



**THE ARAB AMERICAN UNIVERSITY – PALESTINE
FACULTY OF GRADUATE STUDIES**

**The Reality of Applying Technical Quality Standards in
Designing and Printing Palestinian Textbooks.**

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requirements for the Master's Degree in Quality
Management, February - 2022**

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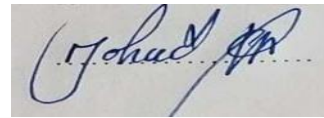
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Deceleration

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Dedication

الاهداء

الحمد لله أولاً و آخراً على هذا النجاح....

إلى من قاد قلوب البشرية وعقولهم إلى مرفأ الأمان، معلم البشرية الأول محمد صلى الله عليه وسلم.

إلى أمي وأبي حفظهما الله وأدام صحتهما ومد في عمرهما بالسعادة بالدنيا والفوز في الآخرة
واعانني على الوفاء بحقوقهم.

إلى من هم أكرم منا الشهداء الأبرار والأسرى والاسيرات البواسل فرج الله كربهم.

إلى كل من علمني حرفاً طيلة مسيرتي التعليمية وأنار لي طريق العلم والمعرفة.

إلى أخي وإخواتي مصدر فخري وابنائهم وبناتهم.

إلى زوجتي وبناتي ثمرة الفؤاد وأمل الغد.

إلى كل من ربطتني بهم علاقة القرابة والصداقة.

إلى كل هؤلاء أهدى هذه الدراسة، راجياً من الله

أن تكون نافذة علم ومعرفة وأن ينفعنا وينفع بنا.

Acknowledgments

شكر وتقدير

قال تعالى ﴿رَبِّ أَوْزِعْنِي أَنْ أَشْكُرَ نِعْمَتَكَ الَّتِي أَنْعَمْتَ عَلَيَّ وَعَلَىٰ وَالِدَيَّ وَأَنْ أَعْمَلَ صَالِحًا﴾ [الأحقاف: 15]

وقال رسول الله (ﷺ) " من لم يشكر الناس، لم يشكر الله عز وجل "

أحمد الله تعالى حمدا كثيرا طيبا مباركا ملئ السماوات والأرض على ما أكرمني به من إتمام هذه
الدراسة التي أرجو أن تنال رضاه....

أتقدم بجزيل الشكر والامتنان إلى جميع من أعانوني وساعدوني في إخراج هذا البحث بجهدهم
وأراءهم القيمة التي أبدوها لي وخصوصاً لجنة مناقشة الرسالة وإلى الهيئة التدريسية عموماً،
راجياً من الله أن أكون قد أصبت أكثر مما أخطأت وأن يستفاد مما بذلت من جهود، أملاً أن
أكون قد أعطيت الموضوع بعض حقه وأسأل الله أن يعلمنا ما ينفعنا، وينفعنا بما علمنا.

Abstract

The study aims to examine the availability of the technical quality standards in the new basic and secondary stages' Palestinian curricula, which were officially published in (2016-2017) from the point of view of teachers and administrators in schools, as well as highlight some of the technical standards adopted in Arab countries. Besides, it seeks to explain the impact of the selected technical standards on the quality of textbooks based on the means of the study sample answers.

The study used a quantitative research approach, where two structured questionnaires were developed to collect the primary data. Whilst the targeted study population was composed of teachers and administrators in Palestinian schools, whose number, according to the data of the Ministry of Education, was (42,787) teachers and (2,293) administrators, the study sample consisted of (418) teachers and (272) principals with a total of 690 respondents. To obtain the results, the collected data were analyzed, using the SPSS program. The study findings indicate that the selected dimensions are represented and linked with the technical quality standards. Moreover, the sample results show that the percentage of standards availability in the Palestinian textbooks ranges from high to medium, besides some other elements with low percentages. Recommendations were made to help improve them in the future.

The study included the technical dimensions of the textbook's quality (quality of format and output, images, external cover, presentation of ideas, printing, and presentation of content), based on data analysis and review of the mechanisms and standards used by the Ministry of Education in the process of preparing and printing textbooks suggested by the focus group. As such, I recommend that the MoE should focus on balancing between the

quantity and quality of the production of pictures and books' texts and their impact on the weight of the school bag. Furthermore, the increase of the percentage of teachers' participation in committees to re-develop books through establishing sub-committees and special programs for each subject should be taken into account. Finally, it is also recommended that MoE set standards for qualifying companies participating in the printing of textbooks.

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Definitions:

- **Standards:** Oxford Dictionary defines it as "a specific level of performance excellence or a specific degree of quality, and it is seen as a pre-determined goal for the educational issue or as a measure of what is required to achieve for some purpose" (William, 1974: 645).
- **Textbook:** it contains the indirect experiences presented to students in a written, illustrated, or graphic form. It is a group of units and sections of knowledge that are used in a way that suits the student's level according to the age and mental level (عطوان واخرون، 2007).
- **Quality standards for textbooks:** They are requirements (norms and criteria) which textbooks must fulfil. These textbooks, selected by official procedures and defined standards, may be used in schools (Ivićet al., 2013: p.66).
- **Quality book output:** The book in its general form is elegant in appearance, attractive in shape, and appropriate in size. It also has good papers, which are light in weight and free from linguistic and typographical errors, have clear characters consistent spacing between lines and words, clear pictures, graphics and maps. Besides, it contains a beautiful cover, firmly bound, and display clear, interesting main title and sub-headings. (رضوان 1982: ص 299).
- **Active Learning Approach:** It "is a student's active impact on learning and a student's involvement in the learning process, allowing students to focus on creating knowledge with an emphasis on skills and developing students' thinking" (Demirci, 2017). Examples of experiential learning are problem-solving, cooperative learning,

speaking activities, case-study methods, class discussion, simulations, fieldwork, and role-playing.

- **The Ministry:** It is the Palestinian Ministry of Education (MoE), As defined by Wikipedia (2016), it is a governmental ministry concerned with educating citizens by establishing educational institutions (Basic schools, secondary schools). Its role is to determine the major educational goals representing the community and the result of a specific educational philosophy and to monitor the educational process. In addition, it prepares learning material for students. (Wikipedia, the free encyclopedia, 2016)
- **Curriculums:** It is a set of educational experiences that the school provides to students, inside and outside the school precinct, to promote a healthy, comprehensive, and an integrated growth of the human being, based on specific educational goals and a scientific plan drawn up physically, mentally, psychologically, socially and religiously. . (يونس، . (1425هـ
- **Curriculum in the Islamic educational system:** It is the sum of the experiences, knowledge and skills that the school provides in the Islamic community to students to develop them comprehensively in all aspects, be it mental, physical or emotional, and to modify their behavior in accordance with the approach of God and his law and prepare them for settling and making use of the land. (باهمام، 1430هـ)
- **Academic stages:** According to Palestinian law, the basic education stage starts from the first grade to the end of the ninth grade, while secondary education is from the tenth until the twelfth grade, and education is compulsory until the end of the tenth. (قانون التربية والتعليم العام، 2017)

- **School:** According to Palestinian law, it is every educational institution that includes one or more parts of basic and secondary education, in which students receive a formal education, and this education is taught by one or more teachers. (قانون التربية والتعليم العام، 2017)
- **Book presentation quality:** the book should be easy in style of its language, interesting in a display of topics, graded in its information, appropriate to the level of students and abilities, diverse, and far from any complexity in formulation and style. (عبدالحكيم، 2017)
- **Quality standard in book design:** It is a set of specifications and conditions that contain a high degree of accuracy and perfection in pictures, educational drawings and their technical and scientific forms, which have been agreed upon with a group of specialists and validation experts. (الزويني، 2017)
- **Quality of the book cover:** the artistic form of the cover in terms of its style of presentation and the quality of the font used in it, images and colors, in order to achieve attractiveness to students and durability due to frequent use. (امين، 2018)
- **Administrators in schools:** They are the principal and secretary of the school.

Chapter One

Introduction

1.1 Background

Quality of education is essential, as many international models have shown their interest in quality, such as the Baldrige Criteria in America, the Deming Award in Japan, academic and professional accreditation institutions around the world, and other comprehensive quality standards. Therefore, the importance of a quality educational system emerged in pre-university and higher educational institutions in many countries, as it is the basis from which all attempts to develop and advance society towards progress in various fields arose.

Thus, this explains the importance attached to the textbook, because it is the primary reference for students to obtain information (Khawaldeh, 2007). As such, attention should be paid to its preparation and production in accordance with scientific and educational standards and specifications. Given that textbooks are the document that reflects and expresses the curriculum, it is also important to develop and design these textbooks with comprehensive quality standards, with the aim of adapting and crafting the presentation of the material in a way that is responsive to the dispositions, interests and mental development of students.

Therefore, the quality of the design and printing mechanism of books will be evaluated from the point of view of teachers and school administrators during this study. In addition, it will make use of from the technical quality standards applied in some neighboring countries based on the literature review in order to draw conclusions and recommendations for future improvement.

Bibawi emphasizes that the design of the textbook must be based on local and international standards so that the objectives, content, teaching strategies, and presentation methods used in it are linked, according to the age category, community and global needs; In order to prepare a generation capable of dealing with the developments of the modern era and its rapid scientific and technological advances. (ببأوي، 2009: ص256)

Moreover, the output and design quality of the book help make the book attractive to students and teachers alike in terms of the quality of the outer cover, font size, paper quality, clarity of images, and other technical elements of the book's presentation. (الجراح، 2017)

Besides, the quality of the textbook's design and presentation is embodied in the appropriateness and attractiveness of images and texts in terms of size, colors and connection to the topic to be explained. Along with taking care of its design, the textbook quality also combines educational experiences and the quality of its production in format and content, which are in line with the cognitive, psychological, educational and technical foundations, so that they can be an effective tool that contributes to achieving goals educational. (الخلوة، 2004: 31) Similarly, the quality of educational images in textbooks is revealed in the extent to which these drawings, symbols, or prepared pictures are capable of attracting and visually pleasing the learner in order to help him/her interpret and clarify subject information and the texts.

Therefore, it is necessary to prepare and produce textbooks based on scientific and educational standards and specifications, take feedback to check and address deficiencies and improve the display of quality of textbook content in view of the requirements of contemporary society (عبد الحكيم واخرون، 2017)

Consequently, achieving a wide-ranging technical quality in textbooks design and printing to obtain high-quality texts, covers, images, shapes, and presentation of ideas is critical to capturing students' attention and interest in receiving knowledge and consolidating ideas and concepts. Moreover, we need a general framework and pre-set standards related to ensuring the planning and preparation of books at all study stages. From a technical perspective, it is important to ensure the achievement of educational goals directed to cultivating citizens capable of advancing society. Equally, it is also significant to guarantee that it contributing, the textbook quality promotes, contributes and achieves the desired aims of making students more willing to learn and teachers more satisfied with their students' performance. It can be concluded from what (Willgos) said that education necessarily requires the selection and organization of information based on the needs of the learners which is achieved by developing curricula and textbooks on the foundation of organized process frameworks. (Willgos, 1984: p.65)

Quality of education is defined as a set of criteria, approaches, strategies or foundations by which the appropriate and desirable level of what is offered to students can be determined to improve the educational environment and provide it with all required components that enable students to acquire the pre-determined skills at a particular educational stage to increase efficiency and effectiveness of the school outputs (Quality Concepts, 2018).

Against the backdrop of the abovementioned, the textbook is one of the most important pillars of the curriculum, as it is the vessel that contains the educational material and is the main reference for students to acquire information (Khawaldeh, 2007). In the course of the study, therefore, the focus will be placed on the quality of the design, production,

and printing textbooks such as printing clarity, accuracy of words, sentences, and texts and a distance between lines. All this will be done in order to contribute to developing books and addressing the weaknesses in the design of curriculum textbooks based on the results of the technical evaluation of textbooks.

1.2 Research Problem

Due to the rapid technical and technological advances in the world, the MoE needs to keep abreast with these developments in the process of preparing, designing, and printing textbooks to ensure the continuous updating of books and raise the level of performance in various dimensions to meet the needs of students. Therefore, the study will determine the availability of technical quality standards in the new textbooks based on the opinions of a sample of teachers and administrators in schools. It should also be pointed out that there are also other factors that affect the application of technical quality standards when preparing and printing textbooks, such as physical or human factors. More importantly, this study will also focus on identifying and analyzing aspects with low rates as well as suggest recommendations for the future based on the literature review. This will contribute to avoiding misprints or poor performance and final production of textbooks (colors and poor images that are not compatible with texts).

It is fully understood that appropriate textbooks of good quality in the form and design of the content contribute to attracting students to learning, encouraging them to think, simplifying and facilitating the comprehension of information.

Based on the above-mentioned, the focus of this study is to assess the extent to which the MoE applies the quality standards of technical books based on the opinions of a sample

of teachers and administrators in schools. The main problem, therefore, can be formulated in the following question: To what degree does the MoE apply technical quality standards in the new Palestinian textbooks?

Finally, the study will assess textbooks' technical design and quality of printing against the quality standards for these aspects: quality of the cover, colors, pictures, and text fonts).

1.3 Research Questions and Hypotheses:

The main study question that the study seeks to answer based on the chosen aspects is: To what degree do the new Palestinian books follow the standards of technical quality considering the Arab standards? In order to answer the main study question, the study also has to answer the following study sub-questions:

- To what degree do Palestinian textbooks reflect the adopted Arab standards?
- To what degree are these technical standards applied to the Palestinian textbooks from the teachers' point of view?
- To what degree are these technical standards applied to the Palestinian textbooks from the administrator's point of view?
- What are the technical quality elements with lower averages depending on the percentages of teachers' answers?
- What are the elements of technical quality with high averages according to the percentages of teachers' answers?

Study Hypotheses

- There are no differences in teachers' responses regarding the use of these textbooks depending on variables (teaching subject, years of experience, participation in co-authoring the curriculum, age, gender).

1.4 Research Objectives:

This study aims to find out the availability of the selected technical quality factors in the new textbooks, in addition to clarifying the effect of these factors on achieving the attractiveness of the books depending on the response rates of the study sample. To achieve the main study objective, the study also has to achieve the following sub-study objectives:

- Measuring the technical quality of the new curriculum for possible future improvement.
- Determining the technical criteria for presenting topics that are required to be available in the books according to the applied standards in some Arab countries.
- To identify the degree of availability of technical standards for design and printing of textbooks in order to identify strengths and weaknesses in order to suggest appropriate recommendations.
- To measure the differences in teachers' awareness for the selected factors due to demographic variables (gender, age, educational level, years of experience).
- To identify the degree of performance of pictures and graphics in textbooks.
- To identify the degree of performance of the outer cover of schoolbooks based on the responses of the study sample.

- To identify the relationship between the selected technical factors and the weight of the school bag according to the responses of the study sample.

1.5 Research Significance and Justifications:

Theoretical importance: The importance of the research arises from its uniqueness, as it is one of the first studies that measures the availability of technical standards in textbooks for the new curriculum, through suggesting recommendations to improve the future technical standards of books to make them more attractive to students and facilitate the understanding of topics. The study will also benefit researchers who wish to conduct studies on the quality of textbooks.

Experimental importance: The importance of the study lies in the use of the decision-makers at MoE of results extracted from the responses of the study sample linked to the technical quality of textbooks so that they develop and improve the weaknesses of textbooks, particularly for the low-rated elements, based on data analysis.

1.6. Study Limitations:

The study was limited to a specific scope, including the following:

1. **The objective scope:** the study was limited to studying the technical quality standards and evaluation in the books of the new Palestinian curriculum (2016-2017) and its subsequent amendments.
2. **Time scope:** conducting the study during the academic year (2020-2021).
3. **Spatial scope:** schools in the education directorates in the West Bank.

4. **Methodological scope:** following quantitative research approach.
5. **Conceptual scope:** The difference in teacher's and administrators' assessments of quality standards, because quality standards are abstract terms on which there is consensus. Therefore, there is a difference in their understanding and analysis of these standards, because respondents' knowledge of quality standards may affect the data analysis.

Chapter Two

2.0 Literature Review

In this section, the literature available on the standards for preparing and printing textbooks and the impact of these factors on the quality of textbooks in a number of countries will be reviewed. This literature review consists of two main parts. The first part is a review of theoretical literature which introduces the definition of technical quality standards for textbooks in previous studies, shows the importance of applying technical quality standards, and provides an overview of the basic concepts and keywords for study variables and their dimensions. The second part is about an empirical literature review. It will summarize the findings, limitations, and recommendations of previous studies about the importance and impact of technical quality standards for textbooks.

2.1 Theoretical Framework:

As the aim of study is to determine the availability of quality standards approved for designing and printing of new textbooks from the standpoint of the MoE experts, teachers, and administrative assistants, it is necessary to consider the textbooks and their quality. Therefore, the book is regarded as the cornerstone to connect students, teachers, and society. As such, they should be designed and prepared technically with concrete and meaningful goals to help accomplish the expected objective in line with the MoE strategies and policies. In this case, the book can contribute to presenting and clarifying the subject's basic outlines by focusing on the textbooks, including diagrams, shapes, and illustrations that are important to explain texts to students, link these images and shapes with the texts and students' real-life environment, and present ideas, concepts, and basic

information. All this contributes to the success of the book production process and achieves the necessary technical goals.

In addition, the research will discuss in detail the textbook designing process based on the technical quality standards, preparing, and printing textbooks for all academic levels from the teachers' point of view. Thus, literature reviews have been done with these issues in mind. Some of them have focused on the quality and attractiveness of images, texts, titles, and shapes for school book covers; other studies on the production and interior design (fonts, paper, space between words, and general appearance and punctuation) based on the Arab and locally accepted standards.

Therefore, in this part, the researcher will present the definition and importance of technical quality standards in previous studies and provide an overview of the basic concepts of study variables, their importance and dimensions.

2.1.1 Quality of Format and Output For Textbooks

The quality of form and output means that the textbook should be attractive in its general form, suitable in size and light in weight, have good papers, clear letters, consistent spacing between words and lines, clear pictures and drawings, and beautiful cover so that it attracts students in its title and general output and finally be free of linguistic and typographical errors (عبدالحكيم واخرون، 2017). In this study, the researcher will therefore determine whether the technical quality standards in textbooks are appropriate. This is measured against the Arab standards for the quality of design, printing and preparation of images, shapes, covers and paper to determine the suitability and technical quality for new textbooks.

The production and format of the textbook are one of the most important elements to

achieve the attractiveness of books through the clear presentation of the main and sub-headings, the inclusion of an index of contents and references, as well as the consistency for pages (Ben Turki et al., 2021). In addition, there is a need to focus on requirements and the specifications for each age group of students when preparing books to achieve the desired goals.

Based on the previous definitions of the technical quality of preparing books, we conclude that the quality of the form and output is a basic stage to attract students to textbooks by simplifying the presentation of topics in line with the plans of the educational curriculum.

2.1.2 Quality of Images and Shapes

The quality of pictures in educational books means the picture use is purposeful and useful. In fact, it is used explain and clarify the written texts, which contributes to simplifying the lesson and making it easier for students (حمدان، 2013). In addition, the purpose of images in textbooks is mental, perceptual, emotional, and kinesthetic. There are also other functions for images such as being expressive, aesthetic, impactful, referential, and cultural, which are determined through the context dictated by text (Rabbani et al., 2015).

The characteristics of textbooks have an impact on the motivation of the students. Generally, students prefer books with large pictures, as pictures in textbooks give to them a chance to be conscious of variety of art styles, and improving their quality of judgment. Some researchers have found that pictures in textbook can motivate creativity (Rabbani et al., 2015).

Pictures in textbooks are considered a valuable tool for stimulating and developing students' creativity. When students read books with picture associated text, they learn to use their imagination to explain and reconfigure the meaning. Moreover, illustrations provide mental scaffolds to facilitate their process of understanding of the written text (Fang, 1996). In addition, Diamond (2008) believes that students prefer images in textbooks because, upon using them, they can understand and learn better and easier this illustrative information than just having words in the text.

Considering the above information, the quality and durability of the images used in textbooks will be measured in terms of their suitability for students, their design, size, colors and ink, according to the response proportions of the study sample.

2.1.3 Quality of the Outer Cover for the Book

The cover of the textbook is the entry gate for the reader's eye, as it contains a set of suggestive signs in the form of words, drawings and images that fill the cover. In reality, it is a means of communication to attract students and transfer of information and ideas in a short and simplified manner (Maha et al., 2017). Also, Ben Turki (2021) elucidated the conditions that must be provided in the cover of the book.: It should be made of thick cardboard and contain a small part of the material information, including the name of the publisher, and the name of the author.

Moreover, the goal of the cover is to be a realistic translation of the book's content in language, design and output so that the cover attracts students to read the book itself, and this is achieved through the reading factors (ease of reading and understanding the text, content and output) and through distinctive design of texts,

images, and colors. Additionally, simplicity and the age category of each stage as well as the scientific material of the book should be taken into account. (مامون، 2017)

There are elements necessary to achieve the attractiveness of a textbook cover: (مها
واخرون، 2017)

- Font: The cover font is an essential element of the artwork in terms of font shape and thickness.
- The size of the elements: so that the sizes are taken into account, and examined in proportion to the space they occupy.
- Title: By focusing on its consistency with the rest of the cover components in order to achieve an aesthetic appearance, and this is achieved by considering the selection of letter shape and size, the space surrounding it, and its printing in order to ensure its readability and attractiveness. (العالمي، 2008، ص.42)
- Cover photos: They are considered a communication tool that contributes to conveying the idea and creating a visual language to attract the reader towards what is intended to be communicated from the design.
- Colors: They are considered an effective interactive element that attracts the reader through the diversity of font colors and gradations and their ability to realistically depict things. (ايباد، 2008، ص.69)

In view of the previous definitions related to the design of the cover of textbooks, we conclude that the basic elements of the cover consist of font, images, design of light and shadow, movement and direction of components. In addition, the foundations of the cover are its design has clarity, balance, compatibility, organization, focus, and consistency with spaces.

2.1.4 Textbook Printing Quality:

Printing is an art and science through which letters, drawings, and a machine onto paper or any other surface can transfer images (العابدي، 2017). Thus, the quality of school book printing is represented by the ability to coordinate printing tools (machines, paper, ink, binding) in order to produce books with high efficiency and durability to use.

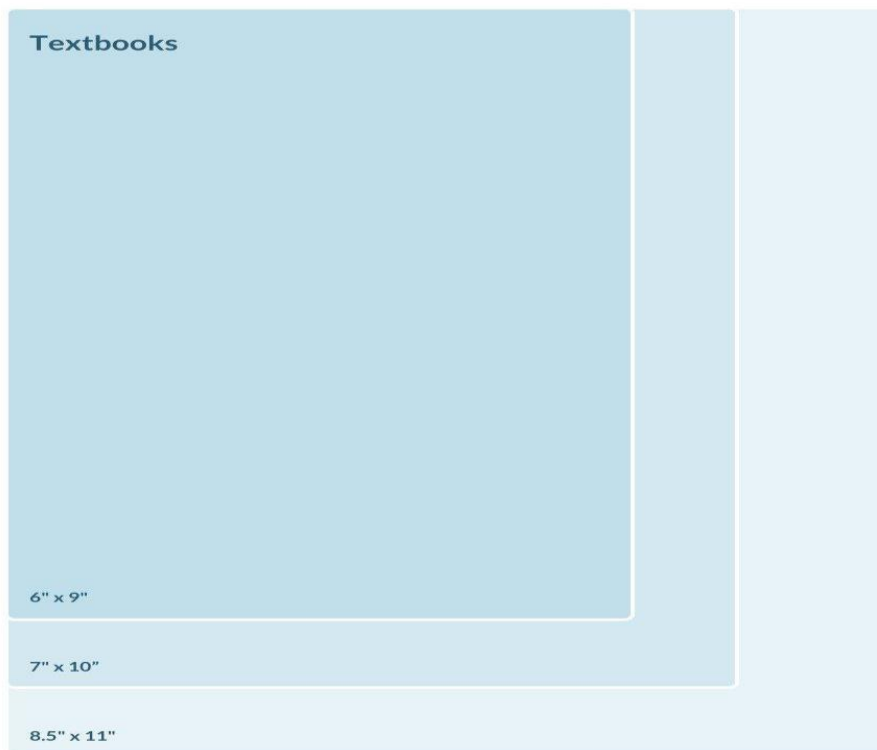
The quality of textbook printing is also characterized by organization and clarity of the material presented (texts, images) so that this helps to improve and facilitate the readability of the texts by taking into account the size of the letters and the length of lines, the spaces between words and lines, the consistency of the margins, the type and weight of paper, the type of ink, its color, and color of the background of the print. In addition, the special needs of each age category of each stage for students should be taken into account to contribute to attracting students to books and facilitating learning (الزويني واخرون، 2017).

In the light of the abovementioned, it can be concluded that the print quality element has the purpose of ensuring the integrity of the artistic output of the book in terms of:

- 1) the accuracy of printing texts and images and the absence of shadows or flickering,
- 2) highlighting and distinguishing the main and sub-headings,
- 3) the quality of the paper used,
- 4) the durability of binding and compilation of the book,
- 5) adequacy of the color and quality of the inks used,
- 6) consistency of spacing between words and lines,
- and finally 7) optimization of the margins.

The standard book sizes in inches are:¹

Textbooks: 6 x 9, 7 x 10, 8.5 x 11



2.2 Empirical Literature Review:

2.2.1 Literature Review Related to the Technical Quality of Textbooks:

In his research on the standards of the textbook quality and its specifications, **Helles (2007)** focused on analyzing and evaluating Arabic language books to develop and improve the quality of the textbooks in the educational process. He also paid attention on other aspects like designing and building textbooks from the visual point of view.

Moreover, he stressed the need for having a distance between words, the size of letters and lines, the homogeneity of colors, and the space between lines, taking into account

¹ - Book Design Posted on Oct 26, 2018

<https://blog.reedsy.com/standard-book-sizes/#:~:text=Blog%20%3E%20Book%20Design,Oct%2026%2C%202018>

students' academic levels. It is necessary as well to ensure the quality of textbook production by focusing on scientific expertise and technical tools. In fact, the quality of output and design of images, shapes, and texts make them more appropriate and contribute to achieving the desired educational goals. By involving different parties in producing books including technical department, and not being limited to the scientific characteristics contributes to developing the technical part of the book and making it more attractive to students. Furthermore, it should also be emphasized the school bag weight is taken into consideration by studying relationship between the picture size and existing shapes, and their impact on the number of book pages. In addition, the durability of the cover, binding, the clarity of the main and sub-headings contribute to achieving the element of attraction and suspense for students in learning science books.

Tioubet al (2011) also attach importance to using international standards in developing textbooks to ensure the quality of inputs and processes and improve books' efficiency. Books quality for the basic stage in Syria was measured based on international standards (book preparation, scientific subject, language, design, and technical output). It was found that most books were in reasonable conformity with these standards.

Alsalmami (2018) evaluated the Arabic language book for the first intermediate grade in light of the quality standards of the textbook in Baghdad. To judge the quality of the book based on the criteria specified for the study, which were the quality of objectives, content, educational activities, the quality of the evaluation and the quality of output and printing, he used the descriptive approach, and so distributed an open questionnaire for measurement purposes. The results showed that the criterion of goals ranked first, and then the content ranked second.

In their studies (2017، خالد وحسن)، they tried to determine the extent to which there was an interest in applying quality standards in the school curriculum environment. Emphasis was placed on the appropriateness of curriculum contents, presentation, and design to achieve specific educational and scientific goals and plans. The teachers' point of view was measured through a questionnaire prepared for that. The study concluded that there is a weakness in applying quality standards for authoring and designing curricula, which negatively affected the general quality of curricula in some aspects.

Mahmood et al. (2009) concluded that it is necessary to provide clear criteria to evaluate textbooks. Besides, the study focused on the importance of identifying clear and accurate indicators to measure the quality of textbooks.

Thiab (2018) emphasized the importance of developing tools to measure the quality of Palestinian school textbooks in terms of competence of its authors, the scientific content, the textbook form and its output to mathematics in the Gaza Governorate. The results were not encouraging and mainly negative in some texts. And thus, there was a recommendation for developing quality standards for books and upgrading them.

Therefore, it can be summarized that the quality of education means in another way education for empowerment, which refers to having a collection of standards that would consider building the curriculum based on the society's philosophy, ensuring field experimentation for the curriculum, and using design and objective assessment tools to determine mastery levels (Mahmoud, 2009). It also sets standards to define formulas to measuring each component of the educational process, provides a common language that everyone is interested in understanding as well as achieving the principle of efficiency, an

oversight that contributes to development, and provides clear information, and provides opportunities for cooperation to improve education (Al-Amiri, 2010).

2.2.2 Literature Review Regards to the Quality of the General form, Output, and Printing of Textbooks:

Furthermore, Azwaini (2017) conducted study aimed to measure the artistic output quality of the Arabic reading book for the sixth grade from the point of view of the teachers of Babylon Governorate / Iraq find out that book's topics contain modern and contemporary values presented in an appropriate manner. He focused on the book's technical output to include the aspects related to the quality of the fonts, the content of the educational material, the clarity of the main headings in a distinctive way, the book's inclusion of an explanatory introduction, an index of titles, a conclusion, and a list of sources and references. The study concluded that the sixth-grade reading book was unique as it is distinguished by the application of technical quality standards in directing and providing an element of attraction and suspense. The study recommended the necessity of conducting training for employees who are involving in the committees of the technical production of books for all educational levels to raise their capabilities to ensure the appropriateness of the technical quality of books for all academic subjects.

In general, technical design includes many aesthetic aspects of the appearance of books, including images, graphics, and visual design elements (line, points, shape, composition, space, light, shadow, movement, and direction). These elements are necessary to the design's success to be characterized by simplicity, clarity, and balance (each component

is proportional to its size, color, and shape), the compatibility and organization of the elements, as it needs to be clear and achieve the desired objectives.

Albatoosh (2016) aimed to measure the availability of quality standards for the Islamic education textbook for the third grade from teachers' point of view in Jordan. The researcher identified some conditions and characteristics necessary for the quality of preparing the textbook, which are the author's efficiency, practical and social reputation, impartiality, the interrelationship between the content and topics of the book, the way they are designed and organized, the importance of focusing on the form and language of the book's output and method of presentation to achieve the desired educational goals according to the prepared plans advance.

Finally, Atika (2014) dealt with the foundations of evaluating the book (Let's Understand the Arabic Language) for the intermediate level in Indonesia, focusing on several aspects related to the preparation and production of the book to suit non-Arabic speakers in Indonesia. During the research, factors associated with the quality of the content and the preparation and presentation of the book were presented as follows:

- The attractiveness of the cover shape and its expression of book goal.
- Convenient binding the book to facilitate book opening.
- Adaptation of the font size to the students' level, besides being free from errors in texts and images, or errors related to the arrangement of the book's pages.
- The quality of the printing paper, which uses glossy and matte white paper to avoid bad printing and straining the eyes when reading.
- Provide appropriate pictures and illustrations.

- Adjust text and space between words appropriately, use punctuation marks, and optimize book pages and reduce spaces.
- Simplicity and clarity of the book's presentation language, use academic language, and easy, familiar, and modern words.

As stated above, the technical design includes many aesthetic aspects of the book's appearance, including images, graphics, and visual design elements (line, points, shape, composition, light and shadow, movement, and direction). These elements are necessary for the design success to be characterized by simplicity, clarity, and balance (each component is proportional to its size, color, and shape), in addition to the compatibility of the elements and their organization, so that they are clear and achieve the desired goals.

2.2.3 Literature Related to the Quality of Images, Graphics, and Shapes:

Al Montashari (2019) stressed the importance of pictures in school books, pointing that picture are a non-verbal means of communication that contribute to communicating and simplifying ideas. He also identified a number of criteria for the quality of pictures, including:

- The ability to convey and clarify meanings.
- The contribution of images to increasing the effectiveness of communication between students and teachers.
- Adding an element of suspense, excitement and attraction to the book.
- Linking the images to the material and educational objectives.
- Pictures and graphics clearly and accurately represent the educational material.
- The photos are appropriate for the age and experience of the students.

- Match the pictures and their place in the book.
- The pictures are suitable for the space of the book.
 - The images are honest and realistic.
- The pictures are distinguished by the clarity of colors with the use of favorite colors for students.
- The pictures match one another.

In addition, Bibawi (2009, p.263) identified some standards for images that should be included in educational textbooks in the Arab world:

- It adheres to the quality standards: the clarity of photo elements, the appropriateness of the image size with the text, the clarity and brightness of color degrees.
- The photos must be certified by the source.
- The link of the picture with the topic of the lesson, its objective, and the mental and age level of the students.
- The photo is not repeated, except when there is a need for comparison.
- Variety of pictures for each lesson.
- Choosing pictures that help to establish the idea of the lesson for students (attracting students).
- Considering the association of the picture with the environment surrounding the students.
- Inclusion of the images for different aspects of the environment (economic, social, and physical)
- The pictures focus on one concept (not branching out) to ensure that students are not confused.

- Pictures are free of signs and symbols that lead to a misperception.
- The direction of reading images from right to left.
- Simplifying and shortening the image without prejudice to the meaning.
- Adaptation of the aesthetic aspect of the pictures with the educational stage of the students
- Images size does break into the space designated of the text.

In his study, Ametller (2002) explored the application and measurement of the role and effectiveness of images in textbooks to build the students' concepts. The study highlighted the importance of the images in increasing understanding of terms used the learning process. The researcher relied on presenting pictures to students, listening to students' interpretations of them, and checking students' understanding of the topic and then determining the impact of the use pictures on student understanding. The study showed the usefulness of these images in learning, as the students who had difficulty reading and understanding writing texts could later read and understood the text which had pictures. It was concluded that pictures simplified and clarified the ideas entailed in the text.

In addition, **Al Devetak, (2013)** evaluated the quality of the textbooks as one of the most critical educational sources in terms of their adequacy and consistency of information and its impact on students. It stressed the necessity of applying the theories and standards of different quality of verbal learning (texts) and visual learning (images and shapes) when preparing textbooks, particularly scientific materials, as visual images contribute to the consolidation student learning of the concept. Also, it shows the importance of processing images and their quality to clearly and precisely achieve the

required scientific purpose by simplifying and clarifying complex concepts with displaying and designing those images following modern global standards. The study also focused on the text analysis tools used to analyze the written material.

Postigo (2019) study focused on using educational standards in designing textbooks' pictures. In conducting his study on the biology book for the primary and secondary stage, he relied on the evaluation of educational standards to analyze images in books. The study showed that textbooks using images contributes to the increasing student positive interaction with subject activities. In addition, it showed there was a difference in the distribution of these aesthetic, educational standards between one subject and another, and above all, it revealed the lack of consistency between the committees working on authoring those books for the same subject. The researcher also recommended that there should be more emphasis on designing images according to the standards of aesthetic education to be more interesting and attractive for students and help them understand the content material.

Based on the abovementioned, one can conclude that, as Aristotle one said, "The soul never thinks without pictures," and that image importance lies in facilitating the understanding of the texts as a primary language of communication. The images simplify the comprehension of written texts and facilitate communication. The focus, therefore, is on designing and producing images and graphics to help student understand information in the textbooks and facilitate his/her consolidation of information. So many studies have confirmed that more than 75% of the knowledge one receives comes through looking. (96. ص: 1996 حمدي وآخرون،)

Accordingly, I think that it is important to use pictures in books, especially for basic education, as they assist students in visualizing those pictures, analyzing them, making judgments, and understanding relationships between those pictures and written text. That will facilitate student perception of information, especially in the basic primary stages.

Therefore, the importance of selecting and designing images can be summarized, as follows:

- Facilitating cognition, comprehension, and understanding.
- Helping to draw the learner attention and reduce abstract texts.
- Extending students perception and imagination to help them think by linking images with text.
- Simplifying information to help achieve goals.

2.2.4 Literature Related to the Quality of the Outer Cover of the Book:

Cover quality (book appearance) is embodied in the quality of the external image of the cover, its durability, and thickness, and the colors used. It, therefore, plays an important role in attracting the reader to the book and giving him an idea of its content so that he/she, especially in the basic stage, feels a deep desire to read it. As such, the designer should consider linking the book content with the design by giving more focus onto book cover's exterior design quality. The aesthetic aspect of the design must be balanced with the book's educational, social and economic goals. In fact, Ma'moon and Rafeeda (2017) summed up these general goals, as follows:

1. The photos should be clear and realistic.
2. The colors should be consistent and coherent.

3. The cover should be thick; it can bear a lot of use (since some books serve more than one student).
4. The artistic form of the cover is comfortable to look at, and its size, font, and final shape attract students.

Rolo (2021), views the importance of the book cover design as a communication and attraction tool for the reader. In the educational field, this is reflected on the use of the textbook cover as an initial visual and textual communication tool that contributes to forming the reader's first impression of the book's content. Role's study emphasizes understanding the importance of design of images, texts, and colors of the book cover by adopting a suitable graphic design method (Rolo, 2021). That will achieve the brevity of the content and help in conveying facts in the book, enhancing the book's purpose.

In their study, Alma'moon and Rafeeda (2017) presented the standards of image quality in school book covers by measuring the availability of quality standards in pictures and titles for the basic stage in Sudan. Also, their study showed that the quality standards of the illustrative pictures were necessary, as they had an impact on the image integration with the text and the link between its attractiveness and the received responses. What the study finally revealed was the weakness in the book covers design and inconsistency of text writing. It recommended considering redesigning books to suit the learning outcomes to set standards for designing educational drawings and pictures.

2.2.5 Literature Related to the Quality of Presenting the Content of the Book:

According to the Arab Organization for Culture and Science (1998-1999), the quality of the book's content is the relationship between scientific texts and the way they are

presented and organized, consistent with the goals and plans of the curriculum. In addition, the scientific material is characterized by its comprehensiveness, accuracy, and depth. It is also necessary to consider the level of students and their life experiences and the extent to which the texts and topics related to the local environment surrounding them.

Fatima (2017), upon looking into quality of Arabic book content in Algeria, considers these aspects: society, education, and teaching systems. The Algerian experience, while developing the content of Arabic textbooks, seeks to develop procedural tools in order to provide students with skills based on the content of the book. The researcher identified several standards necessary for the selection of content of the book. A good book, from her viewpoint, has the following characteristics:

- The content of the book should be socially desirable and applicable to practical life.
- The exercises should be modern and take into account individual differences.
- The topics are presented in an appropriate manner and keep with modern technology.
- The need to take into account the level of students for all educational levels.
- The book and its content encourage students to think, analyze and draw conclusions.
- Coherence and sequencing of the information (the way in which bits and pieces of information and integrated together).
- Providing multiple evaluation methods to help teachers in dealing with different students.
- It is free from typographical errors and contains a list of references and sources.
- Experimenting and teaching the new curriculum to a group of students before printing and circulating it.

Another of study conducted by **Fred and Hala** (2015) addressed the degree of availability of comprehensive quality standards for the sixth grade English language textbook from teachers' point of view. The study focused on the quality of the presentation of material when preparing the textbook. It stressed the need of the availability of the relevant aspects of content presentation in terms of the quality and clarity of linguistic formulation during the design and production of the book. This undoubtedly facilitates the learning process. In fact, the quality of the content presentation encourages students to think in an organized manner and acts as an attracting factor to the topics. Besides, there is a need for the author to adapt the topics and formulate them in a way consistent with the students' interests, tendencies and abilities.

From the above, it is clear that there is also a general agreement among most researchers on the importance of following clear and measurable quality standards when developing textbooks so that these textbooks can be evaluated. Besides, they can be assessed in terms of conformity with society's requirements and compatibility with its aspirations.

Consequently, the researcher aims to determine the effect of using technical quality factors on student understanding of the textbooks' subjects in the new curriculum from the teachers' point of view. It can be done using the standards and foundations specified in the study plans prepared for each educational subject to measure the effectiveness of these tools in motivating students' abilities to learn.

Reviewing some of the previous studies in Palestine and others in neighboring countries, the researcher found that the great bulk of them focused on studying the quality of the technical design of textbooks by studying either a specific subject or a particular

educational stage, be it primary or secondary. Therefore, the study will measure the extent to which the application of quality standards in designing and preparing Palestinian textbooks for the new curriculum for all subjects across academic levels (educational stages) from teachers' and administrative bodies' viewpoint to assess the quality of newly printed books.

In a nutshell, this study reveals the degree to which the MoE has adopted quality standards upon preparing textbooks from standpoint of teachers, and the administrative body in schools. Furthermore, it examines how far the MoE has applied local and Arab quality standards upon preparing and design textbooks. In other words, it seeks to investigate the extent to which the textbook content design and production is in line with local and Arab standards for image quality, cover quality, and usability.

More significantly, the quality standards have also been used to review the effectiveness of textbooks in achieving goals related to technical, linguistic, educational, and social aspects.

2.3 The Following is the Local Procedures Followed to Achieve the Quality Standards of Textbooks.

2.3.1 Overview of the Criteria and Conditions Applied at the Palestinian Ministry of Education:²

About the Directorate General for Books and Publications at the Ministry of Education:

The aims of Directorate General for Educational Books and Publications regarding the quality of textbooks are:

- developing printing of textbooks and educational publications adhering to high-quality technical specifications.

²<https://www.mohe.ps>

- Developing the workers' capacities and enriching their experiences in textbooks development and production at the MoE and the education directorates level consistent with their capabilities and work needs.

The main task of the of Directorate General for Educational Books and Publications:

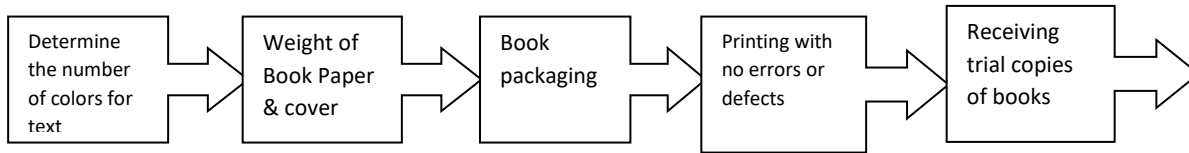
- Contributing to setting the MoE educational policy related to textbooks and educational publications and their implementation and proposing projects to develop and improve them to serve society's educational process and developmental plans.

Other sub-functions are:

- Ensuring the textbook printing for students and teachers to facilitate teaching and learning.
- Distributing textbooks to students at the beginning of the scholastic year and following up on the required procedures and receiving and considering feedback for development purposes.
- Preparing the technical specifications necessary for printing textbooks in terms of output and development.
- Seeking to develop the competencies of workers of Directorate General for Educational Books and Publications in the in design, production, and publishing.
- Seeking to achieve quality in printing textbooks through good technical book production with high-quality specifications.
- Planning to approve consumption rates for textbooks.
- Conducting field follow-up to printing presses, district offices, warehouses, schools to check out good performance, implementation, and raising the quality level.
- Seeking to provide storage places for textbooks to protect them so as not to be damaged.

Some Technical Specifications for Printing Books According to the Ministry of Education Conditions:³

Figure No. (1) Technical Specifications Aspects for Printing Books:

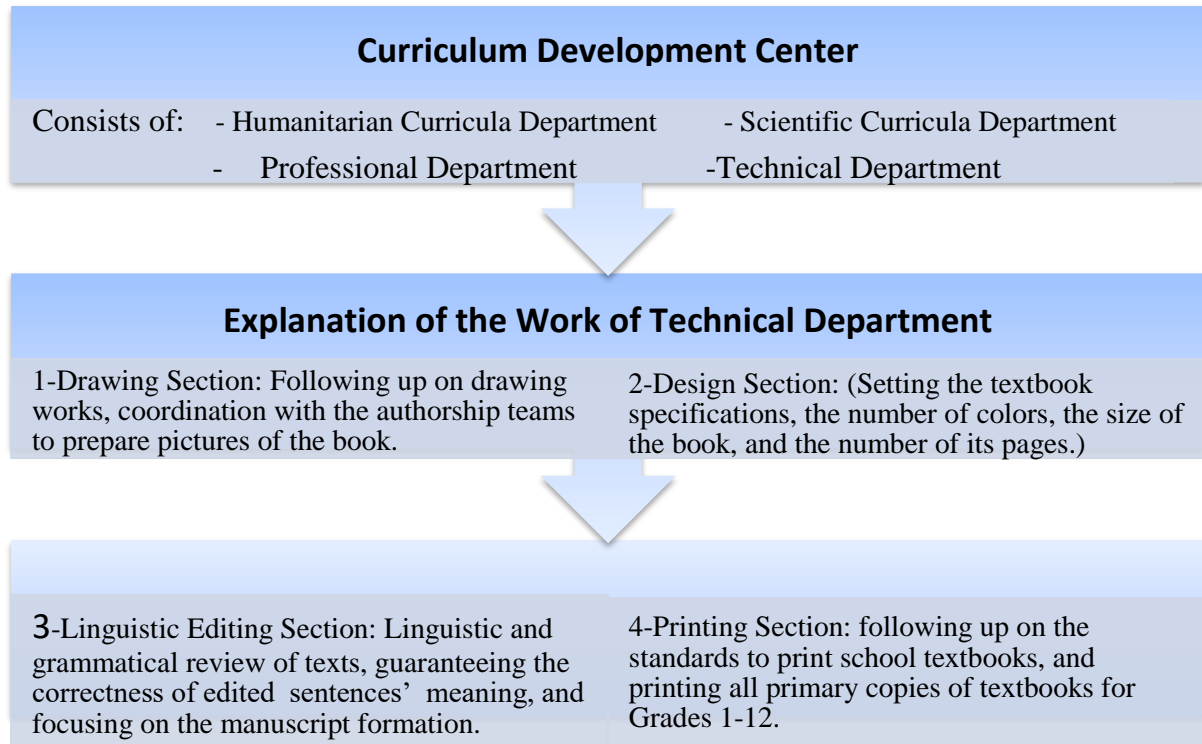


- **The number of text colors:** According to the technical specifications table, the word color, the cover and paper should be printed in four colors or more.
- **Book Paper Weight:** 70 grams (wood free, smooth, white, 80% Over (Opacity) The weight of English Book 80 grams, and it is opaque and wood free.
- **The wrapping paper's weight:** Chromo glossy 225 grams, and it is sulfonated, as in English language textbooks.
- **Binding:**
 - Bonnie: Glue not less than ½ mm with side binding screening approximately 5 mm wide glued.
 - Khreis: The distance between Khuraisin is equal on both sides, with a distance of 7 cm, and pin ends are applying from inside.
- **The printing is free from defects.** The color composition is observed with high accuracy; it is subject to technical examination of the particular device in the printing press or the administration.
- The supplier must deliver to the Palestinian MoE five units of printed textbooks to be examined and take the supply approval.

³-(<http://www.gs.pmf.ps,tender> No. 65/2017)

Technical Department in Curriculum Development Center:⁴

Figure No. (2) shows the mechanism of the Technical Department at the Curriculum Center:



The Palestinian Curriculum Development Center at the Ministry of Education includes the following departments: General Department for Humanitarian Curricula, General Department for Scientific Curricula, Professional Department, and Technical Department. Below is a description of the work of the technical department and its sections:

The tasks of the technical department:

1. Following up on the administrative issues in the department.
2. Following up on printing books and other publications.
3. Following up on drawing works.
4. Devices and supplies.

⁴ -(<http://pcdc.edu.ps/ar>)

5. Organizing color printing works.
6. Following up on contract files.

Tasks of the Printing Department:

1. Printing the required materials of the department's accomplishments
2. Printing all primary copies of textbooks for Grades 1-12.
3. Printing the official documents at the Curriculum Center.
4. Printing literacy books.
5. Printing teacher guides for Grades 1-12.
6. Printing the references issued by the Curriculum Center.

Design Department Tasks:

1. Following the approved specifications for designing approved textbooks for each educational stage.
2. Setting the textbook specifications, the number of colors, the size of the book, and the number of its pages.
3. Conducting studies to improve the textbook design and its impact on learning.
4. Following up on printing school textbooks in the printing presses and checking out if they match the standards of a good book.
5. Making sure that the textbook has access to international specifications in its design, output, and printing is done in the best way possible.
6. Keeping up with developments in software related to designing scientific and technical books in particular and other publications in general.

Duties of the Drawing Department:

1. Providing school books with all the necessary drawings and pictures for the texts.
2. Coordination with the authorship teams to prepare the specifications for a good picture of the book.
3. Preparing covers for textbooks.
4. Providing design and drawing services to the MoE for its publications.

The tasks of the Language Editing Department:

1. Checking the soft copy for all subjects and making sure it contains the following:
 - The two pages of the inner cover.
 - List of contents (index).
 - Pagination sequence, shapes, and graphics.
 - Various appendices (list of references, list of terms, if available).
2. Reading the manuscript for correct linguistic, grammatical, spelling, and typographical errors.
 - Checking punctuation.
 - Paraphrasing soft phrases.
 - Manuscript formation in terms of the hamzah (Arabic letter) of the pieces, obsolete words, the last words, the shadah (accentuated and stressed Arabic letter), and the dot.
 - Checking the uniformity of sentences and keeping sentential cohesion.
 - Clarity of paragraphs.
 - Building coherence of paragraphs.
3. The language editor must consider the following:
 - The consistency of the author style.

- Keeping the meaning of the sentence s/he corrects and of the text s/he paraphrases.
 - Keeping the paragraphs intact, that is, s/he mustn't add any new paragraphs in the text.
 - Providing clear Arabic text free of padding.
4. Contacting the relevant curriculum member to consult with him/her if a phrase or term is ambiguous, or if an abbreviation, a reference to a shape, or, otherwise, anything is not clear.
 5. Standardization of terms in the manuscript, parts of a single book, and the whole series.
 6. Arranging the references according to the principles followed by the Curriculum Development Center.
 7. Making sure to list the terms alphabetically.
 8. After completing editing the manuscript, the curriculum team member will ensure that the editorial notes are entered, and that the manuscript is submitted to the Ministerial Curriculum Committee for approval.

2.3.2 Display Some Standards Related to the Design and Printing of Textbooks:

Egyptian National Authority of Quality Assurance and Accreditation Standards:⁵

The Egyptian National Authority of Quality has defined criteria, which lay foundations of the textbook issuance, in order to provide them for decision-makers as a guiding tool. These established criteria have helped design and implement quality textbooks as a comprehensive and integrated reference for students, develop their knowledge and mental capabilities, stimulate their abilities to self-learn, and finally enable them to self-assess

⁵ (22-9-2010, د. مجدى قاسم).

their levels through different activities, exercises and multiples questions. The authority has set several criteria, as follows:

Presenting Some Arab Standards Related to the Design and Printing of Textbooks

- Selecting experts at the authorship phase and defining the methodology.
- Determining requirements for book cover design, age-appropriate content, color consistency, providing an element of attraction and suspense, keeping internal page alignment, organizing the elements' arrangement, keeping topics in sequential order, and determining the position of images in the book and the manner in which they are used to deliver information.
- Paying attention to the quality of assembly and binding during the printing process and using appropriate fonts for the age category levels.
- Defining the printing paper specifications and the book specifications in terms of size, weight, and dimensions in a manner appropriate to the age and nature of use.
- Guaranteeing content standards are met as well as the scientific material related to life and social problems.
- Ensuring the content's accuracy, modernity, and balance, its rational arrangement, suitability of the language used for the student's age, relevance, applicability, attractiveness, and its capacity to stimulate positive learning and grow mental skills.
- Considering cost-cutting and efficiency-of-use while maintaining quality by providing instructions to ensure cost-cutting and efficiency-of-use while maintaining quality.

▪ **Textbook Standards, According to the Vision of the Quality Assurance Unit at Menoufia University in Egypt:**⁶

Due to the importance of the book as one of the essential educational pillars, it is imperative to select the best quality of textbooks and continually improve their quality.

And for this reason, an array of specific criteria has been identified and should be followed upon developing textbooks:

First: Presentation of the book's content:

1. The clarity and ease of the book language and the presentation of the topics in an interesting manner.
2. Taking into account the linguistic level of the students.
3. Considering the coherence, cohesion, and sequence of the book's material and its integration with other materials.
4. Ordering the book's topics logically.
5. The book's inclusion of scientific modernity.
6. Contains pictures, charts, illustrations, maps, statistics, and other means to facilitate the learning process.
7. Presenting topics in a manner that develops thinking and problem-solving ability.
8. Observe clarity in the presentation of the material with the necessary explanation, interpretation, and examples
9. The book includes additional sources for reading and encourages students to refer to them.

⁶ - http://mu.menofia.edu.eg/sci/sci_Quality/View/66511/ar

Second: Arranging and publishing the book:

1. Considering the quality of the output of the book and the quality of the paper and binding.
2. The emergence of the main and sub-headings, the clarity and accuracy of the treatment of graphics, images, and shapes.
3. The print is clear and free from defects.
4. The book contains practical activities and exercises at the end of each lesson.
5. It includes a clear introduction, contents, lists of terms, maps, graphics, statistical tables, and others.

In addition, the general characteristics of book design have also been summarized according to a study (السلمي واخرون، 2017), in this fashion:

1. Brief.
2. Organized.
3. Centered on the learner.
4. Accurate.
5. Enjoyable
6. Based on standards.
7. Motivational and based as much as possible on authentic and realistic activities.
8. It builds on the learner's previous information.

Furthermore, Haji (2016) presented several standards for designing and printing a textbook following the standards adopted in Saudi Arabia. They are as follows:

Textbook Standards for Covers:

- It is made of cardboard.
- Attractive colors.
- Tight stapling and pressing.
- Containing the book's title, the author's name, and an image or symbol associated with the content.
- The title should be expressive, brief, and written in a clear and attractive font.

Display of the Book's Content:

- It has a relationship with objectives of the book.
- The content is related to the reality surrounding the students and their previous experiences and preparing him/her for subsequent experiences.
- It contains cognitive components (theories, principles, values, etc.) as well as professional and language skills.
- It takes into account individual differences.
- It keeps up with modernity and scientific accuracy.
- The size of the course corresponds to the study plan and the time specified for it.
- A balance between depth and comprehensiveness.

Preparing and Producing the Book Standards:

- The book includes pictures, drawings, and illustrations of topics.
- It contains educational models.
- Each unit begins with an introduction and ends with a summary and exercises.

- The presentation of the content considers the availability of the element of excitement and suspense.
- The accuracy of the used language and the use of punctuation.

Evaluating the Textbook Standards:

- Adaptation of the calendar to the objectives of the book and its presented topics.
- It includes sufficient and varied questions and exercises.
- It measures knowledge and skill areas for all levels.
- It is appropriate to students' abilities and able to detect strengths and weaknesses.

Book Printing and Formatting Standards:

- The clarity of the font and its size are commensurate with the students' visual maturity
- Use good quality paper that does not reflect light.
- The books are free from typographical errors.
- Focus on punctuation.
- For texts, it is necessary to be distinguished in the size and color of headlines and sub-headings.
- Fit the spacing between the lines.

Furthermore, the State of **Qatar** has also identified several standards that must be available upon developing and producing textbooks, based on the teachers' point of view. These standards have the following aspects (عبدالحكيم واخرون، 2017):

Standards for Designing, Directing, and Printing Books:

The emphasis was placed on the need for clarity of printing of content, which should have considered an appropriate spacing between the lines. It also indicated the importance of providing illustrative tools such as pictures, drawings, and models to simplify the content and facilitate understanding. It was also pointed out that the books should have identified the means that aligned with modernity so as to keep up with fit the students' thinking patterns.

Quality Standards of Presenting and Organizing the Content:

- Considering the gradual presentation of content from simple to complex to facilitate comprehension while using vocabulary familiar to students.
- Adaptation of the book content and its activities to the needs of students consistent with the plans, while ensuring that the book information is modern, deep, and comprehensive.
- Adaptation of information and facts to the student's mental, social, cultural, and linguistic levels across all educational stage.
- Incorporation of content distribution for all topics so that it presents correct concepts and ideas.
- Highlighting the Islamic and Arab identity upon choosing topics, examples, concepts, values, and skills.

- The information has no scientific errors or complications.
- The book's contents are related to the previous and subsequent books to achieve information integration.
- There is a list of additional external references at the end of each topic, which students can use to expand their knowledge.
- The indicators linked to the linguistic accuracy of the book's content are presented in a manner in which the book is free of grammar and spelling errors. The appropriate use of words, the length of sentences and structures facilitate reading task for students.

The Commission for Accreditation and Approval of Textbooks in Algeria through the National Institute for Research in Education (INRE) also identified several characteristics for the reform and development of textbooks (Nimour, 2018, p.138-140):

- Ensuring that the information in the book is up-to-date and consistent with the facts and scientific theories.
- The author must present the educational material in the book in an appropriate manner, that is, it is formulated in a clear and organized linguistic style and with pedagogical skill.
- The author's major focus is on adapting the scientific material and on formulating and coordinating the content to respond to the students' dispositions, interests, and mental abilities.
- The necessity of adapting books in relation to the country's social reality.

- It is also imperative to consider enabling students to acquire the competencies required to keep pace with economic progress, the scientific breakthroughs, and technological advances.

Moreover, Habib (2007) outlined the necessary conditions for the approval of textbooks, as follows:

- Commitment to the goals and objectives of the educational system.
- Respect for national principles and values.
- Containing true, accurate, and up-to-date information.
- The embodiment of the main objectives and programs required.
- The suitability of exercises and various activities.
- Respecting scientific and technical standards related to aesthetics, durability, and ease of use.

Crabbe (2014) also laid down specifications for the design and printing of school books (paper, binding, colors), as follows:

- **Technical Specifications for Paper Quality:**

The weight of paper is measured in grams per square meter (GSM) in the metric system, or pounds in America. The higher the GSM, the more durable and expensive the paper. It is important to the choice of paper should be based on a balance between weight and cost.

Typically, the paperweight ranges between 80-90 GSM/paper, the best of which is made from spruce wooden pulp found in Scandinavian countries. But the best quality is wood-free paper, and 100 GSM or higher. That is composed of chemical pulp that is not prone to yellowing due to the composition of the fibers of which paper is made. This paper is perfect but also costly.

Textbooks are usually printed on 60-80 GSM/paper.

- **Technical Specifications for Binding:**

Binding: The pages of a book are held together in this method. Animal or hide glue, resin, and hot melt glue are the three main kinds of glue used in bookbinding. There are several ways of binding books. The printer's task is to choose the correct binding method to ensure that books do not fall apart. In addition, the correct type of binding can extend the life of a book.

Below are some of the significant bookbinding techniques:

- Hardcover: This method is time-consuming and expensive and may not be ideal for textbooks.
- Punch and bind: used for atlases and other publications
- Thermally activated binding: This common type is considered perfect/adhesive binding, which works well for paperback or softcover books, using hot melt glue such as PUR.

- **Technical Specifications for Colors:**

The printed color we see is a combination of the four main printing colors: cyan, magenta, yellow, and black. Mixing all three theoretically results in black.

Color printing typically uses ink of four colors: cyan, magenta, yellow, and key (black); the resulting "secondary" mixtures are red, green, and blue.

Most textbook printing is black text on white paper. Textbooks for the lower classes, science, and mathematics generally have more color than other subjects (Wikipedia).

Beside Arabic standards, I will present the non-Arabic standards for designing and printing school books for the comparison and contrast purpose of and, using this model:

○ **Guiding Principles for Printing of Textbooks (Hong Kong Chinese Textbooks)**

The content quality standards should be self-sufficient in terms of effectively dealing with the curriculum learning objectives; that is, there should not be any additional supplementary materials for textbooks (CommitteegovHk, 2014). In addition, the design of books should facilitate the reuse of textbooks, provide publishers with a clear picture of the relevant standards, and encourage them to print textbooks using appropriate, low-cost printing methods. Here are some guidelines for printing books:

- **Standards of Paper:**

1. Use paper that is light, thin, durable, and matte finished.
2. Use paper of lower-cost, given comparable quality.
3. Take into consideration the impact on human health and the environment when choosing paper. For example, they may use printing paper that complies with the Environmental Protection Department's green specifications.

- **Colors Standards:**

1. Use a single color to print the texts in textbooks as far as possible.
2. Avoid using unique colors as well as full color to print colored pictures (e.g., atlas).
3. Use a single color for printing workbooks.
4. Standards for printing ink:
5. Take into consideration the impact on human health and the environment when choosing inks. For example, they may use environmentally-friendly lithographic inks that comply with the Environmental Protection Department's green specifications.

- **Printing Standards:**

1. Reduce the blank space margin on each side of the page.
2. Avoid any materials for a one-off use, e.g., stickers that can be used only once and learning activities that require tearing off pages from the textbook as far as possible.

- **Criteria Related to the Font Type and Size, and Vocabulary:**

1. Adopt font types that are commonly used. The font type and font size should be consistent throughout the textbooks as much as possible.
2. Use a minimum font size equivalent to font size 12 in “Microsoft Word” for legibility. Larger font size is recommended for textbooks for the kindergarten and lower primary levels.

- **Special Standards for Book Covers:**

1. Use gloss lamination to protect textbook covers and avoid using matt lamination.
2. Avoid using costly methods to print textbook covers (e.g., the spot UV varnishing).

- **Quality Standards of the Binding:**

1. Make good use of flexible binding methods to reduce the weight of textbooks.
2. Adopt proper binding methods to make textbooks easier to carry. For example, you may bind textbooks in loose leaves, separate them into a few thin volumes or print them in separate modules.

▪ **The Approved General Standards for Designing and Printing Books According to the Rcampus Classification are Presented Below:**

Table No. (1) Rcampus list of criteria for assessing how well the textbook design is.

	Weak 1 pts	Good 2 pts	very good 3 pts	Excellent 4 pts
Organization: Headings and subheadings, spaces between lines and paragraphs, page numbering, and specification of areas for figures and graphics to the rest of the elements.	Highlighting the main, sub and secondary addresses	Highlighting the main, sub and secondary headings, coordinating the spaces between lines and paragraphs	Highlighting main, sub, and secondary headings, coordinating the spaces between lines and paragraphs, determining the areas of shapes and text in regard to the rest of the elements.	Highlighting the main, sub, and secondary headings, coordinating the spaces between lines and paragraphs, determining the areas of shapes and text in regard to the rest of the elements, page numbering.
Book components: The pages contained in the book, such as the cover page, the front page, the index, references, and a glossary to the meaning of words and terms	The book contains the cover page, and the sub-cover page	The book contains a cover page, sub-cover page, contents page, and an index	The book contains a cover page, sub-cover page, contents page and index page, introduction, and publication page	The book contains the cover page, the sub-cover page, the contents page and the index, the introduction, the publication page, the list of references, the meanings of words and terms guide
Texts: The appropriate type of letters in the Arabic language, the appropriate color for writing texts, the appropriate font for writing headings and subheadings in both Arabic and English	Using the Naskh script in writing texts in Arabic	Using the Naskh script in writing texts in Arabic. Avoiding the use of capital letters in English in, and using black color for texts on a white background	Using the Naskh script in writing texts in Arabic. Avoiding the use of capital letters in English, the use of black text for texts on a white background, the use of italics and the technique of using lines to explain the body, and the use more than one type of letter in writing texts	Using Naskh script in writing texts in Arabic. Avoiding the use of capital letters in English, the use black text for texts on a white background, the use of italics and the technique of using lines to explain the body, and the use more than one type of letter in writing texts, Using the font (18- 30) to write the main and subheadings in Arabic, and the font (14-16) to write the main and subheadings in the English language and the like
The background: Contrast the background with text, the appropriate background for the graphics, the most suitable colors to be used in the background	Using one color for the background	Using one color for the background. Avoid the use of pictures and graphics as text backgrounds	Using one color for the background. Avoiding the use of pictures and graphics as text backgrounds. Using a contrasting background with the text colors	Using one color for the background. Avoiding the use of pictures and graphics as backgrounds for writing texts. Using a contrasting background with the colors of the texts. Using light colors to color the background. Using white or cream as a background for the drawings
Productive characteristics: The type, color, weight of the paper, the type of ink used, the pages separating the chapters	Using white paper of at least 80 grams for printing the book	Using white paper weighing 80 grams at least in book printing. Using non-coated paper and matte	Using white paper weighing 80 grams at least in book printing. Using non-coated paper and matte. Using dark ink in the printing of written material. Putting a different color page between chapters	The use of white paper weighing at least 80 grams in printing the book. Using uncoated and matte paper. Using dark ink in the printing of written materials, the placement of a page of a different color between the chapters, the cover to be durable and able to withstand heavy use. Each chapter begins with a page explaining the main topics. The summary links it to the previous chapter

Source :(<https://www.rcampus.com>)

Rcampus: is a suite of learning, assessment, and competency management solutions that enable educational institutions to be more efficient, provide easy access to their constituents, and gain a thorough understanding of skills and competencies.

Drawing a comparison between the Palestinian standards adopted in the printing of books and what has been presented above thus far, one can find out that the specifications were above the standards, as the specifications approved for printing paper required a specific weight (70 grams) for books in Arabic and weight (80 grams) for English books. Apparently, this is a good percentage compared to the general standard of paperweight (60-80). Gram). Concerning the printing color, the Palestinian books, similar to Hong Kong in terms of the number of colors used for printing, also used four colors as a minimum in mixing colors.

To have an idea about the standards used in the design and printing of textbooks in Palestine, below is a simplified table that will compare these standards in comparison with those used in other countries and institutions:

Table No. (2) Comparison of some technical specifications in the literature review:

	Text color	Font Size	Paper
Palestinian	Cover and paper printing 4 or more colors	For grades (1-4), the font size is 25pt. For grades (5-9), the font size is 18pt. For grades (10-12) the font size of 16pt is usually supported.	Paper weight 70 grams, free of smooth wood, opacity 80% or more, cover weight 225 grams glossy.
Hong Kong	Use of one color for text as much as possible.	Minimum size (12) and use of a larger font for basic stages.	Considering the health and environmental impact of the quality of the paper and inks used. Optimizing paper utilization by reducing margins. The cover is glossy and has a reduced cost due to the short usage time. Divide the book into sections to reduce the weight of the bag.
Rcampus Specification	Use of black text on a white background, and avoidance of using pictures as text backgrounds.	One type of text, size 18-30 for Arabic writing, and size 14-16 for English writing.	Paper weighs at least 80 grams, use of uncoated and matte paper, the use of dark ink in the printing of written materials.

It should be pointed out, having presented several internationally used standards, that it is necessary, upon looking into technical aspect of designing and printing textbooks, to consider the aspects of the content quality, due to their interrelatedness and integration.

Therefore, the distinct advantage gained from enriching this chapter with literature is determining which dimensions the researcher has to examine in this study. More importantly, it also gave him a broader perception of the subject, which helped immensely in the construction and administration of the study tools. To be concise, this facilitated the conversation he had with the focus group of the specialists from the MoE to get an idea about the standards used to achieve technical quality in books. Further, It enabled him to identify and frame the items for the questionnaire. To sum up, the literature also contributed to clarifying the main idea of research and defining the problem and objectives of the research more accurately.

Besides, the literature played a role in defining the study community and its sample and providing an initial roadmap about the main points that the researcher had to consider to draw conclusions and recommendations. That would help in measuring, developing, improving the technical aspect of textbooks, and making their design, preparation and production keep pace with scientific, technological and technical developments, which would certainly facilitate the achievement of its objectives related to meeting the needs of society in different fields.

The quality of the design and technical output of the textbook, based what has been explained above, can be summarized in the extent to which it can arouse students' attention with sensory and visual stimuli. Therefore, the book is a tool through which the teacher can deliver the material to the students. Consequently, it requires lots of care to

present it in accordance to educational and technical principles and standards that consider and environment of and reality of the students' lives, while keeping pace with their rapid cognitive development. Furthermore, it may achieve the coherence, or strike a balance, between imparting students with necessary knowledge and skills and the requirements imposed by the practical life required by the labor market. It is therefore important to define the main conditions and criteria for the book in terms of its scientific content and the way it is presented and produced concerning size, colors, binding, and cover.

In conclusion, based what has thus far presented, the elements of technical standards related to the quality of preparing the textbook can be identified and then summarized, as follows:

- Define cover standards for the book.
- Determine the size and dimensions of the book.
- Determine the criteria for the general format of the book.
- Determine the specifications of the printing paper.
- The quality of the selection of images, graphics, and shapes.
- Specify the colors for printing.
- Format the type, size, and spacing of printed texts.

In view of the preceding literature review, a general summary of the technical standards for the quality of textbooks for the following aspects is provided below:

Table No. (3) Summary of the technical standards for the quality of textbooks.

Standards related to images and graphics	
Contribute to the development of students' thinking skills, emotional and aesthetic sense.	It helps students to understand and read the content of texts.
Realism and clarity of colors	Linked to the surrounding environment of students.
Acquisition of the intended values by students.	Achieve the goal you set.
Attract the students' attention and arouse their interest.	Contribution to the development of students' thinking skills.
Suitable for the age level of the students.	
Standards related to textbook printing	
Fitted font size and number of words per the line	Matching the font type to the printing background
Distinction and clarity of main headlines and subheadings	Quality of the output and printing of images and shapes.
Clarity and ease of readability of printing.	Fit the space between the lines
Consistency of colors and degrees with each other.	The size of the book is appropriate to the age of the students in terms of its length, width, and number of pages.
The durability of the packaging of the book.	Suitability for the type and weight of paper used.
Suitable paper book in terms of the degree of luster.	
Standards related to presentation of the content	
Standardization the size of the margins for the pages.	Suitable size of the images with the texts attached to them.
Integration of the organization book content with the objectives of the curriculum.	Appropriate form of arrangement of sentences paragraphs.
Taking into account the linguistic and aesthetic integrity aspect of the content organization.	The book design is in line with the philosophy of education accepted by the community.
Taking into account the presentation of the content with the modern scientific development.	It matches the students' level of mental maturity and considers the individual differences between them.
Appropriate use of text formation.	It includes a list explaining concepts and terms to make it easier for students to understand.
Suitable spaces between words.	Use punctuation correctly.
Standards related quality book cover	
The title is clear and expressive of the content.	Appropriate cover colors and attractiveness to students.
cover paper quality	Book stapling quality.
The attractiveness of the cover images and their relevance to the content of the book	

Much more importantly, the criteria in Table No. (3), which were extracted from the literature review, will not only help determine the dimensions of quality approved in the preparation and design of textbooks, but also in preparing the study questionnaire and in contributing to achieving its objectives.

Based on the Above-mentioned, the Benefit of Studying the Literature can be Summarized, as Follows:

1. It should be pointed out that some studies aim to study the overall quality of textbooks in general, whereas others focus on studying some technical aspects of preparing books such as the quality of images, book covers, colors, text coordination and other characteristics. This certainly contributes to the formation of a general perception of aspects the study.
2. It should also be noted that most of the reviewed studies use a questionnaire and the descriptive-analytical method and quantitative research, as in this study. Further, samples in the studies mapped out in the literature varied between teachers, students and curriculum experts, as does this research.
3. Interestingly enough, whilst this study agrees with the previous literature in focusing on the importance of technical quality standards for books in attracting students' attention and facilitating the delivery of information, it differed with from it in that it includes the technical aspects of designing new Palestinian textbooks for all levels and subjects, as it seeks to provide a general understanding of textbook's design that will help develop textbooks in the future.
4. Because previous studies have made use of statistical analysis program as the mechanism of data analysis and interpretation of the results, they help better inform in this study in area.
5. Besides contributing to defining the dimensions that make up the questionnaire of this research, the study of the literature has provided a scaffold, explaining of the idea the research by helping define its problem and its goal. It has also provided a perception of other tools, community and sample of the study.

Chapter Three

3.0 Methodology

This chapter will discuss the outline of thesis design, primary and secondary data, study instrument, questionnaire validity and reliability, population and sample of the study, method of data analysis, and thesis conceptual model.

3.1 Thesis Design

The purpose of this study design was gain a clearer understanding of the topic and to effectively address the study problem, through using quantitative research approach to collecting data and answering the study questions. As the factors related to the technical quality of books were identified, the study questionnaire was designed to measure the availability of standards. As for the survey, it included a sample of teachers and administrators in schools.

The questionnaire was developed in a manner where the respondents can easily express their opinions and thoughts about each element of selected dimensions.

3.2 Data Collection

The primary data were collected, using structured questionnaires to measure the availability of technical quality standards in the textbooks based on the selected factors. the dimensions' items were rated using the five-point Likert scale from 5 to 1, with 5 denoting *strongly agree* and 1 representing *strongly disagree*. The questionnaires were made in an electronic format, and an online link⁷ of this format and was sent through the

⁷ -Note (attached is the link to the questionnaires, the response to them closed on 16/12/2020)
https://forms.office.com/Pages/ResponsePage.aspx?id=QCZLJLdmJE2wq4P4lQt7N0hChrZsSy1FgZ9_AOXi2IFUOTM5TjVNR0hFV09CSzM2REJQUIM3UjFBMy4u

government mail (e-letter) for schools, in addition to uploading to some web pages for teachers. To be specific, the questionnaires were designed to achieve the objectives of the study.

Secondary data were collected by reviewing published and unpublished articles.

3.3 Thesis Instrument

Data were collected mainly using two structured questionnaires for school teachers, administrators to measure the availability of technical quality standards in books. Each questionnaire consisted of two sections, which contains sufficient and relevant study items for the variables. Where the first section contains demographic elements about the respondents (gender, age, educational level, years of experience, participation in the preparation of the curriculum, and the stage of teaching), the second section of teacher questionnaire includes the following selected factors (the content for teachers): (1- The quality of the format and output consisting of 12 items, 2- The quality of content presentation consisting of 11 items, 3- The quality of images and colors consisting of 9 items, 4- The quality of the cover involving of 11 items, 5- The quality of printing consisting of 7 items, 6- The quality of presentation of ideas comprising of 6 items). The second questionnaire was used **for administrators of schools** contained 11 items.

The questionnaire went through several steps before arriving at the final version in order to be appropriate and contain related to the variables. This was done by reviewing and examining the drafted questionnaires, presenting the questionnaires to arbitrators (validating authority) and making the recommended modifications.

https://forms.office.com/Pages/ResponsePage.aspx?id=QCZLJLdmJE2wq4P4IQ7N0hChrZsSy1FgZ9_AOXi2IFURUNSNkpNUUNNTUIONkZWR0dPM0xERVRNVy4u

In addition, a focused group was selected, consisting of eight people from the specialists at the MoE in the field of designing and printing textbooks. The focus group was addressed with a single question: What is the mechanism used to achieve technical quality standards in designing and printing school books? Their answers were collected, as shown in the fourth section, in order to take a general idea mainly about the mechanism used by the MoE.

The questionnaires used a five-point Likert scale from 5 to 1, where the number 5 signifies *strongly agree* and 1 *strongly disagree*; the items were built in a positive direction, where the results were interpreted using the following evaluation criteria:

Table No. (4) The arithmetic means of the questionnaires converted into percentages.

Note: *The results were interpreted according to the following criteria:*

Rating score	Percentage	Average rate	Evaluation
Very low score	Less than 20%	1 – 1.8	High
Low score	From 21-40%	1.81 -2.6	
Medium score	From 41-60%	2.61 – 3.4	Medium
High score	From 61-80%	3.41 – 4.2	Low
A very high score	81% or more	4.21- 5	

3.4 Population of Study

The population for the study is composed of the teachers and administrators in Palestinian schools, with the number of teachers participating in the study totaling 33,787, and total number of administrators reaching 2293. Also, eight employees from the MoE specialized in designing and printing textbooks were part of the population so that it could be inquired from about the standards.

3.5 Sample of Study

As regards the method of selecting the study sample for the purpose of administering the questionnaires, it was determined based on the study population (teachers and administrators in school), where the study sample size was determined based on the targeted degree of accuracy, the size of the study population. The attached table⁸ in the appendages shows how to choose the sample size.

Table (5) shows the number of the teachers and administrators in Palestinian schools.
Note: *(This is the population)*

Workplace	Female	Males	Total	Notes
West Bank teacher	20,166	12621	32,787	Source: Ministry of Education, Ramallah
administrator in schools in the West Bank	954	739	1,693	Source: Ministry of Education, Ramallah
Gaza strip teacher	10,000		10,000	Approximate
administrator in schools in the Gaza Strip	600		600	Approximate
		sum	45,080	

According to what have been presented above, the sample was randomly selected, where the opportunity was equal for everyone in the population to get a chance to be in the sample, that is, receiving the questionnaires link and responding to it. The study sample consisted of (418 teachers and 272 administrators), with a total of 690 respondents.

- The picture below means the number (381) or more measurements/surveys are needed from this population to have a confidence level of 95% that the real value is within $\pm 5\%$ of the measured/surveyed value.⁹

⁸ - See Appendix No. 3

⁹ - <https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=50&ps=45080&x=66&y=29>

Find Out The Sample Size

This calculator computes the minimum number of necessary samples to meet the desired statistical constraints.

Result

Sample size: **381**

This means 381 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within $\pm 5\%$ of the measured/surveyed value.

Confidence Level: [?]	<input type="text" value="95%"/>	<input type="button" value="v"/>
Margin of Error: [?]	<input type="text" value="5"/>	<input style="width: 20px;" type="text" value="%"/>
Population Proportion: [?]	<input type="text" value="50"/>	<input style="width: 20px;" type="text" value="%"/>
Use 50% if not sure		
Population Size: [?]	<input type="text" value="45080"/>	
Leave blank if unlimited population size.		
<input type="button" value="Calculate"/> <input type="button" value="▶"/> <input type="button" value="Clear"/>		

3.6 Validity and Reliability of the Questionnaire

3.6.1 Reliability of the Study Tool:

The study tool's reliability was tested, using the internal consistency. In fact, the study used the Cronbach Alpha test to calculate the questionnaire reliability; the acceptable Alpha value that meets the statistical requirement for the questionnaire to be characterized as reliable should be equal to or above 0.60 according to Hänze, (2015).

The alpha coefficient for all dimensions is more than 0.60, which means the items have acceptable to high internal consistency.

Table No. (6) shows the results of the test of the reliability parameter, using Cronbach Alpha for the different study tool sections.

The first questionnaire for the teacher)	No. of Items	Value of the Reliability	Result
Total reliability factor (Teachers)	56	0.856	Pass
Technical quality of the shape and production of the book	12	0.823	Pass
Quality of the book's content	11	0.891	Pass
Image and color quality	9	0.905	Pass
Cover quality	11	0.859	Pass
Print quality	7	0.837	Pass
Quality of the book's ideas	6	0.821	Pass
The questionnaire for the administrators in schools			
Measuring the quality and durability of the textbooks used at schools.	11	0.787	Pass

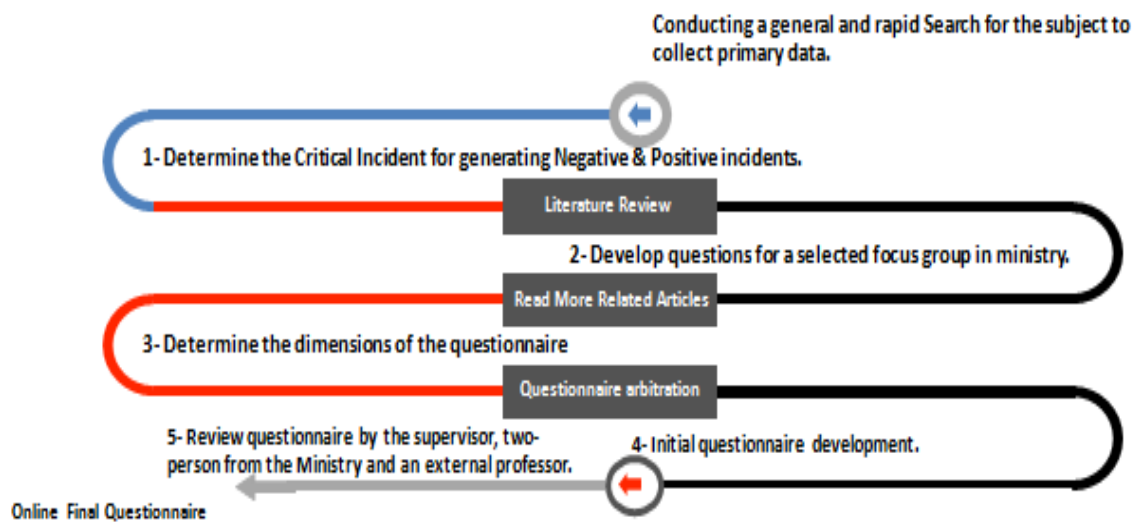
It is clear from the table (6) that all the different study tool sections' reliability has ranged between (0.787-0.905), and all of them have a high reliability coefficient. This means the study can be trusted, as they are all higher than (0.65), the level at which reliability is accepted.

3.6.2 Validity of the Questionnaire

The questionnaire moved through many stages before issuing the final version distributed to the respondents; two types of validity were used to check the validity of the instrument:

1. Face Validity: For determining the representation of the sections and questions for the purpose for which they were designed, by distributing the questionnaire to some teachers who responded to them smoothly and easily, as the questions and paragraphs were clear to them, this was an indication of the apparent validity of the tool.
2. The validity of the arbitrators: the questionnaire was reviewed and edited by the supervisor then it was sent to three evaluators. The researcher then made the appropriate modifications referred to by the arbitrators.

- **This template shows the steps for developing a questionnaire:**



3.7 Statistical Approach

Ensuring the reliability of the questionnaire and its validity, the following was done: finalizing the final form of the tool, identifying the respondents of the study sample, and then distributing the questionnaire to the members of the study sample. Afterwards, the received responses were collected, and gathered data was analyzed by using a Statistical Package for the Social Sciences program (SPSS).

The frequency was used to analyze and describe the demographic variables, while the mean and standard deviation were use in descriptive statistics to measure the degree of the availability of items. In addition, the study used one sample T-test to test the significant role of study variables, and one way ANOVA to test the impact the demographic variables on selected factors, particularly the educational stage taught by the teacher and subject taught as well. To sum up, the processes were used to analyze the data were, as follows:

1. Cronbach-Alpha formula to measure the internal consistency
2. Arithmetic mean and percentages.
3. Differences in the responses of the sample members.

Chapter Four

Data Analysis and Discussions

This chapter analyzes the collected data to achieve the main study objective. It also explains the results and compares them to previous studies with a similar nature. The chapter starts with analyzing respondents' profiles; then, it answers the study questions and hypotheses. The sample size was made of (418) school teachers and (272) administrators. Data were collected by using five- point Likert scale questionnaires from schools' employees, and data were analyzed by using (SPSS).

4.1 Demographic Characteristics of the Questionnaire's Respondents:

The frequencies and percentages were used to describe the responses of the study sample according to its variables, as indicated in Table No. (8), which shows a general summary of the demographic variables of the study sample composed of teachers, principals and administrative assistants (secretaries) in schools.

Table No. (8)

Variable	Classification	Repetition		Percentage of the total sample%
		Teachers	Principals and secretary	
Gender	Males	139	91	33.4
	Females	279	181	66.6
Age	20- less 30	52	20	10.4
	30- less 40	158	94	36.5
	40- less 50	134	82	31.1
	50 and above	74	76	22
Academic qualification	diploma	30	52	11.9
	Bachelor	326	176	72.8
	Master and above	62	44	15.3
Years of experience	1- less 6 years	102	39	20.4
	6- less 11 years	70	37	15.5
	11- less 15 years	88	64	22.1
	More than 16 years	158	132	42
Participation in the writing of the curriculum.	Participated	49	24	10.6
	Did not participate	369	248	89.4
Classes taught by the teacher	1-4 class	102	--	24.3
	5-9 class	168	--	40.3
	10-12 class	148	--	35.4

▪ **Age Variable:**

Table No. (9) shows percentage of the respondents for the two questionnaires according to the age variable.

Table No. (9)
Percentage of the respondents for the two questionnaires according to the age variable.

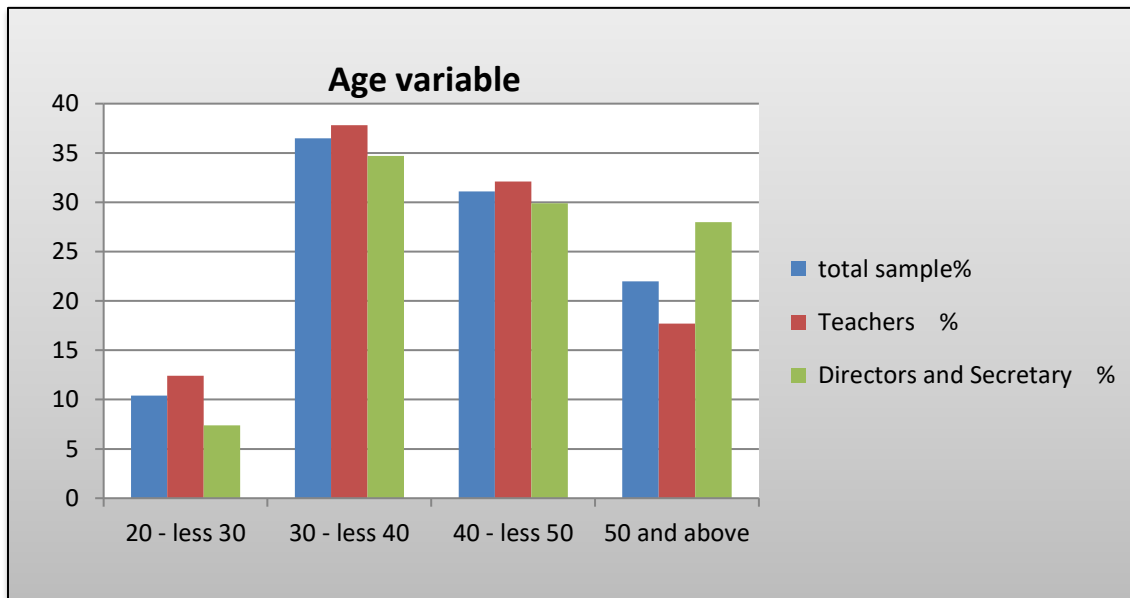
Scope	Percentage of the total sample (%)	Percentage of Teachers (%)	Percentage of principals and administrative assistants (%)
20 - less 30	10.4	12.4	7.4
30 - less 40	36.5	37.8	34.7
40 - less 50	31.1	32.1	29.9
50 and above	22	17.7	28
Total	100%	100%	100%

According to table No. (9), the statistical analysis of the study sample based on the age variable, which included four age groups, revealed that the age group (30 - less 40) years constituted the highest percentage 36.5%. While teachers belonging to this age group (30 - less 40) accounted for (37.8%), the percentage of principals and administrative assistants in school was 34.7%. It also showed the age group (20 - less 30) years, accounted for the lowest percentage (10.4%) of the sample as a whole. Whereas the percentage of teachers in that category was 12.4% for the teachers, the principals and administrative assistants in school stood further lower at 7.4%. This indicates that the employment rate for this age group (20-less than 30 years) is low, which reasonably accounts the high unemployment rate among the young people.

Besides, it was found in the statistical analysis that the sample consisted mainly of middle-aged respondents, who were (30) to less (50) years old. Put together, these respondents from the two age groups (30-less 30 & 40-less 50) made up 64.6% of the participants. These findings were consistent with the fact that most public-sector staff

were from the age category of 30–50-year-old workforce. As stated by a report of the General Personnel Council (2016-2017), most civil service servants were employees aged between 30 and 50, who constituted (67%) of employees. In contrast, the employees aged less than 30 years made up only 7%. The following figure (3) shows the distribution of the age variable:

Figure (3): The Distribution of the Age Variable



▪ **Gender Variable:**

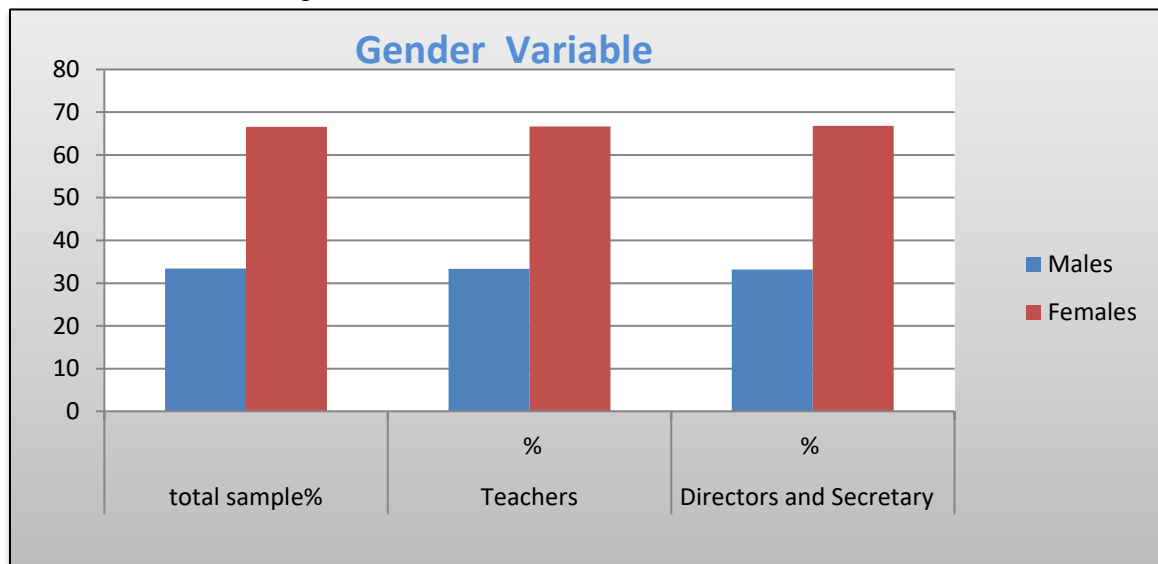
The following table shows the percentage of respondents who completed the two questionnaires according to the gender variable.

Table No. (10): Gender

Gender	Percentage of the total sample%	Percentage of teachers%	Percentage of principals and administrative assistants (secretaries) %
Males	33.4	33.3	33.2
Females	66.6	66.7	66.8
Total	100%	100%	100%

It was revealed by the statistical analysis of the study sample in terms of the gender variable that the percentage of females, which was 66.6%, was almost double that of males, which stood at 33.4. This was attributed to the greater number of females employed in this sector than the male employees. Additionally, it could also be inferred that females might be more serious about filling out questionnaires than males. The following figure (4) shows the distribution of the gender variable:

Figure (4): Distribution of the Gender Variable



▪ **Academic Qualification:**

The following table shows the percentage of respondents to the two questionnaires according to the academic qualification variable.

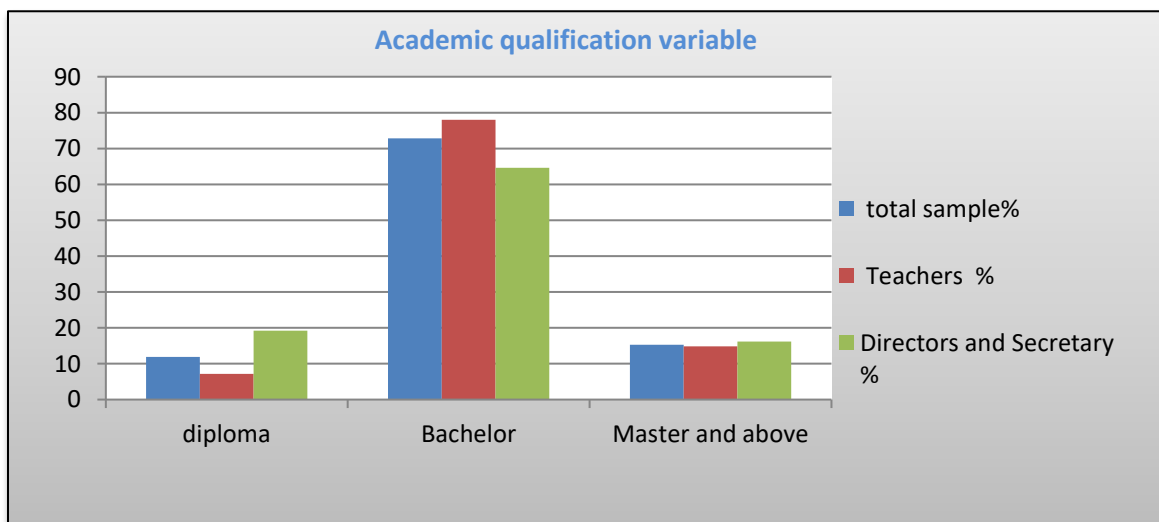
Table No. (11): Academic qualification of the respondents

Scope	Percentage of the total sample%	Percentage of Teachers%	Percentage of principals and administrative assistants %
Diploma	11.9	7.2	19.2
Bachelor	72.8	78	64.6
Master and above	15.3	14.8	16.2
Total	100%	100%	100%

The statistical analysis of the academic qualification found out that the percentage of bachelor degree holders was the highest, which constituted 72.8% of the total; however, the percentage of diploma holders was the lowest, as it plunged to only 11.9%, composed of 7.2% of teacher and 19.2% of administrative assistants. The increase in percentage of the administrative assistant category (19.2%) compared to teachers' (7.2), might be ascribed to the acceptance of administrative assistants to work at schools from diploma degree holders. By contrast, this phenomenon was less common among teachers, as it is required that a teacher should have a bachelor in order to get employed in the system. In addition, some old teachers who were employed as diploma holders pursued their education and finally got bachelor degrees.

The ratio of administrative assistants holding diploma to teachers is considered reasonable upon comparing it with the findings the annual report of the General Personnel Council in (2016-2017). In fact, it was reported that the percentage of employees who held Master degrees or PhDs was (11%) of the total civil service employees, whereas the employees who had a bachelor degree were (70%) of total civil service employees. The figure (5) below shows the academic qualification variable's distribution:

Figure (5): Academic Qualification Variable's Distribution



▪ **Years of Experience:**

The following table shows the percentage of respondents to the two questionnaires in terms of years of experience variable.

Table No. (12): Years of Experience Variable

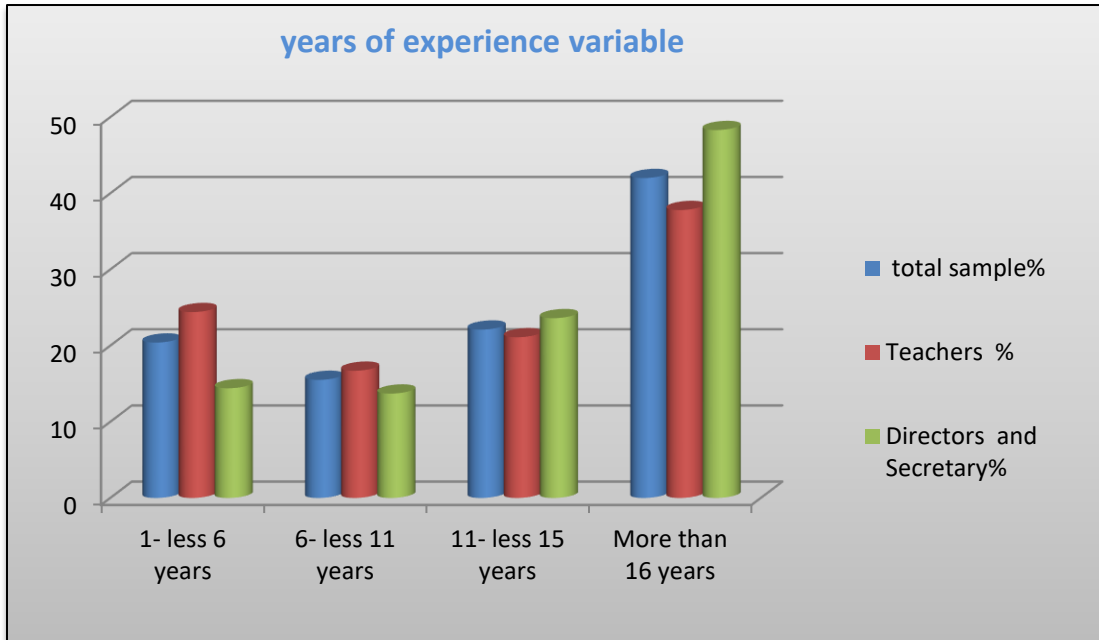
Scope	Percentage of the total sample%	Percentage of Teachers%	Percentage of principals and administrative assistants %
1- less than 6 years	20.4	24.4	14.4
6 - less than 11 years	15.5	16.7	13.7
11 - less than 15 years	22.1	21.1	23.6
More than 16 years	42	37.8	48.3
Total	100%	100%	100%

The statistical analysis of years of experience showed, as in table (12), that the largest group of the respondents were those who had more than 16 years of experience, who made up 42% of all respondents. In contrast, the group of respondents having 6 to less than 11 years of experience got lowest percentage with a total of just 15.5%. As it was clearly manifested, teachers who were within this range of years of experience (16.7%) were a minority. It was also obvious that the largest proportion of administrators (principals and administrative assistants), with (48.3%), had more than 16 years of experience in the field of education. This was due to the fact that almost all administrators had previously had some years of experience in teaching before becoming administrators.

Accordingly, it seems plausible to rely on the results of the data analysis of the sample members in this study, since nearly half of the sample respondents are employees who have served for an extended period of time (more than 16 years) either as teachers or administrators. These administrators, it is believed, have the aptitude for and extensive

experience in evaluating the technical quality of school books. Figure (6) shows the distribution of the years of experience variable:

Figure (6): Distribution of The Years of Experience Variable



▪ **Co-author Curriculum:**

The following table shows the percentage of respondents to the two questionnaires according to the participation in writing the curriculum.

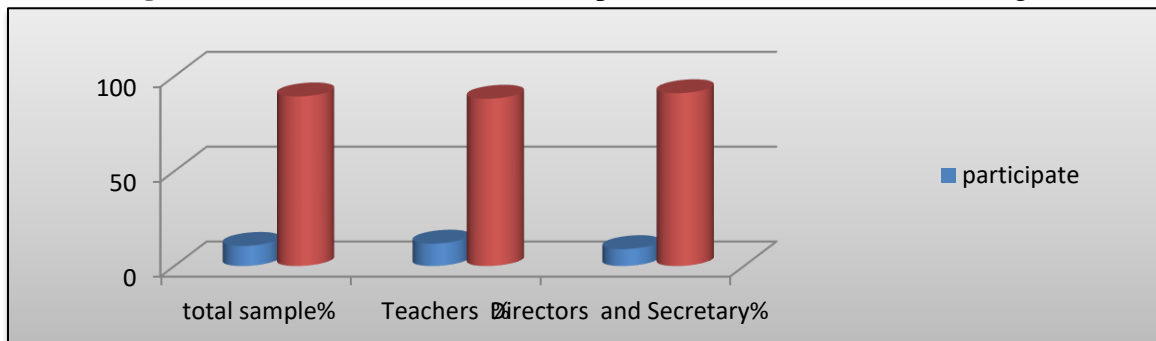
Table No. (13): Participation in writing the curriculum

Scope	Percentage of the total sample%	percentage of Teachers%	Percentage of principals and administrative assistant %
Participated	10.6	11.8	8.9
Did not participate	89.4	88.2	91.1
Total	100%	100%	100%

The statistical analysis of data revealed that the sample respondents' participation in writing the curriculum stood at 10.6%, with 11.8% of teachers and 8.9% of administrators. This low percentage of participation can be attributed to the strict selection criteria of the textbooks' authors, which is only limited to the distinguished

teachers and some other distinguished administrators, who exhibited excellence in the field. Therefore, it is quite imperative to activate the role of sub-committees of each subject at the Education Directorates level so that they can contribute to the authoring process and textbook development by sending their suggestions and recommendations to the Curriculum Center. This, definitely, will increase the participation rate in the curriculum writing. The following figure (7) shows the distribution of the participation in writing the curriculum:

Figure (7): Distribution of the Participation in The Curriculum Writing



▪ **Teacher Classes:**

About the classes taught by the teachers, the teachers were distributed among the classes according to the following table:

Table No. (14): Classes Taught by The Teacher

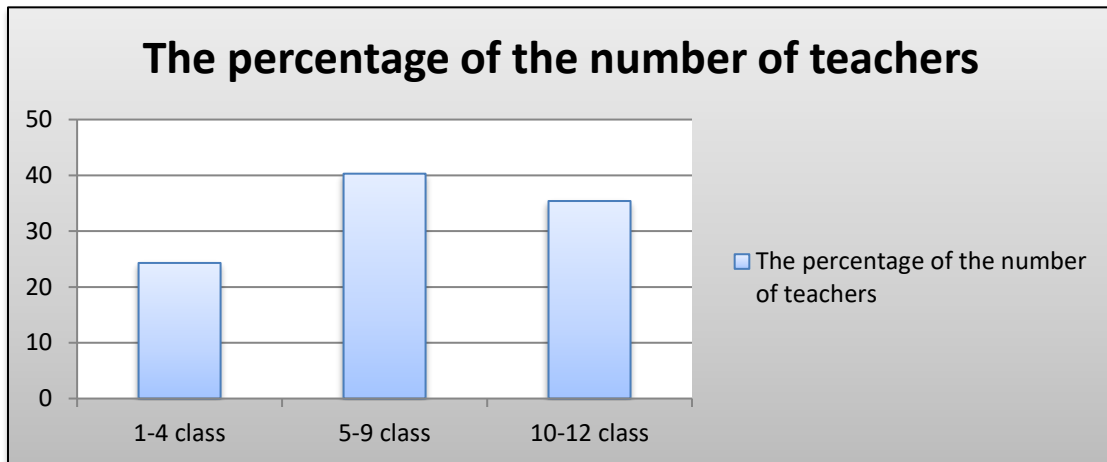
Scope	Percentage
1- 4 class	24.3
5 - 9 class	40.3
10 -12 class	35.4
Total	100%

The table shows that 40.3% of the teachers in the study sample taught the fifth to the ninth grades, while 24.3% of the study sample members taught the (1st – 4th) grades. As clearly and plainly as the table No. 14 shows, the number of teachers teaching the (5th – 9th) grades is greater than those for (1st -4th) grades. This is because of the diversity in

and multitude of the subjects in these classes, where each learning subject has a qualified teacher. In the lower basic stage, however, the number of subjects is limited, and teachers are chiefly designated as class teachers or specialists, which means they have to teach most subject, apart from English. This explains why there are few teachers in these grades.

Figure (8) below shows the study sample was distributed among all educational levels, and as such its results can be relied upon for generalization.

Figure (8): The Percentage of The Number of Teachers



4.2A simplified Interpretation of the Mechanism Used by the MoE to Achieve Technical Quality Standards (Focus Group).

Focus Group:

The focus group contributed to providing the initial idea used in developing the questionnaire questions. It also provided me with clarifications on the standards used by the Ministry of Education to prepare textbooks. The discussion raised in the focus group was only around one question: What are the criteria used to achieve the technical quality of books? The focus group is comprised of (8) employees specialized in designing and printing textbooks at the Ministry of Education, as follows:

- Director General of Scientific Research at the Palestinian Ministry of Education
- Assistant General Manager for Books and Publications.
- Heads of Research Departments at the Curriculum Center.
- Head of Design Technical Department.

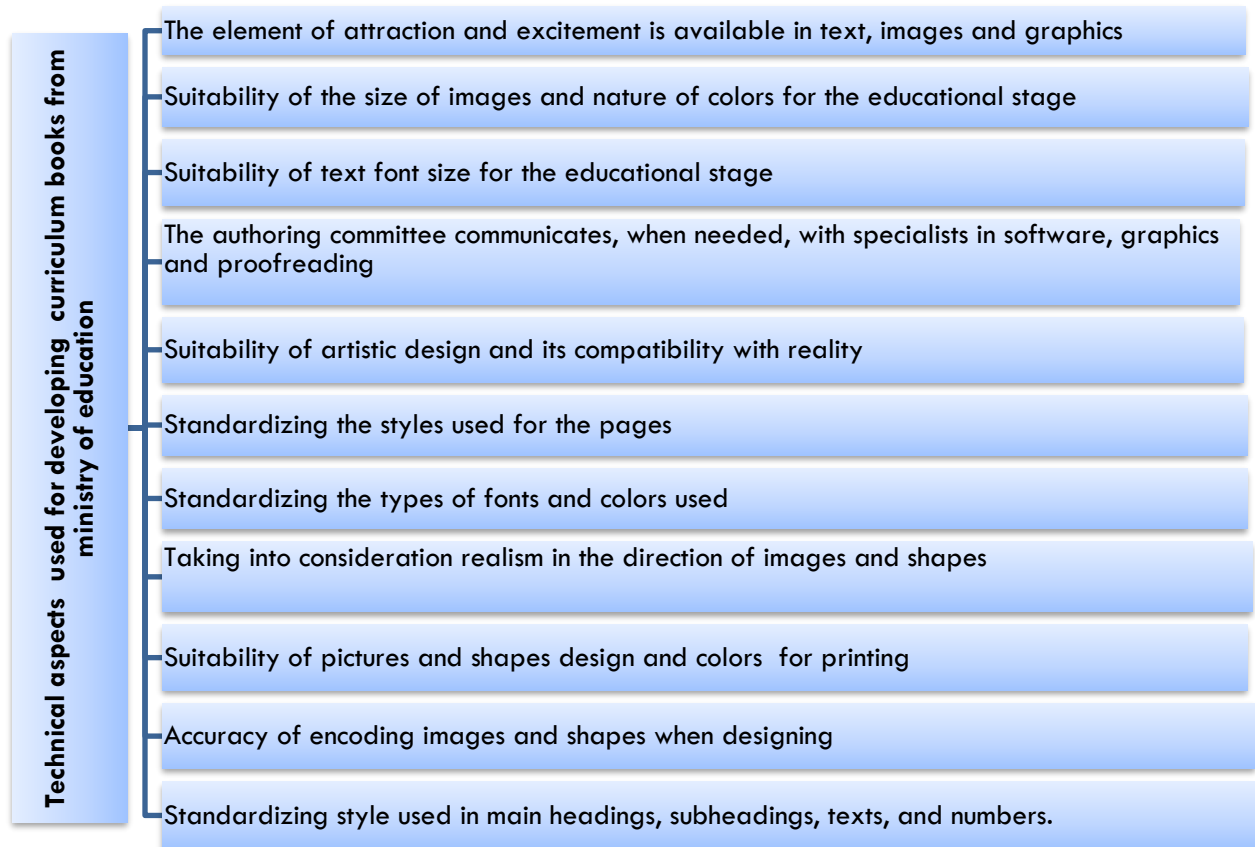
The aim behind using this MoE's focus group was to learn and clarify the mechanism used in the process of technical development and preparation of curricula, particularly in designing and printing textbooks.

Concerning the mechanisms in place for preparing and ensuring the quality of the textbooks at the MoE, the researcher, found there were a series of steps used by the Curriculum Center to ensure the quality of the books. To design a textbook, an authorship committee, the authoring team, for the subject is formed, who are mainly consisted of the head of the department responsible for the subject, and selected supervisors, teachers, and school principals, civil society institutions, a professor from a Palestinian university, and an expert, when need. It was also reported research bodies and studies conducted on the Palestinian curriculum as of the year (2000) are used in developing the curricula. Similarly, the General Framework Document for The Palestinian Curriculum prepared in 2016 as well as general guidelines document of the targeted subject (this document contains the criteria and objectives for each subject for all grades) are also utilized.

Also, upon completing the design, development and distribution of the books to students, feedback is sought by holding regular meetings, especially within the first three years of using the new textbooks. This is in order to spot any existing errors, whether in the texts, shapes, drawings, and to make corrections in the light of this received feedback upon printing new copies of the book to ensure its high quality. Below is a list of some

technical aspects that the Ministry of Education seriously considers upon developing curriculum, as shown in figure (9):

Figure (9): The Technical Quality Aspects

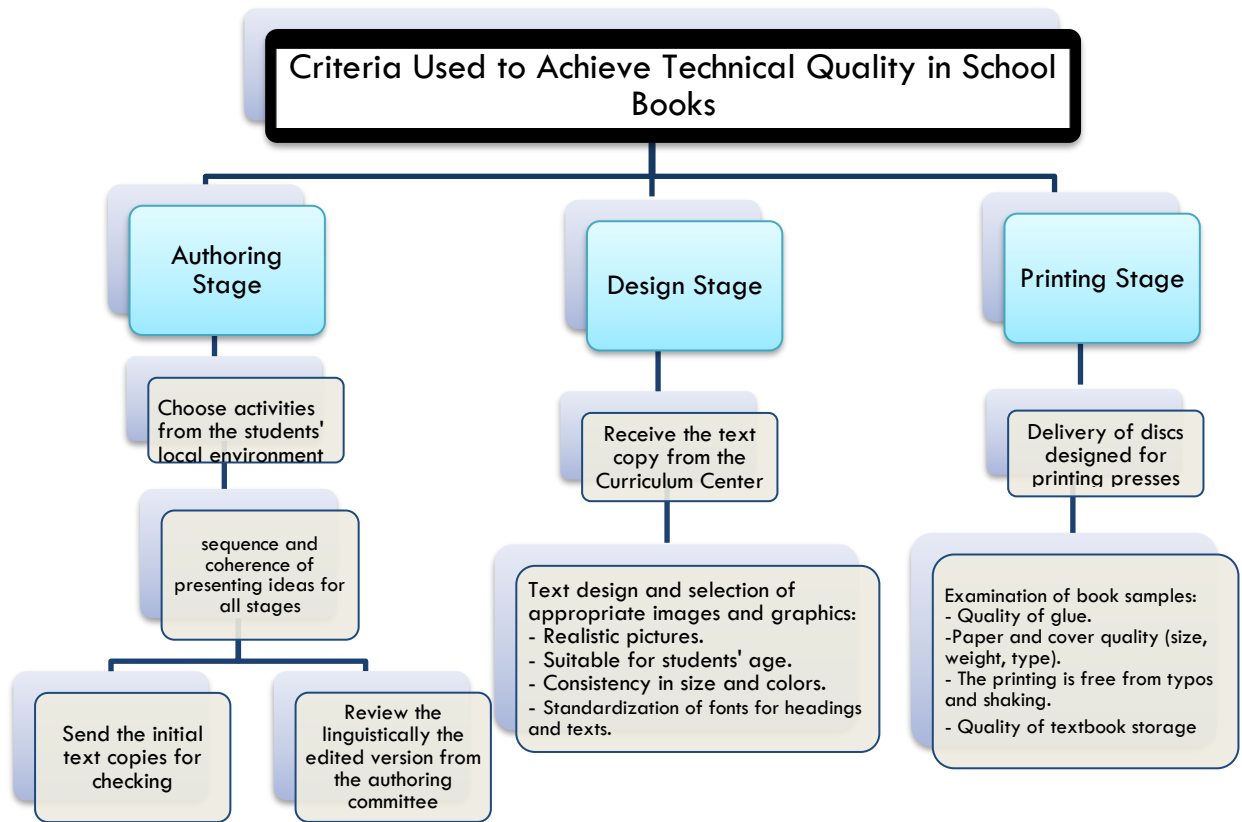


- 1- Texts, pictures, and drawings should be attractive and contain activities and examples from the Palestinian student real-life environment to facilitate understanding.
- 2- The picture and its size and colors are appropriate for the student's age level.
- 3- The font size of the texts corresponds to the age of students, as follows:
 - For grades (1-4), the font size is 25pt.
 - For grades (5-9), the font size is 18pt.
 - For grades (10-12), the font size is 16pt.

- 4- When necessary, the authoring committee consults with specialists in drawing, programming. Then all books are transformed to a language editor to check the texts before starting the design process by the technical department.
- 5- Workers in the technical department use advanced computer programs and devices to create drawings, pictures, and maps of high quality, accuracy, and clarity and in line with contemporary developments in this field.
- 6- Following uniform appearance and standardized style of the book pages and margins to give the book pages an aesthetic look.
- 7- Using two or three types of fonts and the appropriate colors for the printing process and include them in 10% of the color.
- 8- Using an appropriate size of the image and its right orientation in the processing operations.
- 9- Adopting the image resolution to match the printing process, which is (250dpi) per inch.
- 10- Using a specific coding to naming the images during the design process to ensure accuracy in identifying their locations when inserting them.
- 11- Using uniform styles for all headings, texts, paragraphs, and any other text and numbers.

Based on the data gathered from to the heads of the departments in the Curriculum Center, the Technical Department, and the Directorate General for Books and Publications regarding the criteria used to assess the technical quality in the process of preparing, designing, and producing textbooks, it turned out the whole criteria used to achieve technical quality in textbook include the following:

Figure (10) Shows the technical criteria in preparing books



Keeping the books consistent with student real life by using realistic and authentic activities in the books taken is from their environment.

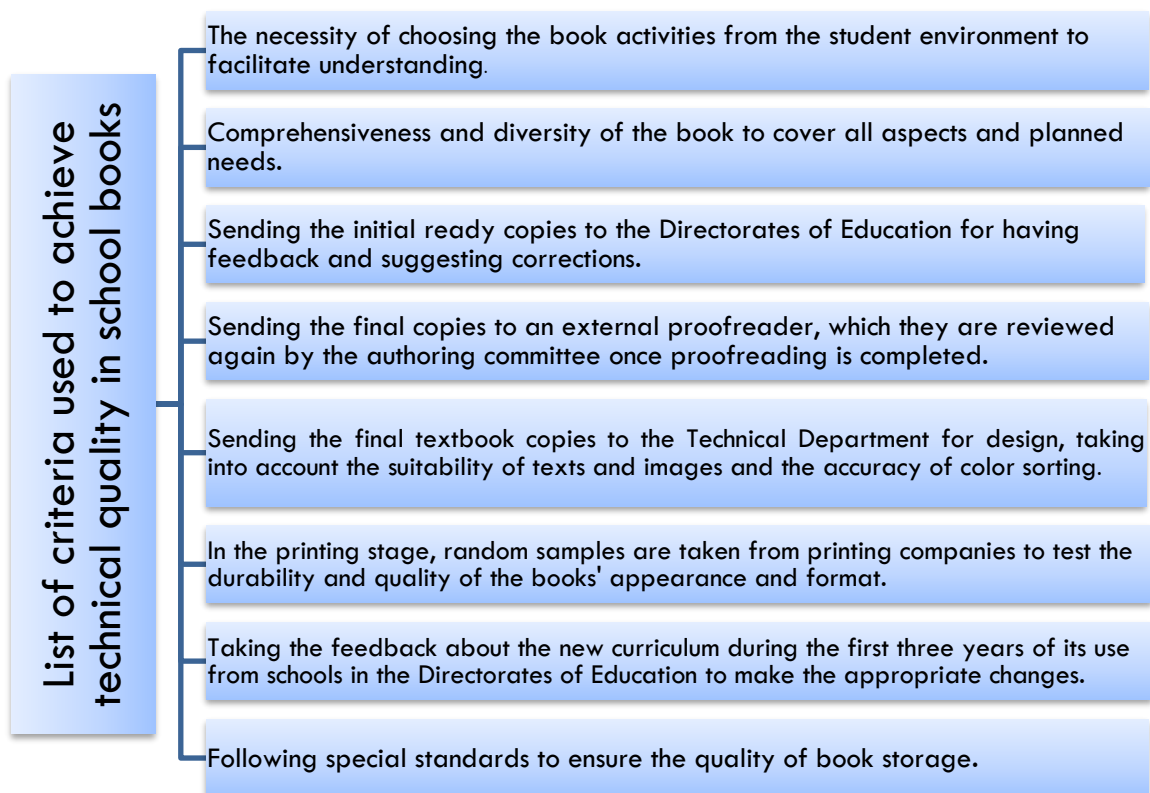
- 1- The books should be comprehensive and varied, meeting student different needs.
- 2- Sending the designed and fully developed books to the directorates for feedback.
After the incoming feedback is thoroughly examined, and right ideas are considered and incorporated in the book.
- 3- Upon completing authoring a book, it is sent to a language editor for checking and proofreading. Once this process is finished, the book is reviewed again by the authoring committee before sending it for the design.

- 4- The final edited copies are sent to the Technical Department to design texts, pictures, and graphics by using specific programs for this purpose, such as (In-design, Illustrator, Photoshop, office, CS6). The Technical Department considers the suitable font size for the educational stages, the size and newness of the images and graphics, accuracy and clarity of color. It should be emphasized that the books cover should contain images from the book's main units and a symbol of the Palestinian reality.
- 5- Before designed and confirmed copies are sent to the printing presses to start printing in large quantities, a follow-up is done with the printing presses to take samples so that they can be checked for the durability and quality of the books in terms of shape and output to ensure that there is no jitter in the printing texts and image, and that the arrangement of the papers, weight, paper thickness, and cover of the books are according to the agreed upon requirement.
- 6- During the first three years of the books use at schools, feedback is sought from teachers, school principals and supervisors in the directorates. Received feedback is reviewed and used, if necessary, when printing the new copies.

It was also revealed through the interviews with the focus group from the Curriculum Center that the MoE uses activity-based approach in the current books, upon developing a book, the authors design activities and exercises from the student environment in order to connect the students with the contexts of their community life. This, it is believed, facilitates student understanding of the content and attract them to the learning, fosters sense of community, strengthens sense of belonging to and national ties with the land amongst students.

Upon completing the writing and printing of curriculum (textbooks), the MoE distributes them directly to students at school and then collect feedback from schools. Afterwards, the necessary modifications are made, and errors are corrected before printing new copies in the coming years. It should be noted that the appropriateness of this feedback is assessed in the light of the Curriculum General Framework Document used by the MoE in the curriculum development.

Figure (11): Summary of Criteria for Achieving Technical Quality in Textbooks:



4.3 Research Questions of Questionnaire

4.3.1 Calculation of the Mean, Standard Deviation and Percentage of the Questionnaire Questions

The study sought to answer the following sub-questions from teachers' and administrative staff's viewpoint in terms of the technical quality aspect followed by the Ministry of Education:

- *To what degree do teachers confirm that the technical quality standards are available within the Palestinian Curriculum?*
- *To what degree do principals and administrative assistants in schools confirm that the technical quality standards are available within the Palestinian Curriculum?*

To be able to answer these study sub-questions, the arithmetic means, standard deviation, and percentages of the selected study factors were calculated. Table No. (15) shows that the total sum of the six domains related to teachers ranged from high to medium, with arithmetic mean (3.42) and a standard deviation (0.899), and a percentage (68.4%). This indicates that there is a high degree of availability of quality standards in the design and printing of the new textbooks from the teachers' point of view. Similarly, the table also shows that there is a medium percentage of the degree of availability of quality standards in the design and printing of the new textbooks from the point of view of principals and administrative assistants.

Table (15): Summary of Averages, Standard Deviation, And Percentages for All Factors

N o.	Factors	Average	Standard Deviation	Percentage%	Evaluation
1	Quality of the book format and output	3.69	0.828	73.8	High
2	Quality of the book's content	3.26	0.948	65.2	Medium
3	Quality of images and colors	3.46	0.87	69.2	High
4	Cover quality	3.43	0.90	68.6	High
5	Print quality	3.51	.85	70.2	High
6	Quality of presentation of book ideas	3.17	1.002	63.4	Medium
All factors for teachers		3.42	0.899	68.4	High
7	Quality of textbooks from point of the administrators in schools	3.29	0.933	65.8	Medium
5-1/5=0.8 The evaluation for the average		(3.41 – 5) high	(2.61– 3.4) medium	(1– 2.6) Low	

It is obvious that the evaluation of most of the factors in the above table ranged from high to medium, as it is clearly revealed in the subsequent tables from No. (16-22). In fact, the tables from No. 16 to No. 22 signify the degree of conformity of books to technical quality standards for each of the selected factors from the standpoint of the study sample. Where the questionnaire designated for teachers include (6) domains, also there is one domain specified for principals and administrative assistants. They are all composed of (67) items.

Table No. (16): The Availability of Quality Standards Associated with The Artistic Output.

No.	Quality of format and artistic output of the book.	average	standard deviation	percentage %	Evaluation
1	Headings and subheadings appear in eye-catching fonts.	4.05	0.681	81	High
2	The letter size is appropriate for students' educational stages.	3.98	0.697	79.6	High
3	The space between the lines of books is appropriate for the educational stages.	3.88	0.767	77.6	High
4	Space between words is proportional to the educational stages.	3.92	0.709	78.4	High
5	The type of font is appropriate for students' educational stages.	3.97	0.656	79.4	High
6	Sentences are set appropriately.	3.75	0.842	75	High
7	Punctuation used correctly.	3.90	0.724	78	High
8	Book papers are of suitable quality.	3.55	0.928	71	High
9	The size of the book is adapted to students' ages.	3.28	1.041	65.6	Medium
10	The weight of books' bag is commensurate with the age of the student.	2.86	1.107	57.2	Medium
11	The book includes a list of references and used sources.	3.88	0.808	77.6	High
12	The book design is advanced and keeps up with modern technologies.	3.28	0.985	65.6	Medium
	Total	3.69	0.828	73.8	<u>High</u>

As it is clearly shown in table No. (16), there are 12 items about the quality of format and the artistic output of the book, with their percentage ranging from high (81%) to medium

(57.2%). The item No. 1 “Headings and subheadings appear in eye-catching fonts” ranked first, with a percentage reaching (81%), then followed by item No. 5 “The type of font is appropriate for students’ educational stage,” with a percentage amounting to (79.4%). This indicates the appropriateness of the book's format as well as their overall attractiveness to students. Expectedly, as the study sample respondents consider the titles and fonts suitable for students, this signifies, in one way or another, that the shape of the title is attractive to students, too.

The items No.10 “The books’ bag weight is commensurate with the age of the students” has the lowest a percentage (57.2%), which means the majority of respondents believe the weight of school bag places a heavy burden of on the student. By far, the weight of the bag could be attributed to the large number of drawings in the book, which definitely increase the number of pages in the book and thus its weight. To put simply, the quality of books is considered a double-edged sword, as the improved quality of a book comes at the expense of its weight.

Overall, the format aspect of the book quality is generally appropriate for students in terms of the titles, texts and suitability of font. As there are some subjects in new curriculum divided into two books, such as technology, In addition to insert new chapters related to vocational education and increase the use of pictures to clarify ideas, with paying more attention to not increase the number of book pages.

Table No. (17): The Availability of Quality Standards Linked with The Presentation of Book Content

No.	The quality of the book content	average	standard deviation	percentage %	Evaluation
1	The topic content ranges from easy to difficult.	3.45	0.946	69	High
2	The content considers the differences between students.	3.11	0.965	62.2	Medium
3	Suitability of book content with students' age	3.23	0.904	64.6	Medium
4	Relevance of content to students' past experiences.	3.44	0.915	68.8	High
5	The content is characterized by sequence and integrate with educational stages.	3.41	0.864	68.2	High
6	Presentation of technical standards in the content contributes to the transfer of skills to students according to plans.	2.46	1.163	49.2	Low
7	The content is proportional to the number of periods.	2.73	0.956	54.6	Medium
8	Presentation of content meets the needs of the community.	3.94	0.912	78.4	High
9	The content achieves the learning goals.	3.44	0.913	68.8	High
10	The content develops the values and positive attitudes of students.	3.42	0.956	68.4	High
11	The content improves students' life skills.	3.29	0.940	65.8	Medium
Total		3.26	0.948	65.2	<u>Medium</u>

As stated above, table No. (17), which is about the quality presentation of textbooks content, comprises of 11 items, with percentage of most items ranging from medium to high, apart from one item with a low percentage. In effect, the items' percentage range was between (78.4%) to (49.2%), with item No. 8 paragraph "Presentation of content meets the needs of the community" coming in the first place (78.4%). Obviously, this indicates that the presentation of the book content in terms of activities, examples, and graphics met the Palestinian society needs in relation to the national values and other issues. Whereas item 1 "the content of the topic ranges from easy to difficult" occupied the second place, with a percentage (69%), the lowest score went to item 6 "Presentation

of technical standards in the content contributes to the transfer of skills to students according to plans,” with a percentage (49.2%). This indicates that the books were suitable in terms of smooth presentation to students, as teachers thought the content was presented gradually and sequentially.

Based on this data analysis, it can be said that the book content is varied and inclusive, utilizes different technical aspects to clarify ideas, and covers several aspects related to students and society as a whole, while considering good quality in mind. However, there is still a problem related to adherence of the books content to the theoretical aspects, and to lack of use of practical experiments, perhaps due to the limited capabilities and budget constraints.

Table No. (18): The Availability of Quality Standards linked with Images and Colors

No.	Quality of images and colors	average	standard deviation	percentage %	Evaluation
1	The element of attraction and suspense is found in images and shapes.	3.39	0.939	67.8	Medium
2	The images and figures clearly describe the learning material.	3.44	0.877	68.8	High
3	The colors of the pictures and graphics are age-appropriate.	3.56	0.843	71.2	High
4	Realistic size for images and graphics.	3.47	0.837	69.4	High
5	The places images and graphics are aligned with written texts.	3.58	0.844	71.6	High
6	Pictures and graphics are vivid and clear.	3.39	0.934	67.8	High
7	Pictures and graphics are characterized in true natural colors.	3.34	0.924	66.8	Medium
8	Pictures and graphics are devoid of shadows.	3.49	0.817	69.8	High
9	The pictures and drawings are distinguished by natural colors that students like.	3.50	0.820	70	High
	Total	3.46	0.87	69.2	<u>High</u>

As it is clearly put in the table (18), which is about the quality of images and colors, the percentages of the nine items ranged from high to medium (71.6% to 66.8%). Where the item No. 5 "The places of images and drawings are aligned with written texts" came in the first place with percentage reaching (71.6%), the item No.3 "The colors of the pictures and drawings are age-appropriate" did follow in the second place with a percentage (71.2%). This indicates that the images served the learning content, their locations in the book were appropriate, and they were suitable for the age level of the students.

However, item No. 9 "The pictures and drawings are distinguished by natural colors that students like" got the lowest score, with a percentage (66.8%). In this regard, it could be inferred that the graphics might be illustrative, but they are not real pictures a larger extent that could capture student attention. It could also be rather approximate models that serve the academic content, yet they are authentic.

In view of this data analysis connected to the quality standards of images and colors, it can be said that, in the main, the majority of the study sample respondents were satisfied with the quality of image and graphics used in the books. Still, it is necessary to focus more on the color aspect of images and graphics, and dig deeper in order to know the main reason behind this dissatisfaction of respondents. The problems could be ascribed to the technical aspect of design of the pictures and drawings, or perhaps to the printing presses, machines, or the materials used in the process of printing these pictures and drawings.

Table No. (19): The Availability of Quality Standards linked to Cover Quality

No.	Cover quality	average	standard deviation	percentage %	Evaluation
1	Cover photos contribute to motivating students towards academic achievement and linking them to the subject.	3.35	0.967	67	Medium
2	The cover has durability binding.	2.94	1.09	58.8	Medium
3	Titles fit with the book cover, pictures and graphics	3.61	0.821	72.2	High
4	The color of the writing on the cover matches the background and the images.	3.70	0.763	74	High
5	The picture on the cover of the book relates to book content.	3.65	0.806	73	High
6	The quality of the book cover paper protects from damage.	2.91	1.102	58.2	Medium
7	The durability of printing ink against environmental factors and usage.	3.55	0.953	71	High
8	The colors used in the cover design correspond to students' ages.	3.60	0.830	72	High
9	The pictures accompanying the cover are well-designed.	3.57	0.813	71.4	High
10	The components of cover photos are plentiful.	3.26	0.874	65.2	Medium
11	The cover photos relate to the student environment and the Palestinian reality.	3.63	0.885	72.6	High
	Total	3.43	0.90	68.6	<u>High</u>

As shown above, table No. (19), which about the quality of the cover, consists of 11 items, the percentages of which ranged from high (74%) to medium (58.2%), While item No. “The color of the writing on the cover matches the background and the images” ranked first, with the percentage reaching (74%), the item No. 6 “The quality of book cover paper protects it from damage” with a percentage got the lowest score with a percentage falling to (58.2%). As for the second place, it was occupied by item No. 5 “The picture on the cover of the book is linked to the book content,” which ranked second with a percentage rising to (73%).

Based on the analysis of responses received in this section, it is quite clear that there was overall a consensus amongst the respondents on the quality of the production of the textbook cover in terms of format, content, and educational stage stage. Nevertheless, there is a need to improve the quality and durability of the cover so that it can endure the storage and use factors, considering the quality of the used paper and the book binding method. In this context, the researcher found out, after interviewing some school principals to inquire about problem, that a great number of the books are destroyed annually, just because of the book covers rupture, with the internal sheets being in a good shape in most of them.

Table No. (20) The Availability of Standards Linked to Print Quality

No.	Print Quality	Average	Standard Deviation	Percentage %	Evaluation
1	The printing ink used has durable color	3.68	.879	73.6	High
2	The books are free of typos.	2.67	1.03	53.4	Medium
3	The print is clearly marked for reading for all educational levels.	3.61	.855	72.2	High
4	Printed texts are devoid of blurriness and shadows.	3.41	.936	68.2	High
5	The size of typeface used for reading is corresponds to the age of the students.	3.78	.717	75.6	High
6	The punctuation marks are clear on the print.	3.73	.737	74.6	High
7	The typeface type is age-appropriate.	3.69	.799	73.8	High
	Total	3.51	.85	70.2	<u>High</u>

Table No. (20), which is about print quality, consists of 7 items. The items' percentages, as shown above, ranked between high (75.6%) and medium (53.4%). Item 5 "The size of the typeface used for reading corresponds to the student age" ranked first, as the

percentage was (75.6%), and then followed in the second-place by item 6 "The punctuation marks are clear on the printing," which got a percentage (74.6%), In contrast, the lowest percentage went to item No. 2 "Books are free of typos," where its percentage fell to (53.4%).

According to the data analysis of the responses of this section, it can be concluded that there were standards in place regarding the quality of textbooks printing. However, there is still a need to place more emphasis on the printing press work to ensure that printing-related errors do not occur. Such errors as the ones associated with the packaging and assembly process of the book paper or jitter in printing negatively affect book printing quality. Inquiring about the reason behind the typographical errors, the researcher, based on the input of the officials and employees of the Department of Books and Publications at the MoE, has found out that these errors sometimes result from blunders in arranging book papers, and the and the shadow occurs due to machine faults.

Table No. (21) The Availability of Quality Standards Linked to Presentation of Book Ideas:

No.	Quality of presentation of book ideas	average	standard deviation	percentage %	Evaluation
1	The book design is devoid of redundancy.	3.03	1.06	60.6	Medium
2	The style of presentation of the educational material helps with self-learning	2.92	1.07	58.4	Medium
3	The style of presenting the scientific content stimulates thinking.	3.19	1.02	63.8	Medium
4	The book free of grammatical errors.	3.03	1.03	60.6	Medium
5	The vocabulary and phrases of the book are age-appropriate.	3.38	0.952	67.6	Medium
6	Gradual presentation of ideas to facilitate understanding suits students of each educational stage.	3.47	0.884	69.4	High
	Total	3.17	1.002	63.4	<u>Medium</u>

As it is stated in table No. (21), which is about the quality of presenting ideas, the percentages of 6 items ranked between high and medium, though mostly (5 items) were medium. Item No.6 “Gradual presentation of ideas to facilitate understanding suits students of each educational stage” ranked first, with a percentage reaching 69.4%. Then item (No.5) that states, " The vocabulary and phrases of the book are age-appropriate” ranked second with a percentage amounting to (67.6%). The lowest score was for the item " The style of presentation of the educational material helps with self-learning” as respondents’ percentage fell to (58.4%).

Overall, data analysis concerning the responses on the quality of presenting book ideas were generally positive. That is, the suitability of the style of ideas presentation in terms of educational stage is generally good, which means this style of ideas presentation helps students learn the content and facilitates their understanding of ideas. Nevertheless, it is important to review the existing procedures for and checking books’ technical aspect and texts to ensure that they are free from grammatical errors, or repetition. Overcoming these problems and ensuring books’ accuracy would undoubtedly increase students' learning.

Table No. (22): The Availability of Quality and Durability of the Textbooks from The Viewpoint of the School Administrators

No.	The quality and durability of the textbooks used from the point of view of the administrators in schools	average	standard deviation	percentage %	Evaluation
1	The book cover is designed to endure storage humidity in book storage	3.28	1	65.6	Medium
2	The book cover is protected by a plastic film to protect the books from damage	2.91	1.1	58.2	Medium
3	There is an online program to continuously identify actual book needs.	2.76	1	55.2	Medium
4	The ink used for printing is suitable for printing and is not affected by the process of books storage	3.77	0.771	75.4	High
5	The printing paper is suitable for book storage.	3.5	0.926	70	High
6	When packing books, it takes into account the nature of use (one or more times)	3.26	0.939	65.2	Medium
7	The way the books are organized is commensurate with the size of the book.	3.61	0.744	72.2	High
8	Periodic meetings are held by the Book Department about the book preservation mechanism.	2.51	1.04	50.2	Medium
9	Textbook covers are attractive.	3.61	0.918	72.2	High
10	The cover design fits the student educational stage.	3.78	0.789	75.6	High
11	The Directorate is given regular feedback and notes about school books.	3.19	1.04	63.8	Medium
	Total	3.29	0.933	65.8	<u>Medium</u>

As shown in table No. (22), which is about the quality and durability of textbooks from the school administrators' viewpoint, the percentages of the 11 items range from high (75.6%) to medium (50.2%). Item No.10 "The cover design fits the student educational stage" ranked first, with a percentage up to (75.6%), while item No. 4 "the ink used for printing is suitable for printing and is not affected by the process of book storage" came

the second place, with a percentage amounting to (75.4%). The lowest percentage went to item No.8 "Periodic meetings are held by the Book Department about the books preservation the mechanism," which stood at a percentage (50.2%).

In the light of the analysis of responses of principals and administrative assistants, it turns out, the majority generally agree on the availability of quality standards regarding the book format and design of book cover, and the quality of the inks used for printing. There is a need, however, to increase the protection of the book cover by using an insulating layer of moisture that increase its wear and tear resistance. In addition, it is equally necessary to develop electronic programs, or improve the existing programs for taking feedback from the administrative body at schools. More importantly, there is an urgent need to train principals and administrative assistants about the mechanism of storing textbooks, as they have had such training before.

Finally, the data collected from the previous tables in this section, which was about technical quality of textbooks, showed that all factors scores (items' percentage) ranged from high to medium, Whilst the form and output received the highest percentage (73.8%), the lowest percentage went for the dimension the quality of presentation of book ideas by (63.4%). Overall, the majority of the study sample respondents were somewhat satisfied with the technical quality level of the school books in general, though they had reservations over some aspects of the items, as reflected in the lowest marks they received. In fact, the durability of book covers, the weight of the school bag (number of pages and picture size), reviewing plans and mechanisms, examining books linguistically and technically, and evaluating and reviewing the examples and shapes and

models to ensure that individual differences amongst students are the issues that should be considered to make the necessary improvements and increase the textbook quality in general. Despite the general consensus on the quality of textbooks, some teachers were not satisfied with to the size of the books, as well as the language consistency of the content presented in the books. These issues should be handled in future book production to ensure the optimal quality of textbooks.

4.3. 2 Summary and Analysis of High and Low Response Rates to Dimensions:

To answer the question: What are the technical quality elements with lower averages in terms of the percentages of teachers' answers?

Table No. (23) Summary of Items Whose Average Is Less Than (60%) Percent

No.	The items	average	standard deviation	percentage %	Evaluation
	Availability of quality linked to the artistic output.				
1-	The weight of bag books fits with the age of the student.	2.86	1.107	57.2	Medium
	Quality standards linked with the presentation of book content				
2-	The use of technical standards in the content contributes to the transfer of skills to students according to plans.	2.46	1.163	49.2	Low
3-	The content is proportional to the number of periods.	2.73	0.956	54.6	Medium
	Availability of quality standards linked with cover quality				
4-	The cover has durable binding.	2.94	1.09	58.8	Medium
5-	The quality of the paper of book covers protects from damage	2.91	1.102	58.2	Medium
	Availability of standards linked with print quality				
6-	The books are free of typos.	2.67	1.03	53.4	Medium
	The quality linked with presentation of book ideas				
7-	The style of presentation of the educational content facilitates self-learning	2.92	1.07	58.4	Medium
	Availability of standards from the point of view of administrators in schools				
8-	The book cover is protected by a plastic film to protect the book from damage	2.91	1.1	58.2	Medium
9-	There is an online program to continuously identify actual book needs.	2.76	1	55.2	Medium
10-	Periodic meetings are held by the Book Department on the book preservation mechanism.	2.51	1.04	50.2	Medium

In view of the response rates of the study sample respondent that are less than 60% in the above table, the following points can be concluded:

1. The first item related to the weight of the school bag shows that (57.2%) of surveyed teachers consider the weight of the school bag appropriate to student age. Thus, the low percentage of the technical aspect of the book development quality can be explained by the following reasons:
 - The emphasis on the technical aspects regarding the presentation of the content of books (photos, shapes, models) led to an increase in the number of pages of the book. The technical quality standards are thus a double-edged sword. In fact, they improved the performance of the book, but increased, in turn, the number of its pages, thereby increasing the weight of the school bag. As such, it may be suggested that the MoE form expert committees for each academic subject with the aim of reviewing and evaluating the quantity and size of images and texts in order to reduce the number of pages of the book and optimize use the margins of book paper without negatively affecting the quality of performance of books.
 - In addition to what has been presented vis-à-vis the bag weight above, the increase in the weight of the school bag can also be attributed to the Ministry's introduction of new units related to vocational education. One of the practical solutions for this the bag weight problem is to divide the book into two parts. For example, the Technology book split into book: Technology and Programming), and so is the Islamic Education and Recitation.

2. The findings of the analyzed data of items (2, 3) about the relationship between the availability of technical quality standards and the achievement of content objectives are, as follows:

- It is clear from the response rate of the teachers' sample that (49.2%) of teachers believe that presentation the technical content of books helps students acquire the proposed curricular skills in keeping with the specific plans of the curriculum. Therefore, a need exists to review and evaluate for the technical presentation of books in order to link the topics with the objectives to be achieved.
- As explicitly shown in item (3) in the previous table, there is a high percentage of inconsistency between the volume and quantity of the presented content compared to the total teaching time allocated according to the plan, as the teachers' approval rate hits (54.6%) of the total teacher sample. It is necessary, therefore, that the MoE pay attention to this point by striking a balance between the presented content and the teaching periods allocated for its delivery.

3. The findings of the items (4, 5, 8) in the previous table related to the availability of technical quality standards associated with the cover of textbooks include the following:

- With regard to the quality of bookbinding, there is a need to increase and improve the efficiency of the process of binding and assembling the book along with its the cover. This could be done by improving the quality of the materials used in the process of gluing and assembling books, besides tightening stricter control measures over the work of printing presses pertaining to the process of binding textbooks.

- Similarly, (58.2%) teachers consider that the quality of the cover paper used is appropriate for the process of using and preserving books. Considering this, it is imperative to take into account the enhancement of the quality and durability of the book cover so that it can endure students' repetitive use and be more efficient in terms of not being affected while being kept in the storage warehouses.

 - Based on the findings related to the response rate of the administrators in schools, it is clear that there is a real necessity for increasing durability of the book cover, as only (58.8%) of administrators think that there is an insulating layer protecting the outer cover of books from damage during use and storage. This percentage is almost the same percentage of teachers who have this view about the durability of book cover, which emphatically points to the accuracy of the collected information and proves the need to develop satisfactory solutions for increasing the durability and performance of the cover for textbooks, based on previous studies and experiences of other countries as well.
4. With regard to the item "Books are free of typographical errors." Just (53.4%) of the teachers have reported that there are no typographical errors. It is necessary, therefore, that more focus should be given on establishing expert committees to list the typographical errors in textbooks and follow through with correcting them. In effect, typographical errors such as the blur of texts and images, shadows, pagination error, color defects in drawings and figures, wrong numbering of tables or figures affect the efficiency of the books' performance and generally reduce their ability to achieve the goals and plans of the curricula.

5. The findings about the teachers' responses regarding the extent to which the method of technical presentation of subjects stimulates self-learning have showed that only (58.4%) of teachers believe that of technical presentation of subjects promote learner autonomy. Consequently, it is necessary to review and evaluate the technical aspect related to the method of presenting the learning materials in term of the for the following reasons: ensuring the appropriateness of the presentation of learning materials according to student needs and the age group to which a student belongs, the connection of the book activities to the student environment so that it contributes to attracting their attention, considering the absence of repetition of the images use to ensure that information does not conflict with one another, and providing additional references so that they can be consulted to understand the topics when needed, and finally ensuring the sequence and coherence of the presentation of topics used in the different educational stages.

6. The findings related to responses rate of school administrators about the measures taken to follow up books between the MoE and schools have shown the following:
 - Only (55.2%) of administrators agree an electronic program is available to follow up on the needs related books. Upon inquiring about the reason for this low response percentage, it has been found that there is actually an electronic link sent to schools every year to determine their expected needs, However, this procedure alone, it turned out, is not sufficient, because of the transfer of students particularly within cities, which makes it so difficult to count the number of students accurately. It is also difficult to count the numbers of students for the first grade, as well as the distribution

of students after the tenth grade. For this reason, it is important to put in place measures to limit the actual numbers to increase the accuracy of the estimates and determine the real need for printing.

- In the light of the results above, it is of great importance to develop a follow-up program for schools in order that their needs are identified and problems related to textbooks are addressed as soon as possible.

- It is also found that just (50.2%) of administrators believe meetings are held about the mechanism of preserving books. Therefore, it is necessary for the MoE to place more emphasis on arranging meetings and conducting organized workshops, as well as holding regular visits to schools from the relevant department to check out the conditions for keeping and storing books. This is an important measure in order to provide appropriate instructions for keeping books in warehouses and ensuring the reduction in the rate of book damage due to moisture or exposure to direct sunlight and other reasons.

Table No. (24) answers the question “What are the elements of the technical quality with high rates according to the teacher response percentage?”

Table No. (24): Summary of the items with average more than (75%)

No.	The items	average	standard deviation	percentage%	Evaluation
	Availability of quality linked with the artistic output.				
1-	Headings and subheadings appear in eye-catching fonts.	4.05	0.681	81	High
2-	The letter size is appropriate for student educational stages.	3.98	0.697	79.6	High
3-	The space between the lines of books is appropriate for the educational stages.	3.88	0.767	77.6	High
4-	Space between words is suitable to the educational stages.	3.92	0.709	78.4	High
5-	The type of font is appropriate for students' educational stages.	3.97	0.656	79.4	High
6-	Sentences are set appropriately.	3.75	0.842	75	High
7-	Punctuation marks are used correctly.	3.90	0.724	78	High
8-	The book includes a list of references and sources used in the book.	3.88	0.808	77.6	High
	Quality standards associated with the presentation of book content				
9-	Presentation of content meets the needs of the community.	3.94	0.912	78.4	High
	Availability of standards associated with print quality				
10-	The typeface size used for reading is appropriate for the age of the students.	3.78	.717	75.6	High
	Availability of standards from the point of view of administrators in schools				
11-	The ink used for printing is adapted so as not to be affected by book storage.	3.77	0.771	75.4	High
12-	The packaging design is suitable to the students' educational stage.	3.78	0.789	75.6	High

- The previous table shows that the factor related to the quality of the format and output included 8 elements with a percentage ranging between (75%) and (81%). This gives an indication about the quality of the formatting methods used for books in terms of

distinguishing titles, size of letters, space between words and lines, type of font, setting sentences, use of punctuation marks, and providing a list of the used references and sources.

- As shown in the analyzed data of item No. (9), the percentage of teachers' responses reached (78.4%) regarding the extent to which the presentation of artistic content meets the needs of society. In fact, this indicates that there is a general consensus amongst the majority of respondents over the consideration of the books for societal needs, such as providing activities from the students environment and the emphasis of the books on the culturally, socially and economically supportive aspects, using a presentation style which attracts students and thus indirectly contributes to meeting market needs.
- The analysis of the data of the sample of administrators' responses in schools showed that a large percentage of administrators think the book covers design is appropriate for the students' age, which explicitly indicates to appropriateness of the technical design of the book covers. That said, there is a need to introduce all the necessary measures designed to increase the durability of book covers for use and storage.

4.3. 3: Anova Test.

Anova test has been used to answer the question: Are there any differences among teachers using these textbooks attributed to the subject being taught?

- The data analysis, using Anova test, shows there was no statistical differences between teachers who use these textbooks that can be attributed to the subject being taught? An Anova test has been performed, and the results are shown the following table:

Table No. (23)

	Scope	Contrast sources	df	Mean square	Sum of squares	F	Sig.
1	The quality artistic output of the book	Between groups	7	0.706	4.941	3.031	0.004
		Within groups	410	0.233	95.498		
		SUM	417		100.440		
2	The quality of content presentation	Between groups	7	1.233	8.629	2.925	0.005
		Within groups	410	0.421	172.813		
		SUM	417		181.442		
3	Image quality and color	Between groups	7	0.511	9.140	3.130	0.003
		Within groups	410	0.300	171.057		
		SUM	417		180.196		
4	Cover quality	Between groups	7	1.538	10.783	4.792	0.000
		Within groups	410	0.321	131.569		
		SUM	417		142.326		
5	Print quality	Between groups	7	0.933	6.528	2.576	0.013
		Within groups	410	0.362	148.435		
		SUM	417		154.964		
6	Quality presentation of book ideas.	Between groups	7	0.933	11.516	3.165	0.003
		Within groups	410	0.362	213.098		
		SUM	417		224.615		

Table No. (23) determined whether there are statistically significant differences between the mean scores at the level of significance ($\alpha \leq 0.05$) attributable to the subject (taught by the teacher) variable. The value has been calculated for each of the six factors alone, and the results of significance have been determined: All of them have less than 0.05, which indicates there are statistical differences between groups, i.e., there is an effect of the independent variable on the dependent variable. Therefore, it is necessary to examine all questions for each of the six factors to know what significantly impacts their arithmetic

mean, as shown by the six factors' significance value. However, they are all less than 0.05. The significance value was high in the print quality factor. Besides, the subject matter taught by the teacher is important, since every teacher is more interested in evaluating the subject s/he teaches. As clearly known as it is, the method used for delivering the subject content and its special technical needs differs from one subject to another. Some subjects focus on texts more, while others attach more importance on pictures, shapes, and the technical aspects, such as displaying maps and explaining scientific experiments.

Due to the difference in focus of each subject, the teacher's evaluation of each subject is different. For instance, the Arabic language may be critiqued for lack of focus on grammatical proofreading, whereas a subject such as geography or science may be criticized because of its blurred drawings or unclear maps.

- There are no statistically significant differences at the alpha level ($\alpha \leq 0.05$) between teachers who use these textbooks attributed to the stage taught by the teacher?

A single test (ANOVA) has been performed, and its results are shown in the Table No. (24)

Table No. (24)

	Scope	Contrast sources	df	Mean square	Sum of squares	F	Sig.
1	The quality artistic output of the book	Between groups	2	0.057	0.114	0.237	0.789
		Within groups	414	0.241	99.579		
		SUM	416		99.694		
2	The quality of content presentation	Between groups	2	1.893	3.786	4.436	0.013
		Within groups	414	0.427	176.660		
		SUM	416		180.446		
3	Image quality and color	Between groups	2	1.959	3.918	4.623	0.010
		Within groups	414	0.424	175.447		
		SUM	416		179.365		
4	Cover quality	Between groups	2	0.249	0.499	0.732	0.482
		Within groups	414	0.341	141.029		
		SUM	416		141.528		
5	Print quality	Between groups	2	0.266	0.532	0.716	0.489
		Within groups	414	0.371	153.787		
		SUM	416		154.319		
6	Quality presentation of book ideas.	Between groups	2	0.196	0.393	0.364	0.695
		Within groups	414	0.539	223.204		
		SUM	417		223.597		

The analyzed data in Table No. (24) determines whether there are statistically significant differences between the mean scores at the level of significance ($\alpha \leq 0.05$) attributable to

the variable of the stage taught by the teacher (the lower basic, the upper basic, and secondary). The significance value has been calculated for each factor of the six factors; the results showed that there were no statistically significant differences of four factors, as these factors (form and output quality, cover quality, print quality, and quality presentation of ideas) were greater than 0.05. To put it simply, the significance results of these four factors indicates that there is homogeneity between the group's averages. Thus, an analysis of variance can be completed to identify the reasons, which will help the researcher understand the relationships that are attributable to the stage that the teacher teaches.

The researcher attributes this to the fact that male and female teachers do not differ in their point of view at all levels of study regarding the importance of the technical quality of books for increasing students' motivation for learning. In addition, as books have normally the same quality regardless of the educational stage for which they intended, and they are often regulated by the same specifications and mechanism, there are no differences between the stages in terms of the book specifications.

4.3.4 Correlations

- ❖ Correlations measure the relationship between different phenomena (two or more phenomena, two variables, or more) to determine if the change of one or a change of a group of variables is related to the change of the other. In other words, correlation analysis means studying the relationship between two variables, and its main goal is to determine the degree of connection between the variables and in what direction. The value of the correlation coefficient ranges between -1 and 1, and it checks the relationship between two variables and its direction as follows in table No. (25):

Table No. (25)

Correlation / relationship type	Correlation value
A complete direct correlation between the two variables	+1
Strong direct correlation between the two variables	From 0.7 to less than +1
Average direct correlation between the two variables	From 0.4 to less than 0.7
Weak direct correlation between the two variables	From zero to less than 0.4
No correlation / relationship between the two variables	Zero
Strong reverse correlation	From -0.7 to less than -1
Medium inverse correlation	From -0.4 to less than -0.7
Weak reverse correlation	From zero to less than -0.4

“Another classification summarizes the interrelationship between factors”

Correlation coefficient (absolute value)	Interpretation
0.00-0.30	Negligible
0.30-0.50	Low Correlation
0.50-0.70	Moderate Correlation
0.70-0.90	High Correlation
0.90-1.00	<u>Very High Correlation</u>

- (Yadav, 2018)

Applying the rule of thumb in determining strength of association for correlation coefficient size:

±0.00 to ± 0.20 No relationship
 ±0.21 to ± 0.40 Very weak relationship
 ±.41 to ± .60 Weak relationships
 ±.61 to ± .80 Moderate relationships
 ±.81 to ±1.00 Strong relationship

- Measurement of the hypothesis: “There is no statistically significant relationship at the level of significance ($\alpha \leq 0.05$) regarding the quality of content presentation in the books due to the teacher’s participation in the writing of the curriculum.

Table No. (26)

The relationship between the quality of content presentation in the books and the teacher's participation in writing the curriculum			
Quality of content presentation in the book; participation in the writing of the curriculum	Number	R –value	Sig
	418	-0.116*	0.016

The result showed that is a statistically significant relationship the quality of the book's presentation and the teacher's participation in the writing of the curriculum. The statistical function (sig) is equal to 0.016, which is less than 0.05. This is a negative relationship with a degree of 0.116 *, which means the rejection of the null hypothesis. In effect, this could indicate that whoever participates in the development of the book may defend the standards used in the textbook writing process. In a nutshell, the quality of content presentation in the books is attributed to the teacher's participation in curriculum development.

4.3.5 Gender Variable T-test.

There were no statistically significant differences at the level of ($\alpha \leq 0.05$) between the means of the sample responses to the technical format and output of the book in term of the gender variable.

An Independent Sample t-test was performed to test the hypothesis, and the results were as shown in the following table:

Table No. (27)

Category	# of responses	Arithmetic mean	Standard deviation	T- value	Degree of freedom	Sig
Males	139	3.77	0.514	2.380	415	0.018
Female	287	3.65	0.474	2.317	257.172	

The results of the analyzed data in the previous table indicate that there are statistically significant differences between males and females, as the sig. value (0.018) is less than 0.05. This indicates the differences in means of the sample responses between males and females in artistic format and output of the book. This may be attributed to differences in the general appearance, interest, and feel between males and females. Interestingly, this also indicates that women are more interested in shape than men, or that females notice differences in colors and details, while men look at the shape in general without paying attention to details.

- There were no statistically significant differences at the level of ($\alpha \leq 0.05$) between the means of the sample's responses for image quality and colors in terms the gender variable.

An Independent Sample t-test was used to test the hypothesis, and the results were as shown in the following table:

Table No. (28)

Category	# of responses	Arithmetic mean	Standard deviation	T- value	Degree of freedom	Sig
Males	139	3.42	0.701	-1.023	415	0.058
Female	287	3.49	0.635	-0.990	253.127	

The results of the analyzed data in the previous table indicate that there are no statistically significant differences between males and females, as the sig value (0.058) is higher than 0.05. This shows that there are no statistical differences in means of the sample responses between males and females for image quality and color. This could be ascribed to the teachers' lack of experience in distinguishing the differences between the pictures and in assessing the quality standards used in them. In addition, it could also be attributed to importance both male and female teachers attach to the significance of the quality of pictures and colors in improving the level of students' perception of ideas and understanding of the topics through pictures.

- There are no statistically significant differences at the level of ($\alpha \leq 0.05$) between means of the sample responses to the quality of the cover attributed to a gender variable.

An Independent sample t-test was performed to test the hypothesis, and the results were shown in the following table:

Table No. (29)

Category	# of responses	Arithmetic mean	Standard deviation	T- value	Degree of freedom	Sig
Males	139	3.47	0.631	0.982	415	0.074
Female	287	3.41	0.557	0.943	247.890	

The results of the analyzed data in the previous table indicate that there are no statistically significant differences in the means of sample's responses between males and females to the quality of the book cover, with having a sig. value (0.074) which is more significant than 0.05. This can be attributed to the fact that both male and female teachers are concerned with the quality of the book cover, as they view it the primary means of

communication between them and their students. This is because the display style used on the cover has a fundamental role in helping teachers attract the attention of their students to the subject, especially lower basic stage students. Another reason for having no significant of differences between male and female teacher in terms of the book cover quality cover could be that a good number of teachers may not notice the picture on the cover.

Table (30): Summary of Testing Hypotheses Results

H	Statement	Results
H-1	There are no statistically significant differences at the alpha level ($\alpha \leq 0.05$) between teachers who use these textbooks attributed to the teaching subject?	Rejection
H-2	There are no statistically significant differences at the alpha level ($\alpha \leq 0.05$) between teachers who use these textbooks attributed to the stage studied by the teacher.	Accept
H-3	There is no statistically significant relationship at the level of significance ($\alpha \leq 0.05$) regarding the quality of content presentation in the books due to the teacher's participation in the writing of the curriculum.	Rejection
H-4	There were no statistically significant differences at the level of ($\alpha \leq 0.05$) between the averages of the sample answers for the technical form and the production of the book due to the gender variable.	Rejection
H-5	There were no statistically significant differences at the level of ($\alpha \leq 0.05$) between the averages of the sample answers for image quality and colors due to the gender variable.	Accept
H-6	No statistically significant differences at the level of ($\alpha \leq 0.05$) between means of the sample responses for the quality of the cover attributed to a gender variable.	Accept

Chapter Five

Conclusions and recommendations:

In view of results of data analysis, this chapter presents the study conclusions and recommendations to help the General Directorate for Books and Publications and the Curriculum Center at the Ministry of Education in Palestine assess and improve the level of technical quality in textbooks for the current curriculum. Besides, it puts forward suggestions for future studies.

5.1 Conclusions:

Conclusions of the study questions

Based on the analysis of the study questions in the fourth section, the study concluded the following:

Conclusions of the Main Question:

As regards the main question of the thesis: To what degree do the new Palestinian textbooks follow the standards of technical quality; the percentages of the results indicate that all dimensions meet the technical quality standards with either a high or a moderate degree.

The findings also revealed that the quality of the format and artistic production of books received the highest degrees with a total percentage (73.8%), while the quality factor of presentation of ideas scored the lowest degree, with a moderate percentage (63.4%).

It is evident, considering the analyzed data, that all dimensions of the study ranged from high to moderate due to the fact that the new books were developed and designed based on the feedback given on the old books and their evaluation. Because of this, errors were avoided and reforms were made, and the activities were emphasized in the new curriculum in terms of their connection with the texts, reality and student environment.

The Conclusion of First Sub-question:

The degree to which the technical quality standards are available within the Palestinian Curriculum, and how they can be compared in light of Arab standards:

- The research findings in the literature review showed that standards followed in developing textbooks in reviewed studies are consistent with the standards used in the Arab countries, through their focus on the role of technical quality standards in designing books for attracting students' attention and facilitating the transfer of information.
- In addition, the findings revealed that there is a congruence between standards followed in developing textbooks in reviewed studies and those standards used in Arab countries in terms of the quality of the type of printing paper, the type of inks used for printing, and the emphasis put on the accuracy and symmetry of images and shapes.

The Conclusions of Second Sub-question:

The Degree to which these technical standards are applicable to the Palestinian textbooks from the teachers' point of view:

The findings indicate that the item of quality of format and output (Headings and subheadings appear in eye-catching fonts) had the highest rate, with a percentage (81%), where the lowest rate (49.2%) went for the presentation of the book content (Presentation of technical standards in the content contribute to the transfer of skills to students according to plans).

Moreover, in relation to the dimension of the quality of images and colors, the teachers' responses rate showed an overall high score of (69.2%). Specifically, the item (Positions of images and graphics are consistent with written texts) had the highest rate (71.2%), whereas the item (Pictures and graphics characterized in true natural colors), obtained the lowest score, with a percentage (66.8%).

Similarly, the analysis of data of the six dimensions in the teachers' questionnaire, the total percentages of these dimensions showed that four dimensions obtained a high degree, compared to two dimensions that got a medium degree (the quality of ideas presentation and the quality of content presentation). Furthermore, the results indicated that all the questionnaire items' scores range from a high to medium percentage, except for one item that got a low score which is (Presentation of technical standards in the content contribute to the transfer of skills to students according to plans).

The technical quality elements with lower means depending on the percentages of teachers' responses.

The Conclusions to the Sub-question Three:

The Degree to which these technical standards were applied to the Palestinian textbooks from administrators in schools' point of view:

- It was found that school management participation rate in the writing and development of the curriculum was low, where their participation percentage plunged to just (8.9%).
- Conversely, it was found that there was a high satisfaction rate up to (75.4%) about the quality of the printing ink for book storage purposes; this indicates the suitability, accuracy and stability of the ink quality used in printing images, graphics and texts.

- Also, it turned out that there was a medium satisfaction rate (58.2%) about the durability and technical quality of book covers.

The Conclusions of the Sub-question Four:

The technical quality items with the lower mean according the percentages of teachers' responses.

The findings of the data analysis of teachers' questionnaires revealed that there were (7) items out of (56) items were less than (60%). In fact, they ranged from (58.8 %) to (49.2%) the lower percentages being is (the quality of the cover, weight of the school bag, typographical errors, quality of artistic presentation of ideas and content)

It was also found, upon analyzing questionnaires of the administrators in schools, that (3) items out of (11) items were less than (60%), the emphasis of which was on (the durability of the book cover, the availability of an electronic program for books, periodic meetings with schools about books).

Based on what has been explained above, there is a necessity to focus on studying the items whose percentage is less than (60%) in the future. The reasons behind pressing need are outlined below, as follows:

- The study found that the percentage of weight of the school bag was (57.2%). The heavy weight of the school bag, as shown by this percentage, can be attributed to the increase in the number of book pages, thanks to the focus on pictures and illustrative activities, as well as the introduction of new sections related to preparing students for vocational education.

- The percentages of items related to book covers ranged between (58.2%) and (58.8%). It makes sense to ascribe this to the durability of gluing and process of binding books, besides to the effectiveness of specifications related to the weight, quality and durability of the paper used in printing and supervision of printing presses.

Moreover, the percentage of the appropriateness of the content to the number of classes (periods) according to the plans was (54.6%). There is, therefore, a need to assess the suitability of the presentation mode with the students' comprehension capacities.

The results of analyzed data of the item (books are free of typographical errors) showed its percentage amounted to (53.4%). This can be to the nature of the procedures in place at the MoE and how the relevant authorities at the MoE followed them to monitor and coordinate with the printing presses, in addition to the suitability of the machines used for the printing of school books.

The Conclusions of the Sub question Five:

The technical quality items with the highest mean according to the percentages of teachers' responses.

- The analysis of the response of teachers' sample showed that there were (10) items whose percentage was more than (75%). The dimension of quality of format and output included (8) items related to the quality of text alignment, image positions and the availability of book lists of sources and indexes. On the whole, this gives a positive impression about the attractiveness of the overall shape of the book.
- Additionally, the analysis of the results indicated that the appropriateness of books' content presentation to the needs of society got a high percentage, which amounted up

to (78.4%). Undoubtedly, this gives the impression that the artistic presentation of images and shapes of the book content of is appropriate for the nature and needs of the Palestinian society.

- Also, two items were found to have high percentages (75.6% - 75.4%) based on the analysis of the response rates of administrators in schools. As these two items are related to the quality of the ink used in printing and the technical design of the books, it clearly indicates that there is a general satisfaction with the design of books and the suitability and stability of the inks used for printing.

Concerning Conclusions Related to the Study Hypothesis, they can be summarized, as follows:

- The six factors selected in the questionnaire contributed to evaluating the existing technical aspects of textbooks and defining other the aspects to be considered to improve the technical quality in textbooks.
- It turned out that the Ministry of Education had adopted quality standards textbooks, ranging from a high to a medium rate
- There were differences between different groups of teachers using these textbooks. These differences were generally attributed to the subject the teacher taught.
- There was no difference between most teachers who used these textbooks, and this was attributed to the educational stage the teacher taught.
- There was a statistically significant relationship between the quality of book presentation of content and quality of textbooks due to the teachers' participation in writing and preparing the curriculum.

- There were differences in the mean of responses between males and females in terms of the quality of artistic form of the textbooks and their production.
- There were no differences, it turned out, between the responses mean of image quality factor and colors in terms of the gender variable.
- It turned out that there were no differences in terms of a gender variable between means of the sample's respondents for factor of the book cover quality.

5.2 Recommendations:

In view of the analysis of the collected data, we offer the following recommendations in order to help the decision makers at the MoE develop and improve the technical aspects of school books:

- In the light of the dimensions selected for the study, the specialists in the field of textbook development are strongly recommended to prepare a list of technical quality standards for textbooks to be developed so that it can be used as a framework of reference. It is also advised that Technical Department employees participate in book development process from the very beginning of the work of the authoring committees.
- In line with the views of administrators in schools about the quality of textbooks, we recommend that more focus should be given on improving the durability and quality of the textbook cover. Moreover, we recommend the new curriculum be implemented by an experimental sample for a year before being circulated to all schools in

Palestine, as this would reduce the percentage of errors and the onerous burden of modifications.

- To improve the quality of textbook printing, it is highly recommended that standards should be set and specifications should be defined for the companies participating in the printing bids for books to qualify and modernize the machines used in printing.
- Based on the response rates of the respondents of the study sample, it is recommended that further studies be conducted on the items with low rates, such as book cover and school bag weight.
- Equally important, it is highly recommended that administrative measures should be taken to increase the level of teachers' participation in writing and developing curricula. This can be done by forming subcommittees for each subject in all Directorates of Education in Palestine whose job is provide their feedback on submit their recommendations about the curriculum to the MoE's Curriculum Center. This is because teachers have rich teaching experiences of the subject's textbook, which is being developed.
- It is also advised that training courses for teachers about the mechanisms for evaluating and analyzing textbooks should be carefully developed and delivered, with the aim of familiarizing teachers with the technical aspect and other aspects related to textbook development.
- It is also recommended that an electronic link be created for the evaluation and follow-up of textbooks in order to be sent out to schools in the Education Directorates and for quick feedback.

- The researcher also recommends keeping up with developments in area of the type of paper used in printing the book cover, the quality of the ink used in printing books as well as the storage process of books.
- The specialists in preparing textbooks are highly recommended to pay more attention to the technical dimensions targeted in the study so that the attractiveness of books and their performance level can be enhanced, which will have a positive impact on students' achievement.

5.3 Suggested Future Studies.

1. Having studied the technical quality aspects of the textbooks, it is suggested that interested researchers can conduct future studies about agile management in the design and printing in order to cover the following aspects:
 - waste related to the increase in production quantities over the actual need and its impact on the storage space allocated for storing books.
 - i. It is quite normal that adjustments are sometimes made to the content of the textbooks in the light of feedback received from teachers and administrators, which leads to the destruction of the surplus stock of the stored copies of textbooks. To avoid this problem at present and in the future, it is advised that an electronic link be developed between the MoE and the directorates and schools so that the Books Department can assess the actual needs of the schools. This definitely contributes to reducing the spaces allocated for storing books in the MoE's main warehouses and school storage facilities.
 - the textbook size and its effect on school bag weight.

- ii. it is advisable to set up an expert committee to evaluate the volume of written texts for each topic in the textbook with aim of making the necessary adjustments. Deleting unnecessary texts and pictures, editing and shortening them to communicate ideas with the least pieces of texts without affecting content quality can certainly reduce the book size and, in turn, the bag weight. It should be emphasized that this can be applied more broadly to the textbooks of the secondary stages, which will result in the reduction of the number of pages and size of the textbook and consequently the school bag's weight.

2- Based on the percentages of the responses of the study sample in the questionnaire, there is a possibility to apply the pareto curve analysis in determining the number of errors associated with the technical quality aspects of the design and printing of textbooks. Equally important, it is possible to decide on the priorities the MoE needs to give to developing and improving the technical quality of textbooks.

- Following the continuous improvement methodology (Kaizen)
 - i. It is quite significant to conduct a study on the effect of continuous quality improvement in the design and printing of textbooks on reducing costs resulting from reduced errors due to the improvement in the quality of design, production, and printing of books. The measures which can be followed to make improvement should entail the speed and accuracy of identifying the actual needs and the prevention of errors or minimizing them to a minimum before production stage by giving the curriculum to a trial sample of teachers to implement it before generalizing it to all schools in Palestine and using other critical procedures as well.

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Appendix

Appendix 1



الجامعة العربية الأمريكية- فلسطين

كلية الدراسات العليا

برنامج إدارة الجودة

تحية طيبة،،،

تهدف هذه الدراسة إلى التعرف على واقع تطبيق معايير الجودة الفنية في طباعة وتصميم الكتب المدرسية في فلسطين. وذلك استكمالاً لمتطلبات الحصول على درجة الماجستير في برنامج إدارة الجودة، في كلية الدراسات العليا، الجامعة العربية الأمريكية- فلسطين.

يرجى الإجابة على جميع فقرات الاستبانة من أجل الحصول على معلومات متكاملة حول الموضوع، مع العلم ان جميع المعلومات التي يتم جمعها ستستخدم لأغراض البحث العلمي فقط.

شاكرين لكم حسن تعاونكم

الباحث: محمد عبد الهادي

أشرف: د. محمد أبو زايد

القسم الأول: البيانات العامة

الفئة العمرية: 1. 29-20 2. 39-30 3. 49-40 4. 50 فما فوق

الجنس: 1. ذكر 2. أنثى

المؤهل العلمي: 1. دبلوم 2. بكالوريوس 3. دراسات عليا

قطاع العمل 1. حكومي 2. خاص 3. وكالة

الصفوف التي يتم تدريسها: 1. 4-1 2. 9-5 3. 12-10

سنوات الخدمة: 1. 5-1 سنوات 2. 10-6 سنة 3. 11-15 سنة 4. أكثر من 16 سنة

هل قمت بالمشاركة في إحدى لجان إعداد كتب المنهاج المدرسي: 1. نعم 2. لا

المادة التعليمية: 1- التربية الدينية 2- لغة عربية 3- رياضيات 4- لغة انجليزية 5- العلوم وفروعها 6- العلوم الاجتماعية 7- التعليم المهني 8- أخرى.

قسم خاص بالمعلمين	أوافق	أوافق بشدة	محايد	غير موافق	غير موافق بشدة
أولاً: جودة الشكل والإخراج الفني للكتاب. ويقصد بها مدى مراعاة تصميم الكتب لمعايير الجودة من حيث المظهر العام والجاذبية للكتب.					
1					تظهر العناوين الرئيسية والفرعية بخطوط لافتة للنظر.
2					حجم حروف الكتابة ملائم لسن المرحلة التعليمية للطلبة.
3					تناسب المسافة بين السطور في الكتب للمراحل التعليمية.
4					تناسب المسافة بين الكلمات في الكتب للمراحل التعليمية.
5					يتناسب نوع الخط المستخدم مع المرحلة التعليمية للطلبة.
6					يتم ضبط الجمل بالشكل المناسب.
7					يتم استخدام علامات الترقيم بشكل صحيح.
8					أوراق الكتب ذات جودة ملائمة.
9					يتلاءم حجم الكتاب مع عمر الطلبة.
10					يتلاءم وزن حقيبة الكتب مع عمر الطلبة..
11					يشمل الكتاب قائمة المراجع والمصادر المستخدمة.
12					تصاميم الكتب متطورة ومواكبة للتقنيات الحديثة.
ثانياً: جودة محتوى الكتاب. الهدف من المحور لقياس كفاءة وفاعلية المحتوى (النصوص والصور) في تحقيق الأهداف التعليمية والمعايير العالمية.					

1	يتدرج محتوى الموضوع من السهل إلى الصعب.
2	يراعي المحتوى الفروق بين الطلبة.
3	ملائمة محتوى الكتاب مع المرحلة العمرية للطلاب.
4	ملائمة المحتوى مع الخبرات السابقة للطلاب.
5	يتصف المحتوى بالتسلسل والتكامل بين المراحل التعليمية.
6	يساهم عرض المعايير الفنية في المحتوى في نقل المهارات للطلاب وفق الخطط.
7	يتلاءم حجم المحتوى مع عدد الحصص.
8	يلبي عرض المحتوى احتياج المجتمع.
9	يحقق المحتوى الأهداف التربوية للتعليم.
10	ينمي المحتوى القيم والاتجاهات الإيجابية لدى الطلبة.
11	ينمي المحتوى المهارات الحياتية عند الطلبة.

ثالثاً: جودة الصور والألوان. يراد هنا معرفة مدى جودة ارتباط الصور والإشكال والألوان المستخدمة مع النصوص الموضوعية للمراحل التعليمية.

1	يتوفر عنصر الجذب والتشويق في الصور والأشكال.
2	تصف الصور والإشكال المادة التعليمية بشكل واضح.
3	تتلاءم ألوان الصور والرسومات مع عمر الطلبة.
4	يتسم حجم الصور والرسومات بالواقعية.
5	تتناسق أماكن الصور والرسومات مع النصوص المكتوبة.
6	تتسم الصور والرسومات بنقاء الألوان ووضوحها.
7	تتميز الصور والرسومات بألوان حقيقية وطبيعية.
8	تخلو الصور والرسومات من الظلال.
9	تتميز الصور والرسومات بألوان محببة لدى الطلبة.

رابعاً: جودة الغلاف. نهدف هنا لمعرفة مدى ملائمة وتناسق تصميم أغلفة الكتب المدرسية، وتحقيقها لعنصر الجذب والتشويق للطلبة.

1-	تساهم صور الغلاف في تحفيز الطلبة نحو التحصيل الدراسي وتربطهم بالمادة.
2-	يتميز الغلاف بمتانة التجليد.
3	تناسب العناوين في غلاف الكتب مع الصور والرسومات
4	لون الكتابة على الغلاف يتناسب مع الخلفية والصور.
5	ترتبط الصورة في غلاف الكتاب بمضمون الكتاب.
6	نوعية ورق أغلفة الكتب تساعد في حفظها من التلف.
7	ثبات حبر الطباعة مع العوامل البيئية والاستخدام.
8	تتوافق الألوان المستخدمة في تصميم الغلاف مع أعمار الطلبة.
9	الصور المصاحبة للغلاف جيدة التصميم.

					تكثر العناصر المكونة لصور الغلاف.	10
					ترتبط صور الغلاف بالبيئة والواقع الفلسطيني المحيط بالطلبة.	11
خامساً: جودة الطباعة. يراد هنا معرفة مدى تحقيق الجودة المرتبطة في عملية طباعة الكتب المدرسية.						
					يتميز حبر الطباعة المستخدم بثبات الألوان	1
					تخلو الكتب من الأخطاء المطبعية.	2
					تتصف الطباعة بوضوح القراءة لكافة المراحل التعليمية.	3
					تخلو النصوص المطبوعة من الارتجاج والظلال.	4
					يلتزم حجم خط الطباعة المستخدم للقراءة مع عمر الطلبة.	5
					تتسم علامات الترقيم في الطباعة بالوضوح.	6
					يتلاءم نوع خط الطباعة مع المرحلة العمرية	7
سادساً: جودة عرض أفكار الكتاب. نهدف هنا لقياس فاعلية الكتب من حيث طريقة عرض الأفكار وترابطها وتسلسلها.						
					يخلو تصميم الكتاب من التكرار والحشو الزائد.	1
					يساعد أسلوب عرض المادة التعليمية على التعلم الذاتي	2
					يحفز أسلوب عرض المادة العلمية على إثارة التفكير والاستنتاج.	3
					يخلو الكتاب من الأخطاء النحوية الإملائية.	4
					تلائم مفردات وجمل الكتاب مستوى أعمار الطلبة.	5
					التدرج في عرض الأفكار للطلبة بين المراحل التعليمية لتسهيل الفهم.	6

خاص بمدير وسكرتير المدرسة :

الفئة العمرية: 1. 20-29 2. 30-39 3. 40-49 4. 50 فما فوق

الجنس: 1. ذكر 2. أنثى

المؤهل العلمي: 1 دبلوم 2. بكالوريوس 3. دراسات عليا

قطاع العمل: 1. حكومي 2. خاص 3. وكالة

سنوات الخدمة: 1. 1-5 سنوات 2. 6-10 سنة 3. 11-15 سنة 4. أكثر من 16 سنة

هل قمت بالمشاركة في إحدى لجان إعداد كتب المنهاج المدرسي: نعم لا

غير موافق بشدة	غير موافق	محايد	أوافق بشدة	أوافق	
نهدف هنا لقياس مدى جودة ومتانة الكتب المدرسية المستخدمة من وجهة نظر الهيئة الإدارية في المدارس.					
					1 غلاف الكتاب مصمم ليتحمل رطوبة التخزين في مستودعات الكتب.
					2 غلاف الكتب محمي بطبقة بلاستيكية للمساعدة على عدم تلف الكتب.
					3 هناك برنامج إلكتروني لتحديد احتياجات الكتب الفعلية بشكل مستمر.
					4 يتلاءم الحبر المستخدم للطباعة بحيث لا يتأثر بعملية تخزين الكتب.
					5 ورق الطباعة ملائم لعملية تخزين الكتب.
					6 عند ترزيم الكتب يأخذ في الاعتبار طبيعة الاستخدام (مره واحدة أو أكثر)
					7 تتلاءم طريقة ترزيم الكتب مع حجم الكتاب.
					8 يتم عقد اجتماعات دورية من قبل دائرة الكتب حول آلية الاحتفاظ بالكتب.
					9 تتسم أغلفة الكتب المدرسية بالجاذبية والتشويق.
					10 يتلاءم تصميم الأغلفة مع المرحلة التعليمية للطلاب.
					11 يتم إعطاء المديرية التغذية الراجعة والملاحظات بشكل دوري حول الكتب المدرسية.

Appendix2

ARAB AMERICAN UNIVERSITY – PALESTINE

Graduate School

Quality Management Program

Dear respondents,

This study aims to identify the reality of applying technical quality standards in the printing and design of textbooks in Palestine. This is done in fulfillment of the requirement of a Master's degree in the Quality Management Program at the College of Graduate Studies, Arab American University - Palestine.

Please respond to all items of the questionnaire in order to gather comprehensive information on the topic. All information collected will be used for scientific research purposes only.

Thank you for your cooperation

Researcher: Mohamed Abdel-Hadi

Supervision: Dr. Mohammed Abu Zayed

The First Section: General Information

Age group: 1. (20-29) 2. (30-39) 3. (40-49) 4. (50 and over)

Gender: 1. Male 2. Female

Academic qualification: 1. Bachelor Degree 2. Diploma Degree 3. Postgraduate Degree

In which sector do you work? 1. Governmental 2. Private 3. UNRWA

Which grades do you teach? 1. (1-4) 2. (5-9) 3. (10-12)

Years of Experience: 1. (1-5 years) 2. (6-10 years) 3. (11-15 years) 4. (More than 16 years)

Did you participate in the curriculum preparation committees: 1. Yes 2. No

Which subject do you teach? 1-Religious education 2 - Arabic language 3 - Mathematics 3 - English language 5 - Science and its branches 6 - Social sciences 7 - Vocational education 8 - Other

The Second Section: Please the tick how much you agree with the following statements:

No.	Item	Agree	Totally agree	Neutral	disagree	Strongly Disagree
First: the quality of format and artistic output of the book						
1	Headings and subheadings appear in eye-catching fonts.					
2	The letter size is appropriate for students' educational stages.					
3	The space between the lines of books is appropriate for the educational stages.					
4	The space between words is appropriate for the educational stages.					
5	The type of font is appropriate for students' educational stages.					
6	Sentences are set appropriately.					
7	Punctuations are used correctly.					
8	The book papers are of good quality.					
9	The size of the book is suitable to the students' ages.					
10	The weight of books' bag fits with the age of the students.					
11	The book includes a list of the used references and sources.					
12	Book designs are advanced and keep up with modern technologies.					
Second: The quality of the book's content presentation						

1	The topic content ranges from easy to difficult.					
2	The content takes into account the students' differences.					
3	The book content is appropriate with the student's age					
4	The content suits students' past experiences.					
5	The content is characterized by sequence and complementarity between educational stages.					
6	Presentation of technical standards in the content contributes to the transfer of skills to students according to plans.					
7	The content is suitable to the number of periods.					
8	Presentation of content meets the needs of the community.					
9	The content achieves goals of education.					
10	The content develops the values and positive attitudes of students.					
11	The content improves students' life skills.					
Third: Quality of images and colors						
1	The element of attraction and suspense exists in images and shapes.					
2	The images and figures clearly describe the learning material.					
3	The colors of the pictures and graphics are age - appropriate.					
4	The size for images and graphics is realistic					
5	The places images and graphics is in alignment with written texts.					
6	Pictures and graphics are vivid and clear.					
7	Pictures and graphics are printed in true natural colors.					
8	Pictures and graphics are shadow free.					
9	The pictures and drawings are distinguished by the colors that students like.					
Fourth: Cover quality						
1	The cover's photos contributes to motivating students towards academic achievement and linking them to the subject.					
2	The cover has durability binding.					
3	Titles are suitable with the book cover with pictures and graphics					
4	The color of the writing on the cover matches the background and the images.					
5	The picture on the cover of the book relates to book's content.					
6	The quality of the paper of the book cover helps protects it from damage					
7	The stability of printing ink against the environmental factors and usage.					
8	The colors used in the cover design correspond to					

	students' age.					
9	The pictures accompanying the cover are well-designed.					
10	The components of cover photos are so many.					
11	The cover's photos relate to the environment and the student Palestinian reality.					
Fifth: Print quality						
1	The ink used in printing has color stability factor					
2	The books are free of typos.					
3	The print is clearly suitable for reading for all educational levels.					
4	Printed texts are devoid of shadows .					
5	The typeface size used for reading is suitable to the age of the students.					
6	The punctuation marks are clear on the print.					
7	The typeface type is age-appropriate					
Sixth: Quality of presentation of book ideas						
1	The book design is devoid of redundancy.					
2	The style of presentation of the educational material helps self-learning					
3	The style of presenting the scientific content stimulates thinking and conclusion.					
4	The book free of grammatical errors.					
5	The vocabulary and phrases of the book are age-appropriate.					
6	Gradual presentation of ideas to students between educational stages to facilitate understanding.					
The quality and durability of the textbooks from the point of view of the school administrators.						
1	The book cover is designed to endure storage humidity in book storage facility.					
2	The book cover is protected by a plastic film to protect it from damage.					
3	There is an online program to continuously identify actual book needs.					
4	The ink used for printing is not affected by the duration of book storage.					
5	The printing paper is suitable for book storage.					
6	Upon organizing and packing books, the frequency of use (one or more times) is considered					
7	The way the books are organized take into account the size of the book.					
8	Periodic meetings are held by the Book Department about the book preservation mechanism.					
9	Textbook covers are attractive.					
10	The packaging design is suitable to the students' educational stage.					
11	The schools in the Directorate of Education regularly give feedback and notes about school books.					

استبانة المعلم/ة لقياس واقع تطبيق
معايير الجودة الفنية في تصميم و
طباعة الكتب المدرسية



يقوم الطالب محمد عبد الهادي أبو سليم بأعداد رسالة ماجستير حول واقع تطبيق معايير الجودة في تصميم وطباعة الكتب المدرسية الفلسطينية؛ وذلك لإتمام متطلب رسالة الماجستير في تخصص إدارة الجودة لدى الجامعة العربية الأمريكية.

يرجى الإجابة على جميع فقرات الاستبانة من أجل الحصول على معلومات متكاملة حول الموضوع، مع العلم ان جميع المعلومات التي يتم جمعها ستستخدم لأغراض البحث العلمي فقط.

استبانة المدير وسكرتيرة/ة حول تطبيق معايير الجودة الفنية في تصميم وطباعة الكتب المدرسية



يقوم الطالب محمد عبد الهادي أبو سليم بإعداد رسالة ماجستير حول واقع تطبيق معايير الجودة في تصميم وطباعة الكتب المدرسية الفلسطينية؛ وذلك لإتمام متطلبات رسالة الماجستير في تخصص إدارة الجودة لدى الجامعة العربية الأمريكية. يرجى الإجابة على جميع فقرات الاستبانة من أجل الحصول على معلومات متكاملة حول الموضوع، مع العلم ان جميع المعلومات التي يتم جمعها ستستخدم لأغراض البحث العلمي فقط.

Appendix 3

حجم عينة البحث إذا كان مجتمع البحث متجانساً

حجم مجتمع البحث	حجم العينة	حجم مجتمع البحث	حجم العينة	حجم مجتمع البحث	حجم العينة
10 ⇒	10	220 ⇒	140	1200 ⇒	291
15 ⇒	14	230 ⇒	144	1300 ⇒	297
20 ⇒	19	240 ⇒	148	1400 ⇒	302
25 ⇒	24	250 ⇒	152	1500 ⇒	306
30 ⇒	28	260 ⇒	155	1600 ⇒	310
35 ⇒	32	270 ⇒	159	1700 ⇒	313
40 ⇒	36	280 ⇒	162	1800 ⇒	317
45 ⇒	40	290 ⇒	165	1900 ⇒	320
50 ⇒	44	300 ⇒	169	2000 ⇒	322
55 ⇒	48	320 ⇒	175	2200 ⇒	327
60 ⇒	52	340 ⇒	181	2400 ⇒	331
65 ⇒	56	360 ⇒	186	2600 ⇒	335
70 ⇒	59	380 ⇒	191	2800 ⇒	338
75 ⇒	63	400 ⇒	196	3000 ⇒	341
80 ⇒	66	420 ⇒	201	3500 ⇒	346
85 ⇒	70	440 ⇒	205	4000 ⇒	351
90 ⇒	73	460 ⇒	210	4500 ⇒	354
95 ⇒	76	480 ⇒	214	5000 ⇒	357
100 ⇒	80	500 ⇒	217	6000 ⇒	361
110 ⇒	86	550 ⇒	226	7000 ⇒	364
120 ⇒	92	600 ⇒	234	8000 ⇒	367
130 ⇒	97	650 ⇒	242	9000 ⇒	368
140 ⇒	103	700 ⇒	248	10000 ⇒	370
150 ⇒	108	750 ⇒	254	15000 ⇒	375
160 ⇒	113	800 ⇒	260	20000 ⇒	377
170 ⇒	118	850 ⇒	265	30000 ⇒	379
180 ⇒	123	900 ⇒	269	40000 ⇒	380
190 ⇒	127	950 ⇒	274	50000 ⇒	381
200 ⇒	132	1000 ⇒	278	75000 ⇒	382
210 ⇒	136	1100 ⇒	285	100000 ⇒	384

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30, 607-610

الملخص

تهدف الدراسة إلى فحص مدى توافر معايير الجودة الفنية في المناهج الفلسطينية الجديدة للمرحلتين الأساسية والثانوية والتي تم نشرها رسمياً عام (2016-2017) من وجهة نظر المعلمين والإداريين في المدارس، بالإضافة إلى تسليط الضوء على بعض المواصفات الفنية المعتمدة في الدول العربية. إلى جانب ذلك، تسعى إلى شرح تأثير المعايير الفنية المختارة على جودة الكتب المدرسية بناءً على وسائل إجابات عينة الدراسة.

استخدمت الدراسة نهج البحث الكمي، حيث تم تطوير استبيانين منظمين لجمع البيانات الأولية. بينما تكون مجتمع الدراسة المستهدف من المعلمين والإداريين في المدارس الفلسطينية، والذين بلغ عددهم بحسب بيانات وزارة التربية والتعليم (42787) معلماً و (2293) ادريا في المدارس، تكونت عينة الدراسة من (418) معلماً ومعلمة و (272) اداريا في المدارس بإجمالي 690 مستجيباً. للحصول على النتائج تم تحليل البيانات المجمعاً باستخدام برنامج SPSS تشير نتائج الدراسة إلى أن الأبعاد المختارة ممثلة ومرتبطة بمعايير الجودة الفنية. علاوة على ذلك، تظهر نتائج العينة أن نسبة توافر المعايير في الكتب المدرسية الفلسطينية تتراوح من مرتفع إلى متوسط، إلى جانب بعض العناصر الأخرى بنسب منخفضة، حيث قدمت توصيات للمساعدة في تحسينها في المستقبل.

اشتملت الدراسة على الأبعاد الفنية لجودة الكتاب المدرسي (جودة الشكل والمخرجات، الصور، الغلاف الخارجي، عرض الأفكار، الطباعة، وعرض المحتوى)، بناءً على تحليل البيانات ومراجعة الآليات والمعايير المتبعة من قبل وزارة التربية والتعليم، في طور إعداد وطباعة الكتب المدرسية التي أطلعنا عليها مجموعة التركيز. على هذا النحو، أوصى بأن تركز وزارة التربية والتعليم على الموازنة بين كمية ونوعية إنتاج الصور ونصوص الكتب وتأثيرها على وزن الحقيبة المدرسية. علاوة على ذلك، يجب مراعاة زيادة نسبة مشاركة المعلمين في لجان إعادة تطوير الكتب من خلال إنشاء لجان فرعية وبرامج خاصة لكل موضوع. أخيراً، أوصى أيضاً بأن تضع وزارة التربية والتعليم معايير للشركات المؤهلة للمشاركة في طباعة الكتب المدرسية.