Quality Textbooks

1. Resource

A more comprehensive coverage of the information provided below is contained in the following resource:

Visser, C.J.D. (2016) A conceptual analysis of the quality and utilisation of school textbooks in classrooms and its relevance for teacher education (Unpublished doctoral thesis), Johannesburg: University of Johannesburg.

Chapter 3: Quality Textbooks (71 – 145)

2. Context

'Quality' is defined as 'features' that an object has making it different or better than something else. For 'quality' textbooks particular characteristics (features) of textbooks need to be established. For each characteristic a standard needs to be set that describes the quality that is aimed for, thus allowing the quality of textbooks to be evaluated. The quality of textbook can be described in terms of specified quality characteristics and the extent to which these characteristics meet specified standards. Evaluating the quality of textbooks in terms of quality characteristics allows for a direct comparison of textbooks.

QUALITY CHARACTERISTICS

1. Preface

- Preface provided/included
- Use preface to indicate Importance or value of subject area? (Relate to world-of-work; indicate relevance for further study; "Why would some-one want to study this subject?" What benefits can be derived by learner?)
- Indicate approach to follow in studying the subject? (essential study skills)
- Indicate how the textbook is to be used?
- 'Pre-course' requirements indicated? (What knowledge and skills is required to benefit from studying this subject?)
- What are the requirements of the examining body? (matric)
- What equipment is required? (e.g. calculator, measuring instruments, etc.)
- What additional material is required? (e.g. workbook)
- What is the role of the teacher?
- What is expected from the learner to achieve learning outcomes?
- What assessment strategy is to be used?
- Availability of model answers?

2. Table of Content

Table of content included?
- Sequence appropriate to the content being covered? (Parts, Chapters, Sections/topics, Sub-sections?)

2. Table of Content (continue)

- Appropriate numbering system used? (Distinguish between Parts, Chapters, Sections, etc.)
- Table of content reflect the content prescribed by the curriculum
- Headings (Parts, chapters, sections, sub-sections) to be appropriate to the content covered
- Page numbering included for Chapters and Sections?
- Additional Table of Content provided, where required? (Summarised Table of Content provided when main Table of Content, which might include Sections and Sub-sections, is to extensive, i.e. more than 2/3 pages)

3. References

- Identify resources utilised for specific content o Quotations o Concepts o Theories
- Apply Harvard referencing system
- Indicate reference within the body of text Identify author(s) and date of publication
- Utilising direct quotes, also indicate page number in the reference

Bibliography
- Provide bibliography at the end of the textbook
- List all resources utilised
- Apply Harvard referencing system
o Name of author o Date of publication
o Title of publication o Where published
o Name of publisher

4. Additional Resources

resources (Refer page 92)
- Additional text resources identified, e.g. books, magazines or magazine articles, professional journals or journal articles, newspapers, research reports, company or organisation year-end reports, encyclopedias, brochures, etc.
- Videos, DVDs,
- Audio tapes
- Models, simulators, wall charts, etc.
- Internet resources, specifying particular websites (Guide learners in using Wikipedia, or Google)

5. Language Considerations

Language factors that have an impact on the difficulty and age-adequacy of textbooks include
- Vocabulary
- The construction and length of phrases

5. Language Considerations (Continue)

- Punctuation and writing style
- The density of facts

Language of language textbooks
- Write shorter sentences – as a general rule, a sentence should be less than 20 words, never more than 30 words.
- Use plain words ('not important' is better than 'inconsequential')
- Where possible use the active voice
- Use good punctuation (Don't use commas, that, are not, necessary.)
- Conquer grammar phobia
- Understanding is enhanced with 'sound starts' and 'excellent endings'
- Use reader centered structures
- Use alternatives to words, words, words (21 alternatives to words)
- Need to write better instructions (learners, especially, need to know exactly what they may be required to do)
- Layout is important

Language of non-language textbooks
- To provide clear definitions for subject specific/technical words; a common framework for providing definitions is suggested
- To provide a glossary of subject specific/technical and new terms at the end of chapters or sections.
- To use subject specific terms consistently (eleven different terms can be used for 'subtract' in English in numeracy [mathematical] text – using different terms for the same concept can be confusing for the non-home language learner)
- To limit the use of idioms; idioms can be confusing for learners whose home language is not the LOLT
- To avoid unnecessary technical terms or jargon
- To avoid use of acronyms
- To limit use of multi-syllable words
- To apply the 5/7 principle (when lists of items are required, to limit list to 5/7 items; for longer lists, subdivide items and use a suitable heading for subdivisions)

6. Transformation, gender, ethnic considerations

Transformational issues refer to the way culture, ethnicity, sectarian bias, racial diversity, gender, religion, age, disability, sexual orientations, human rights, poverty, etc. are dealt with in textbooks.

Quality Textbooks (Continue)

7. Applying didactical/ pedagogical/ Learning principles
• Adopt problems based approach (Reflected in introductions, discussion questions, activities)
• Provide context to issues/topics addressed (context needs to be relevant and relate to learners' socio-economic environment and the world-of-work to which they might aspire)
• Experience of learners recognised and where appropriate utilised
• Apply (demonstrate) whole-part-whole learning principle
• Appropriate examples used as part of explanations and definitions
• Application of learning cycle
(Introduction
• Explanation
• Demonstration
• Activity
• Feedback)
• Adopt appropriate sequencing principles
  o Logical
  o Chronological
  o From the known to the unknown
  o From the easy to the difficult
  o From the concrete to the abstract
  o From the general to the specific
  o Follow inductive approach (from examples and facts derive principles) supporting a constructivist approach to education
  o Apply the deductive approach where required (from principles to application).
Note: where the deductive approach is applied examples are used to explain the relevant principle.
• Draw distinction between essential, supplementary and background information
• Indicate comparisons and relations where appropriate
• Apply motivational theory (apply MBO approach to motivation - Humble)
• Provide encouragement

8. Chapter Structure
The challenge is to provide knowledge or information in a systematically structured manner. In this regard the challenge is also to ensure methodological continuity between textbooks developed for successive school levels or grades.
• Introduction
• Objectives/outcomes
• Explanation (also involving definitions, graphic representations, examples, case studies)

8. Chapter structure (continue)
• Activities (exercises)
• Consolidation (discussion questions; key learning points, glossary of new/technical/ subject specific terms)
• Assessment
• Feedback

9. Introductions
Introductions are used to . . .
• Identify problems to be addressed in the chapter or section? (Adopting a problems based approach)
• Provide an overview of the Chapter/ Section?
• Indicate the importance of the content or problem to be addressed?
• Indicate relevancy of content?
• Identify approach followed in Chapter?
• Link with previous Chapters/Sections?
• Create interest?

10. Outcomes/Objectives
For learners learning objectives would specify what would be expected from them at the end of a learning sequence. Learning objectives needs to be specified for each chapter in a textbook. For objectives to be meaningful it needs to be formulated in a language that learners understand, it must clearly address the topic or content being addressed in the text; it must be formulated in action terms, thus in terms of what the learners must be able to do at the end of the learning process
'Domains' of educational objectives
(Bloom):
• Cognitive domain (knowing/head)
• Affective (feeling/heart)
• Psychomotor (doing/hand)

11. Information Types
• **Concepts** are presented using appropriate means, e.g. definition, example, identifying things that can confuse understanding of the concept?
• **Procedures** are presented in terms of a sequence of action steps; each step begins with an action verb? (A procedure may be accompanied by additional information, e.g. 'When to use; Before you begin; Introduction; Background.)
• **Processes** are presented using appropriate means, e.g. description, block diagram, cycle chart, or flow diagram?
• **Structures** e.g. machines, computer systems, are presented using appropriate means, e.g. description, diagram, parts table, etc.?

11. Information Types (continue)
• **Principles** are presented using appropriate means, e.g. description, example of a situation where the principle is applied, etc.?
• **Facts** are presented using appropriate means, e.g. lists, summaries?
• **Classifications** are presented using appropriate means, e.g. lists, tables, classification trees, etc.
Make use of additional modes/types of information units,
o Overviews
o Learning advice
o Prerequisite information
o Summary
o Symbols table
o Formulae table
o Index
Note: Guidelines and further elaboration on the IM methodology are provided as part of a workshop for Textbook Writers.

12. Definitions
The following format for a definition is suggested:
• State the word or phrase (concept) being defined up front
• Provide name of the larger group to which it belongs
• Identify critical attributes
• Add an example
(Comprehensive examples provided in resource document)

13. Graphics
• An appropriate mix of different types of Graphics used
    o Pictures? Diagrams?
    o Models?
    o Illustrations?
    o Cartoons?
    o Graphs?
    o Tables?
    o Columns?
    o Bullets?
• Appropriate headings for the graphics used?
• Graphics needs to be relevant to the topics discussed?

14. Examples
An example (noun) is something such as an object, a fact, or situation that shows, explains or support what is said. Examples are used to bring reality into text. The challenge is to choose examples that are appropriate to learners' frame of reference, examples that learners can relate to.

Quality Textbooks (Continue)

15. Case Studies

Case studies are stories. They are often used as a teaching tool to show the application of a theory or concept to real situations. They present realistic and interesting situations that often involve a dilemma, conflict, or problem that needs to be resolved. A good case study is: "the vehicle by which a chunk of reality is brought into the classroom to be worked over by the class and the instructor"

Characteristics of a good case study:
• It is relatively short
• It involves a problem (dilemma) to be solved; without an issue to be resolved the case has no educational value
• Sufficient information is provided on which to base conclusions
• It is contemporary (such as a topic in the news)
• It is real (not imaginary) and something that learners can relate to
• The situation may not have an obvious solution; alternative solutions or outcomes may be possible.
• It has a learning objective.

16. Activities/exercises

• Are activities used . . .
  o Relevant?
  o Meaningful?
  o Challenging?
  o Fun (include games)?
• Are activities used . . .
  o Reflecting on content?
  o Allowing learners to share experiences?
  o Allowing learners to express opinion?
  o Allowing learners to demonstrate understanding or comprehension?
  o Allowing learners to practice skills; apply new knowledge or principles
  o Allowing learners to analyse situations
• Activity mode . . .
  o Provides a balance between individual, with partner or group activities?
  o Utilises various types of activity? (Exercises; undertaking an investigation; collecting information; relate activity to a given case study; develop posters; involving competitions, e.g. who comes up with the answer first?, etc.)
• Expected outcome for activities clearly stated?
• Model/suggested answers to activity provided/ available?

17. Discussion questions

Different approaches in using discussion questions:
• Answering a question individually;
• Dealing with a question in a group discussion only;
• Listen to a teacher explanation only; or
• Participating in group discussions followed by a teacher explanation.

18. Summary/Key Learning Points

A summary is a short and concise representation of the main points, ideas, concepts, facts or statements of written text. A summary identifies key elements and condenses relevant information. It reduces a comprehensive selection of text to the main points for more concise understanding.

19. Assessments

• Example assessments included
• Assessment practice to include . . .
  o Self-assessment questions?
  o Sample test/exam questions?
  o Sample assignments/projects?
• Assessment to reflect or relate to . . .
  o Assessment criteria of examining body?
  o Key learning areas covered?
• Assessment provides for varied degrees of difficulty/challenge?
• Assessment reflects a balance of 'Bloom's taxonomy of learning outcomes' type questions? e.g.
• Criteria Guidelines
• Knowledge?
• Understanding/comprehension?
• Application?
• Analysis?
• Synthesis?
• Evaluation?
• Model answers to example assessments provided/ available?
• Identify corrective action to be taken where 'underperformance' is indicated? (Assessment is only meaningful when corrective action is taken when outcomes were not attained.)

20. Glossary of Terms

A glossary of new/ technical/subject specific terms will assist learners to develop a better understanding of subject specific language (vocabulary) that will allow them to more effectively participate in the relevant teaching and learning processes offered in education.

21. Index

An index is a list of all the topics (concepts) covered in the book arranged in alphabetical order. The index also shows where in the book (page number) the topic is discussed.

COLOR CODING

Weight
5
4
3
2
1

TEXTBOOK EVALUATION

Textbook evaluation is a quality control measure whereby textbooks are evaluated and approved before they are allowed to be used by educational institutions.

Textbook adoption processes should be based on justifiable research-based criteria (quality characteristics) for evaluating and selecting instructional materials. Textbook adoption decisions based on intuition, familiarity with known publishers, and personal preferences will be harmful to a process to promote quality education.

The complexity of textbook evaluation is increased by the fact that the quality of textbooks is not only influenced by its subject-specific content, but also by the way content is presented, which is the focus of this evaluation process.

In terms of the norms and standards for teacher performance, teachers are required to evaluate textbooks, and where weaknesses in textbooks are indicated, to provide supplementary material. Textbook evaluation is therefore an important part of a teachers function,

Textbook Evaluation

Textbook Evaluation Schedule

	Criteria	Weight	Score	Value
1.	Preface	1		
2.	Table of content	1		
3.	References and bibliography	1		
4.	Additional resources	1		
5.	Language consideration	5		
6.	Transformation, gender, ethnic considerations	1		
7.	Applying pedagogical/learning/didactical principles	4		
8.	Chapter structure	4		
9.	Introductions	2		
10.	Outcomes/objectives	1		
11.	Information type considerations	4		
12.	Definitions	3		
13.	Graphics	3		
14.	Examples	3		
15.	Case studies	1		
16.	Activities/exercises	4		
17.	Discussion questions	1		
18.	Summary, key learning points	3		
19.	Assessment	4		
20.	Glossary of new terms	2		
21.	Index	1		
	Total value weight	**50**		
	Total score (actual) - x			
	Total value (maximum)			**250**
	Total value – percentage of maximum (x/250)%			**%**

Textbook evaluated	
Evaluator	
Date	

Assessment	Score
Excellent	5
Good	4
Average	3
Poor	2
Unacceptable	1
Not apparent, not included	0