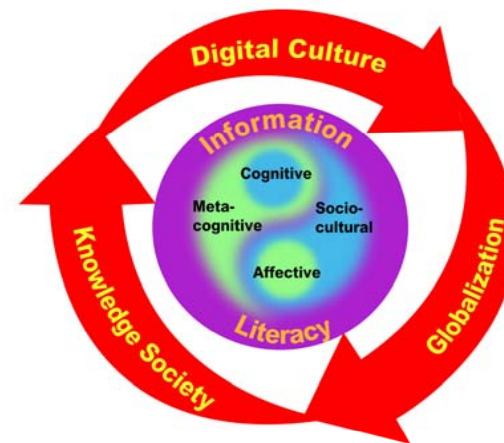


E-learning in School Education and Online Resource Bank

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The Global Development of E-learning



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Our View of E-learning

- Using digital technology to enhance learning
- 2 fundamental changes
 - Digital resources
 - Digital communication
- Generate a new learning and teaching environment

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The Impact of E-learning

- Temporal factor:
 - Synchronous/asynchronous
 - Extended
- Spatial factor:
 - Physically together/not together

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E-learning = Extended Learning?

- E-learning fosters learners to accomplish:
 - concept understanding and meaning making
 - deep learning through understanding
- E-learning fosters learners to conduct authentic learning
 - Technologies allow learners to gain experiential knowledge from experimentation, and then apply the knowledge to real-world problem solving.

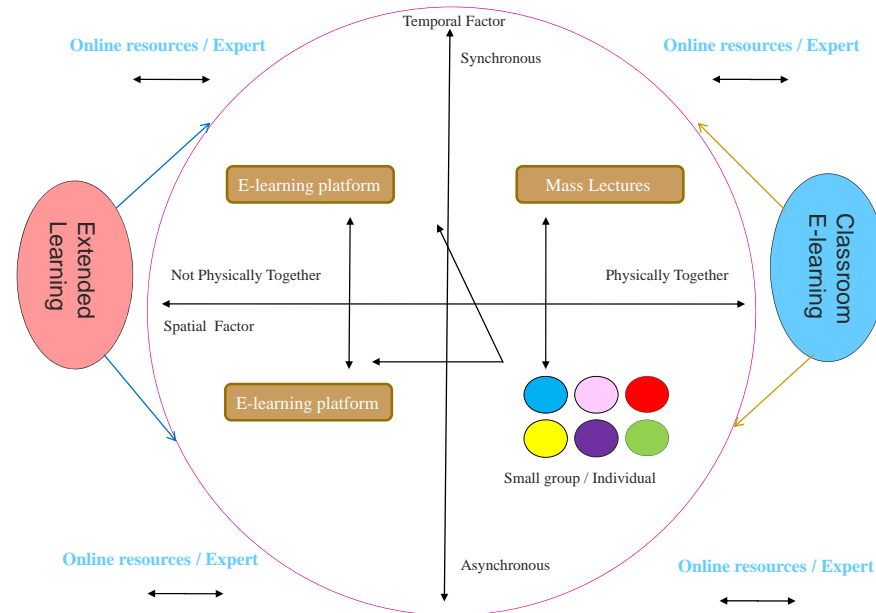
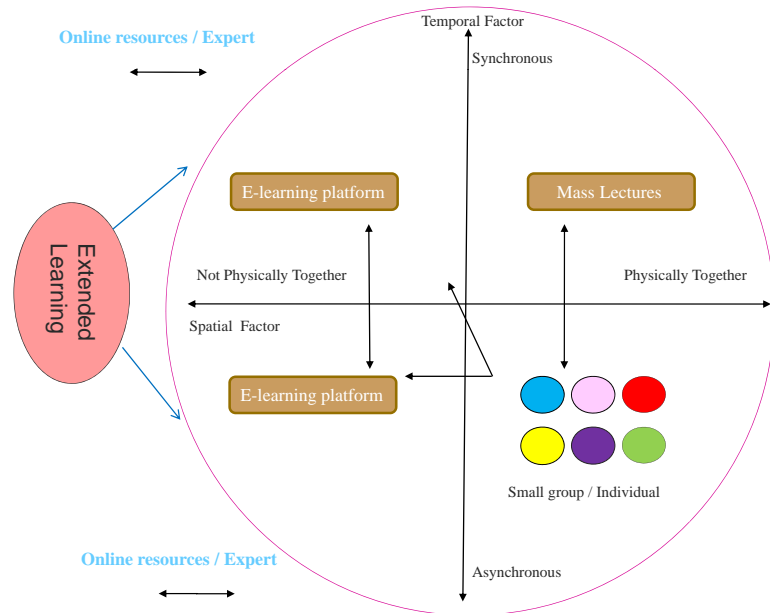
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E-Learning = Open Learning Environment?

- Open the opportunities for external support
 - Learning resources outside school
 - Help from parties outside school (e.g., Alumni)
- Open the opportunities for potential risks
 - Parental support: Providing a safe e-learning environment

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Online Resource Bank: An Element for the Spread of E-learning

- There are tremendous digital resources suitable for e-learning.
- Successful e-learning requires:
 - **comprehensive collection** of digital resources
 - **systematic organization** of digital resources
 - **active sharing** of digital resources
- This drives **a need for the online resource banks of curriculum-based digital resources** for e-learning.

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The Need for an Online Resource Bank: A Questionnaire Survey in a Study in Hong Kong

- Format:
 - **Online self-administered questionnaire survey**
- Respondents:
 - **2182 teachers** from **56 secondary schools**
- Foci:
 - **Current practices** in using digital resources
 - **School support** for using digital resources
 - **Teacher concerns and needs** in using digital resources

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The Need for an Online Resource Bank: Focus Group Discussions in a Study in Hong Kong

- **12 sessions** of **semi-structured focus group discussions**
- **Purposive sampling** of **key stakeholder groups in the school education sector in Hong Kong**
 - School leaders (including Principals and Assistant Principals (Academic))
 - Teachers of major subjects
 - Students
 - Parents
 - Government officials
 - Educational publishers

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Status Quo in the Use of Digital Resources: Subject-specific Usage Objectives

- Language subject area (i.e., subjects related to Chinese Language and English Language):
 - To induce **authentic learning of the development of integrated ability** in language use
- Science subject area (i.e., subjects related to Mathematics, Science and Technology):
 - To assist in **concept explanations and class demonstrations**
- Social science subject area (i.e., subjects related to Personal, Social and Humanities Education):
 - To support **theme-based or project-based learning** in the relevant subjects

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Status Quo in the Use of Digital Resources: Subject-specific Selection Preferences

- Common across different subject areas:
 - **Video** (e.g., video clips on video sharing websites)
- Specific in the language subject area:
 - Ranging from static **PowerPoint slides** (e.g., notes introducing subject topics) to **interactive websites** (e.g., subject-specific e-learning platforms for online exercises)
- Specific in the science subject area:
 - **Cognitive tools** (e.g., subject-specific software, animations and simulations) which support visual representation
- Specific in the social science subject area:
 - **Subject-related websites** that can support the display of multi-media information

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Status Quo in the Use of Digital Resources: Key Sources of Digital Resources

- Textbook publishers
- Local educational authorities
- Local broadcasting organizations
- Internet

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Expectations for the Online Resource Bank: Three Possible Directions for Development Work

- Possible direction 1:
 - To **focus on compiling various types of digital resources for curriculum delivery**
- Possible direction 2:
 - To **collect teaching schemes, in addition to digital resources, for teaching preparation**
- Possible direction 3:
 - To **organize learning materials with digital resources for self-regulated learning**

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Expectations for the Online Resource Bank : Availability of Theme-based Digital Resources

- Language subject area:
 - **Theme-based digital resources, in any form**, that support authentic learning
- Science subject area:
 - Theme-based digital resources, preferably the **subject-related cognitive tools**, that support the illustration of abstract concepts and procedural knowledge in the subject topics
- Social science subject area:
 - Theme-based digital resources, preferably the **subject-related video clips**, that support the organization of task-based learning activities

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Implication 1 for the Development of the Target Online Resource Bank

- *Compiling digital entities, such as electronic texts, presentation slides, images, videos and animations, for curriculum delivery*
 - For the language subject area: Digital resources that support **authentic learning for the development of integrated ability** in language use
 - For the science subject area: Digital resources that assist in the **explanation of abstract concepts** and the **demonstration of procedural knowledge** in the subjects
 - For the social science subject area: Digital resources that support **theme-based or project-based learning** in the subjects

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Implication 2 for the Development of the Target Online Resource Bank

- *Organizing the digital resources into teaching schemes for delivering subject curricula, especially for those subjects with limited textbooks available in the market*
 - To **offer resource support** by organizing useful digital resources
 - To **provide pedagogical support** by inspiring teachers with confidence in the good use of such digital resources in class

An **all-round teaching support** for teachers in the science subject area, in which a number of subject teachers are not specialized in all the subject topics covering by the subject area

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Implication 3 for the Development of the Target Online Resource Bank

- *Organizing learning materials with digital resources, either in the theme-based or project-based approach, for additional support in self-regulated learning beyond class time*
 - **Dual role** of the target online resource bank
 - **Facilitating teachers' subject teaching**
 - **Supporting students' subject learning**

Particularly helpful for the **project-based or theme-based learning tasks in the extended learning** with the use of suitable and reliable digital resources in the science and social science subject areas

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A Step forward in the Use of the Target Online Resource Bank for E-learning

- **Balance** between “Full Teacher Control” and “Full Student Control”:
 - **Teachers provide** digital resources and learning plans for e-learning
 - **Learners flexibly consider** the approach to using the digital resources and the learning plans for e-learning
- **2 significant actions** in the classroom context:
 - To **reduce the ratio of lesson time** for teachers to **instruct subject knowledge**
 - To **increase the ratio of lesson time** for learners to **use digital learning resources**

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Thank You for Your Attention!

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