diversity and allows for inclusion *(feature)*

Recommendations
Rubrics for Textbook Review

Levels 1-4

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. *Present to select Committee for review of the camera ready copy.*

Level 2

Partially fulfilling the compliance conditions, and need major revisions in textual material, including assessment, exercises, activities and illustrations. *Re-submit the manuscript for review by another NTRC*

Level 1

Fulfills few or no compliance conditions and most sections require rewriting. *Manuscript rejected*

Recommendations
Textbook evaluation summary sheet

Title of the Textbook _____ **Class**_____

Publisher _____ **Date of Review** _____
Directions
Following the completion of the Rubric for the textbook reviewed, complete the summary page by first, determining on a scale of 1-4(with being highest) the importance of each category. Second, indicate the score from the Rubric for each category. Next, determine the overall weighted score for each category.

Indicators	Key description	Compliance conditions	Weighted Value	Rubric Score (RS)	Weighted x RS	Evidence

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End of Presentation

Thank for your time

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Garvin's eight dimensions of quality product

1. *Performance* refers to primary operating characteristics e.g. speed, comfort, ease of use etc. for multiple performance features, and the relative importance of each.
2. *Features* are extras, add-ons, or gimmicks that enable a customer to customize a product somewhat.
3. *Reliability* reflects the probability of a product malfunctioning or failing within a specified time period.
4. *Conformance* is the degree to which a product's design and operating characteristics meet to pre-established standards.
5. *Durability* refers to the 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.
6. *Serviceability* is the speed, ease, and convenience of making maintenance work or repairs and the courtesy and competency of service people.
7. *Aesthetic* refers to the look, sound, smell, feel, or taste of the product based on personal taste; though subjective, some aesthetic judgments tend to be common.
8. *Perceived Value* is a subjective opinion about the product based on images or attitudes formed by advertising and/or the reputation of the producer.

Quality – Ontario

1. Sound scholarship in and contemporary relevance of the content,
2. Adequate depth and sophistication of the information provided in the content
3. Build learning area/subject/course and build on students' previous knowledge and skills
4. Use of graphics appropriate to support students' understanding of the content

Language level – Ontario

1. Appropriate language for the reading level of a particular grade and level
2. Writing style appropriate for the learning area/ subject/ discipline
3. Contextual use of language, symbols, and technical terms that are subject- or discipline specific and that student would understand

Bias – Ontario

Textbook content be free from

1. racial, ethno-cultural, religious, regional, gender-related, or age-related bias;
2. bias based on disability, sexual orientation, socioeconomic background, occupation, political affiliation, or membership in a specific group; and
3. bias by omission

Content Style – USA

1. Systematic development of ideas,
2. Depth of the topics,
3. Liveliness of narrative in style and richness with experiences of people
4. Correspondence between the narrative and the illustrations, sidebars, supporting biographies, or primary source references,
5. Literature included or referenced, and
6. Variety of primary sources included, either as a complete reference or in a meaningful excerpted passage.

Instructional activities – USA

1. Opportunities provided for students to be actively engaged in the learning process,
2. Variety of and varied activities,
3. Students of differing abilities can find opportunities for success in learning the content,
4. Questions provided for students help students to analyze the information and to think critically; that is, to reflect, hypothesize, analyze, verify, synthesize,
5. Activities provide for curriculum integration and correlation,
6. Students have opportunity to discuss or debate ideas presented in the textbook,
7. Activities become more challenging as the year progresses.

Evaluation and assessment materials – USA

1. Both formal and informal assessment strategies suggested,
2. These suggested strategies enable students to hypothesize, analyze, and draw conclusions about the subject matter they are studying, and
3. Assessment strategies include student writing exercises.

Recommendations
Rubrics for Textbook Review

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
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

Recommendations
Rubrics for Textbook Review

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
Text Reliability, Accuracy, Validity	Provides up to date, credible and correct information for the period for which it is to be prescribed *(durability)*	Provides examples and illustration from latest and relevant data.	Less than 50 % information is accurate and has to be supported by updated supplementary materials.	50 to 70% information used in the text is accurate	More than 71-90% information in the text is accurate	100% information in the text is accurate with reference of sources

Recommendations
Rubrics for Textbook Review

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
Text Reliability, Accuracy, Validity	Usable at least for the period of curriculum revision cycle without making major structural changes in it *(serviceability)*	Use classic examples and less new examples to explain the content	No classic example, more new examples that might change rapidly with the passage of time	Limited classic examples, more new examples that might change rapidly with the passage of time	Appropriate classic example and new examples that might change rapidly with the passage of time	Appropriate classic examples, less new examples that might not change rapidly with the passage of time

Recommendations
Rubrics for Textbook Review

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
Vocabulary, Illustrations & Format	Uses words from graded vocabulary and defines new terms *(conformance)*	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)

Recommendations
Rubrics for Textbook Review

Indicators	Key description	Compliance conditions	Level 1	Level 2	Level 3	Level 4
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 Constitution of Pakistan	Partially promotes the ideology of Pakistan based on Islamic values as specified in the Constitution, Need for including more references and examples/illustration	To a large extent promotes the ideology of Pakistan based on Islamic values as specified in the Constitution need refinement	Fully promotes the ideology of Pakistan based on Islamic values as specified in the Constitution

Description of Components of CIPP Model for Textbook Development and Evaluation

Components	Textbook Development	Textbook Evaluation
Context	To define the operating context within which the textbook will be developed and delivered. Determine the specific activities suitable for school in which the textbook will be delivered. Most importantly, it helps to establish an informed basis for the determination of the contents of the textbook.	To define the environment relevant to the textbook, describing the actual and intended conditions of the programme, identifying unmet needs, and diagnosing barriers that prevent needs from being met.
Input	To identify and assess the expertise, strategies, designs and infrastructure available for developing the textbook in relation to the curriculum objectives.	To determine to what extent available resources were used to develop the textbook in order to meet the curriculum objectives and other requirements.
Process	To identify the procedural design that will be used to develop the textbook. The curriculum objectives are translated into specific activities that constitute the instructional design.	To identify deficiencies in the procedural design or in the developing the book i.e., what actually took place during textbook development. To provide information necessary to make modifications to the implementation strategies used during instruction.
Products	To define measurable indicators of a quality textbook during both development and delivery of the textbook.	To compare actual outcomes against a standard of what is acceptable to make judgments to continue, terminate, modify, or refocus an activity.