

e-Textbook Writing Guidelines for the Technology Education Key Learning Area Curriculum (Secondary 1-3) – Technology and Living (Knowledge Context)

1. Introduction

The purpose of this set of guidelines is to familiarise interested e-textbook publishers with the curriculum aims and objectives, guiding principles for writing e-textbooks, etc. of the Technology Education Key Learning Area Curriculum (S1-3) - Technology and Living (Knowledge Context) in a bid to ensure that the e-textbooks are written in accordance with the specific requirements of the curriculum and “The Seven Learning Goals for Secondary Education” (www.edb.gov.hk/en/curriculum-development/7-learning-goals/about-7-learning-goals/secondary.html) (For details, please refer to *Secondary Education Curriculum Guide* (2017)). For the general principles and requirements for writing textbooks, publishers should refer to the latest edition of the *Guiding Principles for Quality Textbooks* available from the Education Bureau’s Textbook Information website (www.edb.gov.hk/textbook).

2. Curriculum Aims and Objectives

2.1 Curriculum aims

Technology Education (TE) aims to develop the technological literacy in students through the cultivation of technological capability, technological understanding and technological awareness.

2.2 Learning objectives of the Technology Education Key Learning Area Curriculum (S1-3) - Technology and Living (Knowledge Context)

- Appraise the impact of technology on our personal and social lives, the structure and economy of society, the natural and man-made world
- Understand issues related to the use and advancement of technology, including legal, ethical, environmental and health issues, as well as related to a change in lifestyle
- Be aware of the importance of a healthy lifestyle, including nutrition and a balanced diet, to personal growth and development
- Understand the principles of food preparation and processing and apply skills in food preparation and processing
- Identify the characteristics, care and suitability of different fabrics and generate ideas and process materials to make simple products to meet identified needs

- Appreciate the functional and aesthetic aspects of a design and know how to equip one's wardrobe for different activities
- Participate actively and responsibly as individuals and family members, and promote and maintain harmonious relationships in the family
- Manage time, human and physical resources to make a quality home and take actions in conserving resources
- Recognise the role and functions of the Consumer Council and make rational consumer decisions

3. Guiding Principles

3.1 Content

- Refer to the Technology Education Key Learning Area Curriculum (TEKLA) on <http://www.edb.gov.hk/en/curriculum-development/kla/technology-edu/curriculum-doc/index.html>.
- The TEKLA curriculum comprises six knowledge contexts. Selection of materials should be done with a view to attaining the aims and objectives stated in the TEKLA curriculum and covering the contents under the Technology and Living knowledge context; the learning elements under the six knowledge contexts could be connected or integrated to enhance students' learning. Information/data included should be accurate, systematic and relevant.
- In order to arouse students' interest in learning and to facilitate effective learning, the learning and teaching materials should, as far as possible, be linked to real life situation in local and/or global contexts, technological applications, social issues, and students' daily experiences so as to help students in realising the importance and relevance of the concepts being discussed. Furthermore, local examples should be cited wherever appropriate.
- Bias and discrimination should be avoided in the selection of contents, examples, illustrations, activities, etc. Furthermore, information should be provided to help students in understanding an issue from different perspectives.
- All modules of learning elements (core and extensions) should be covered.
- Concept clarity is an important aspect affecting students' learning. New concepts should be introduced at an appropriate pace and when needed during the development of the text. Efforts should be made to help students connect new concepts with concepts already learned.
- Structure of text should be readily apparent to students as evidenced by chapter titles, headings, outlines, introductions and conclusions.

3.2 Learning and Teaching

- The curriculum emphasises on learning through real-life situation. Authentic learning experiences should be included to facilitate the study of technological applications and to develop students' generic skills such as problem solving skills, communication skills, creativity, etc.
- A variety of projects and learning tasks should be provided for students to experience each of the following four dimensions and integrate them as a whole:
 - conceptual (knowledge and understanding of the relevant concepts and procedures);
 - procedural (knowing how to do something, what to do and when to do it);
 - societal (related to the inter-relationships between science, technology, environment and groups of people);
 - technical (skills related to manual / practical techniques)
- Learning tasks such as experiments, meal planning, fashion illustration, garment construction should offer “hands-on” experiences and opportunities for the application of knowledge and skills. Projects should provide challenging questions or problems for students to explore local and global issues on food or fashion or family. They should also allow students to construct and connect knowledge, skills, values and attitudes through an in-depth study on a topic of interest.
- Projects and learning tasks should help students learn to locate and process important information. They should help students focus on important learning objectives and check their own progress. Stimulus materials, such as newspaper cuttings, extracts from articles, flow-charts, photos, diagrams, statistical tables or graphs, Internet web sites, etc., should be provided so that students can have some concrete materials to base on, some food for thought and incentive for the learning task.
- Projects and learning tasks should be designed to develop various types of student competence at appropriate levels, including their higher order thinking skills, such as application, analysis, synthesis and evaluation, critical thinking and creative thinking, problem solving, sensitivity to the environment, etc.

3.3 Structure and Organisation

- The organisation of curriculum should facilitate teachers to have a better grasp on the coverage of learning elements in order to provide a broad and balanced TE curriculum for students.

- The learning and teaching materials should be arranged in an appropriate sequence, e.g. from easy to difficult, from concrete to abstract. It must also be emphasised that the sequencing of topics in the curriculum is for reference only and should not be taken as the only way in organising the topics.

3.4 Language

- [*An English-Chinese Glossary of Terms Commonly Used in the Teaching of Home Economics/Technology and Living in Secondary Schools*](#) prepared by the Curriculum Development Institute issued in 2018 should be used to provide Chinese translations of those English terms commonly used in the teaching of Home Economics/Technology and Living.
- The language used should be clear, fluent, accurate and easy to understand.
- The interspersing of languages (e.g. English followed by its Chinese translation or vice versa) in the text is undesirable.

3.5 Pedagogical Use of e-Features

- Appropriate multimedia - video, audio and/or animation, shall be included in layout and with captions / labels / synopsis where available
- Animated and narrated instructions / demonstrations on food / textile technology / food chemistry experiments / procedures on manufacturing process and working principles of different technologies
- Virtual visits to food production / manufacturing companies, apparel sector, fashion shows

3.6 Learning Elements/Skills Not Replaceable by Digital Means

- Skills for conducting experiments and practical work, e.g. food preparation, simple food chemistry / textile science experiments, garment construction, etc. are not replaceable by digital means.

3.7 Technical and Functional Requirements

- Refer to the latest edition of the *Guiding Principles for Quality Textbooks* for the relevant requirements.

4. Others

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- When writing e-textbooks, publishers have to ensure that the contents and information provided in the materials should be correct, complete, up-to-date,

- objective and impartial. The source and the date of the information should be provided as appropriate. The information in the illustrations and images should avoid showing brand-names of commercial items unless it is necessary.
- 4.2 Publishers should avoid putting excessive hyperlinks in the e-textbooks so as not to violate the self-containment principles. The contents of the hyperlinks should be placed in the teacher's handbooks or the publisher's online learning platforms as far as possible for teachers and students' reference. The hyperlinks should link to the websites with high credibility, such as the official websites and the websites of academic institutions, and avoid linking to commercial or social media platforms.
 - 4.3 It is incumbent on the publishers to ensure that all proof-reading work, including the electronic functions, language, information, punctuation, illustration, pagination, etc., is completed and accurate before submitting the e-textbooks for review.
 - 4.4 Publishers should clear all copyright issues of the e-textbooks as appropriate.
 - 4.5 Publishers should pay attention to the curriculum time allocation suggested in the curriculum documents of this subject to ensure that the learning contents are designed with an appropriate quantity and level.
 - 4.6 If publishers submit other versions (such as Chinese version or printed version) of the same textbook title for review at the same time, they should duly check the consistency of the contents among all the versions. If another version will be submitted at a later stage, the suggestions in the review reports for the previous submitted version should be thoroughly followed before submission.

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September 2020