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

1. **Introduction**

   1.1 The purpose of this set of guidelines is to familiarise interested e-textbook publishers with the curriculum aims and objectives and related principles for writing e-textbooks of the Technology Education Key Learning Area Curriculum (S1 – 3) - Technology and Living (Knowledge Context), etc. 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 of Secondary Education" (www.edb.gov.hk/en/curriculum-development/7-learning-goals/secondary/index.html). For details, please refer to the *Secondary Education Curriculum Guide* (2017) and its Supplementary Notes (2021).

   1.2 The *Values Education Curriculum Framework (Pilot Version)* was released in 2021 and ten priority values and attitudes (PVA) were introduced. The PVA have been optimised since 2023 with the PVA "Care for Others" extended to "benevolence" and two PVA (i.e. "Filial Piety" and "Unity") added. It is suggested that publishers reinforce the learning elements of values education in the e-textbooks where appropriate. For details, please refer to the *Values Education Curriculum Framework (Pilot Version)* (2021) (Chinese version only) (www.edb.gov.hk/en/curriculum-development/4-key-tasks/moral-civic/ve_curriculum_framework2021.html) and the EDBCM on *Enriching the Values Education Curriculum Framework (Pilot Version) – Optimisation of "Priority Values and Attitudes"* (applications.edb.gov.hk/circular/upload/EDBCM/EDBCM23183E.pdf).

   1.3 The *Curriculum Framework of National Security Education in Hong Kong* was released in 2021. Publishers should reinforce the learning elements of national security education in the e-textbooks where appropriate. They may also refer to the government website "National Security Education Day" for more information such as major fields of national security. For details, please refer to the *Curriculum Framework of National Security Education in Hong Kong* (www.edb.gov.hk/en/curriculum-development/kla/pshe/national-security-education/index.html) and the government website "National Security Education Day" (www.nsed.gov.hk/index.php?l=en).

   1.4 For the general principles and requirements for writing e-textbooks and the requirements for submission of e-textbooks for review, publishers should refer to the latest edition of the *Guiding Principles for Quality Textbooks* and *Guidelines on Submission of e-Textbooks for Review* available on the EDB'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 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, proper 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 and Chinese-English Glossary of Terms Commonly Used in the Teaching of Home Economics/Technology and Living in Secondary Schools* prepared by the Education Bureau issued in 2018 (with updates in December 2022) 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

- Multimedia, such as photographs, illustrations, pictures, graphs, videos and simulations should be relevant to the e-textbook content and be accurate with appropriate descriptions to stimulate and facilitate learning. They should serve to direct students to the instructional focus rather than to distract them from them.

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

4.1 When writing e-textbooks, publishers have to ensure that the content 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 the brand names of commercial items unless they are necessary.

4.2 All URLs and hyperlinks (including the publisher's self-developed learning materials and the learning and teaching resources developed by the third party) in the e-textbooks should be linked to the publisher's website for the publisher's easy management. For the third party resources, the URLs or hyperlinks should be linked 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. In case problems arise from the hyperlinked content (including the third party resources), the publisher should take immediate follow-up actions and bear the relevant liability.

4.3 Publishers should avoid putting excessive hyperlinks that provide additional references in the e-textbooks so as not to violate the self-containment principles. Publishers may place the hyperlinks of their self-developed supplementary learning materials or the learning and teaching resources developed by the third party on their website. Publishers may also provide their website's URL in the Teacher's Book for teachers' reference to facilitate lesson preparation or design of learning and teaching activities. Publishers should be accountable for the learning and teaching resources they provide.

4.4 The maps included in the textbooks should be accurate and only contain essential information suitable for student learning. Reference should be made to the requirements and standard maps of the Ministry of Natural Resources of the People's Republic of China for all maps of China included in the textbooks.

4.5 When using images of the national flag, national emblem, regional flag and regional emblem, the following points should be noted:

- **avoid drawing** the national flag, national emblem, regional flag and regional emblem on your own;

- use real photos to show the national flag, national emblem, regional flag, regional emblem, etc.;

- use the files of the national flag, national emblem, regional flag and regional emblem downloaded from the Protocol Division Government Secretariat and follow the relevant requirements stipulated by the Protocol Division Government Secretariat on the use of these images.

4.6 It is mandatory for the publishers to ensure that all proof-reading work, including that for e-features, language, punctuation, information, illustration, pagination, etc., is completed and the e-textbooks are error-free before submitting them for review.

4.7 Publishers should review the e-textbook content from time to time. When necessary, publishers can make amendments to the e-textbook content with the EDB's consent. The EDB may also require publishers to make amendments when needs arise.

4.8 Publishers should clear all copyright issues of the e-textbooks as appropriate.

4.9 The suggested time allocation set out in the curriculum documents should be taken into consideration to ensure that the learning content is designed with an appropriate quantity and level.

4.10 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 content among all the versions. If another version is to be submitted at a later stage, the suggestions in the e-Textbook

Review Report for the previously submitted version should be duly followed before submission.

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