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A3Learning
Learning Anywhere, Anytime, from Anyone

MODULE 2
Improving Digital Teaching Competence

Unit 2.3.
Implementing Best Practices

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INTRODUCTION

In recent units, we've observed how embracing digital technologies empowers educators to meet the changing needs of learners, encourages active participation, and cultivates a spirit of innovation in education. By adhering to effective strategies, educators can harness the full potential of digital tools, nurturing a dynamic and effective learning atmosphere for every student.

This unit offers practical insights by showcasing **examples of implementing these tools across different subjects and teaching scenarios**. It acts as a preparatory guide for educators, emphasizing the practical application of tools and resources introduced earlier.

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LEARNING OUTCOMES

By the end of this unit, you will be able to:

1. Explore practical **examples of tool implementation for diverse subjects**.

2. **Adapt best practices** for specific teaching contexts.

3. **Apply** tools **effectively** in real-world teaching scenarios.

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TO REFLECT

- How do you **practically implement tools across various subjects** in your teaching?
- How do you **customize** best practices **to suit specific** teaching **contexts**?

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OVERVIEW

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I. STRATEGIES FOR INTEGRATING TOOLS

Why is it important?

Seamless incorporation of digital tools not only enriches the learning experience but also equips students with invaluable skills for the digital age. It:

- **Enhances the learning experience** (making learning more engaging and dynamic).
- **It's relevant to real-world skills** (students develop the digital literacy skills).
- **Offers opportunities for differentiation and personalization** (meeting the diverse needs and learning styles of individual students).
- Increases **efficiency** and **flexibility** (allowing educators to focus more on facilitating learning and less on administrative tasks).

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I. STRATEGIES FOR INTEGRATING TOOLS

Into Lesson Plans

1) Identify Learning Objectives: Begin by identifying the learning objectives of the lesson and determining how digital tools can support or enhance these objectives. Choose tools that align with the content and pedagogical goals of the lesson.

2) Select Appropriate Tools: Consider the specific needs of your students and the content being taught when selecting digital tools. Choose tools that are user-friendly, age-appropriate, and relevant to the learning goals of the lesson.

3) Provide Training and Support: Provide resources, tutorials, and hands-on practice opportunities to ensure that everyone feels comfortable and confident using the tools.

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I. STRATEGIES FOR INTEGRATING TOOLS

Into Lesson Plans

4) Integrate Seamlessly: Incorporate digital tools seamlessly into existing lesson plans to maintain continuity and flow. Introduce the tools at appropriate points in the lesson and integrate them into activities and assessments in a natural and meaningful way.

5) Encourage Exploration and Creativity: Encourage students to explore and experiment with the digital tools to foster creativity and innovation. Provide opportunities for students to collaborate, problem-solve, and create using the tools to deepen their understanding of the content.

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I. STRATEGIES FOR INTEGRATING TOOLS

Into Lesson Plans

Digital tools can be integrated into various subject areas to enhance learning experiences and support the achievement of learning objectives. By incorporating digital tools into lesson plans, educators can create more engaging, interactive, and personalized learning experiences for their students.

Social Studies Lesson

Incorporate digital mapping tools such as Google Earth or ArcGIS to explore historical events and geographical concepts. Students can virtually explore historical sites, analyse primary source documents, and create interactive maps.

Art Lesson

Integrate digital art creation tools such as Adobe Photoshop or Procreate to allow students to explore digital art techniques and express their creativity. Students can create digital paintings, illustrations, and graphic designs, showcasing their artistic skills in a digital format.

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I. STRATEGIES FOR INTEGRATING TOOLS

Into Lesson Plans

Tailoring strategies to the subject matter is essential for ensuring that instruction is **relevant**, **engaging**, and **effective** for students. Each subject area has its **content standards**, **disciplinary practices**, and **cognitive demands** that require specialized instructional approaches.

By tailoring strategies to the subject matter, educators can address these **unique requirements**, scaffold learning experiences, and **promote deeper understanding and mastery** of disciplinary concepts.

Moreover, subject-specific strategies can help educators capitalize on students' **interests**, prior **knowledge**, and real-world **connections**, making learning more **meaningful** and **impactful** across diverse subject areas.

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II. BEST PRACTICES

II. BEST PRACTICES

i) To strategically plan for and integrate digital devices and resources into the teaching process to optimize the effectiveness of teaching interventions

- **Alignment with Learning Objectives:** It is important to ensure that the chosen digital devices and resources align with the intended learning objectives. Integrate technology seamlessly into the curriculum to enhance student understanding and engagement in the subject matter.

- **Accessibility and Inclusivity:** Select digital resources that are accessible to all students, including those with disabilities. Ensure that content is presented in various formats, providing options for diverse learning preferences.

- **Student-Centered Approach:** Involve students in the selection of digital resources to adapt to their interests and learning preferences. Empower students to take ownership of their learning journey by encouraging them to explore resources that resonate with them.

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II. BEST PRACTICES

i) To strategically plan for and integrate digital devices and resources into the teaching process to optimize the effectiveness of teaching interventions

Example

A high school science teacher plans a lesson on the human respiratory system. They integrate digital resources, such as interactive 3D models and virtual simulations, to provide students with an immersive and hands-on exploration of the respiratory system's functioning. The teacher ensures that digital devices, such as tablets or laptops, are readily available for each student to actively engage with the resources during the lesson.

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II. BEST PRACTICES

ii) To appropriately manage and coordinate digital teaching strategies to create a conducive learning environment.

- **Establishing Technology Guidelines:** Collaboratively establish technology guidelines with students to outline expectations for appropriate technology use during class time and the responsible handling of digital devices. These guidelines can help students develop self-regulation and ensure that technology is used to enhance learning rather than distract from it.

- **Digital Citizenship Education:** Dedicate time to teach digital citizenship skills, including online etiquette, critical evaluation of online content, and responsible digital communication. Empower students with these skills to foster a respectful and safe online learning environment.

- **Balancing Digital and Non-Digital Activities:** Maintain a balance between digital and non-digital activities to ensure a well-rounded learning experience. Incorporate a variety of activities, including group discussions, hands-on experiments, and creative projects, to provide students with diverse learning opportunities.

II. BEST PRACTICES

ii) To appropriately manage and coordinate digital teaching strategies to create a conducive learning environment.

Example

A primary school teacher establishes clear expectations for technology use in the classroom. They create a digital citizenship agreement with their students, outlining responsible behaviours while using digital devices. The teacher incorporates collaborative online platforms and interactive presentations to enhance student engagement and participation, while maintaining a balance between digital and non-digital learning activities.

II. BEST PRACTICES

iii) To explore with and develop innovative formats and pedagogical approaches to enrich instructional practices and engage learners effectively.

- **Professional Development:** Participate in professional development workshops and conferences to stay updated on emerging digital tools and best practices. Engage with professional learning communities to share ideas and collaborate on innovative teaching methods.

- **Student Feedback and Reflection:** Regularly seek feedback from students on the effectiveness of digital teaching strategies. Encourage students to share their experiences and preferences regarding digital tools and activities. Use this feedback to refine and improve instructional approaches.

- **Pilot Projects:** Conduct pilot projects to test new formats and technologies in a controlled environment before full implementation. This allows educators to evaluate the feasibility and impact of new approaches and make necessary adjustments.

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II. BEST PRACTICES

iii) To explore with and develop innovative formats and pedagogical approaches to enrich instructional practices and engage learners effectively.

Example

A middle school language arts teacher explores the use of digital storytelling as a way to enhance students' writing skills and creativity. The teacher introduces students to digital storytelling platforms, where they can create multimedia narratives using images, audio, and video elements. The teacher encourages students to experiment with different storytelling techniques and genres, providing opportunities for self-expression and peer feedback.

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III. BEST PRACTICES GUIDELINES

For Different Subjects

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III. BEST PRACTICES GUIDELINES

For Languages: Incorporating Interactive Language Learning Apps

Language learning apps leverage technology to create **dynamic and interactive learning experiences**. They offer a wide range of features and functionalities, including **vocabulary drills**, **grammar exercises**, **listening comprehension activities**, **speaking practice**, and **cultural immersion modules**. By incorporating multimedia elements such as audio recordings, videos, images, and interactive exercises, these apps **engage multiple senses and learning modalities**, facilitating **deeper understanding and retention** of language concepts. Additionally, many apps utilise **gamification** elements such as rewards, challenges, and progress tracking to **motivate** learners and promote sustained engagement with the material.

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III. BEST PRACTICES GUIDELINES

For Languages: Incorporating Interactive Language Learning Apps

- **Align with Curriculum Objectives:** Select language learning apps that align with the learning goals and objectives of the language curriculum. Choose apps that cover relevant language skills and linguistic concepts.

- **Supplement Classroom Activities:** Integrate language learning apps as supplementary resources to reinforce and extend classroom lessons.

- **Promote Personalized Learning:** Encourage students to explore language learning apps at their own pace and according to their individual learning preferences.

- **Facilitate Collaboration and Communication:** Leverage features of language learning apps that support collaboration and communication, like peer-to-peer interactions, group activities, and collaborative projects (forums, discussion boards, or virtual classrooms).

III. BEST PRACTICES GUIDELINES

For Languages: Incorporating Interactive Language Learning Apps

- **Duolingo** is a popular language learning app that offers interactive lessons in over 30 languages. It has a gamified approach to language learning, with bite-sized lessons, progress tracking, and achievement badges to motivate learners. It covers skills like vocabulary, grammar, listening, and speaking, making it suitable for learners of all levels.

- **Memrise** utilizes spaced repetition and mnemonic techniques to help users memorize vocabulary and phrases in various languages. It offers a diverse range of language courses created by native speakers, as well as user-generated content, and also incorporates multimedia elements such as audio recordings and video clips to enhance learning engagement and retention.

- **Rosetta Stone** is renowned for its immersive language learning approach, which emphasizes contextualized learning through visuals, audio, and text. It offers courses in multiple languages and caters to learners of all proficiency levels, from beginners to advanced speakers.

III. BEST PRACTICES GUIDELINES

For Social Sciences: Utilizing Online DIscussions and Debates

Online discussions and debates offer valuable opportunities for enriching social science lessons by **fostering critical thinking, collaboration, and deeper understanding** of complex social issues. Through structured online interactions, students can engage in meaningful dialogue, explore diverse perspectives, and develop essential skills in communication, argumentation, and civic engagement.

Additionally, online discussions and debates **encourage active citizenship and civic engagement** by empowering students to voice their perspectives on matters of social significance and advocate for positive change in their communities.

III. BEST PRACTICES GUIDELINES

For Social Sciences: Utilizing Online DIscussions and Debates

- **Establish Clear Expectations:** Provide clear guidelines, objectives, and expectations for online discussions, including rules for respectful communication, participation requirements, and evaluation criteria.

- **Promote Active Participation:** Encourage active participation in online discussions by posing thought-provoking questions, providing relevant resources, and facilitating meaningful interactions among students.

- **Foster Collaboration and Peer Feedback:** Create opportunities for collaborative learning and peer feedback by incorporating group discussions, peer review activities, and collaborative projects into online discussions. Encourage students to engage with each other's ideas, provide constructive feedback, and build upon each other's contributions to deepen understanding and promote collaborative problem-solving.

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III. BEST PRACTICES GUIDELINES

For Social Sciences: Utilizing Online DIscussions and Debates

- **Flipgrid** is a video discussion platform that allows students to record short video responses to discussion prompts or debate topics. Educators can create discussion topics, pose questions, or assign debate topics, and students respond by recording video responses.

- **Google Classroom** offers a variety of features for facilitating online discussions and debates, including the ability to create discussion topics, post debate prompts, and facilitate threaded discussions among students. Educators can use Google Classroom to assign debate topics, share resources, and moderate discussions in real-time.

- **Padlet** is a virtual bulletin board that allows users to post text, images, videos, and links to create collaborative discussions or debates. Educators can create a Padlet board for each debate topic. It allows for asynchronous participation and can be easily integrated into online learning environments.

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III. BEST PRACTICES GUIDELINES

For Sciences: Incorporating Learning Apps

Learning apps offer a wide range of features and functionalities that enhance science lessons by providing students with opportunities for **hands-on exploration, experimentation,** and **inquiry-based learning**.

These apps often include **interactive simulations, virtual labs, multimedia resources,** and **gamified activities** that allow students to visualize abstract concepts, conduct virtual experiments, and engage with real-world phenomena in a safe and controlled environment.

By immersing students in dynamic and interactive learning experiences, learning apps foster curiosity, critical thinking, and problem-solving skills, while also promoting deeper understanding and retention of scientific knowledge.

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III. BEST PRACTICES GUIDELINES

For Sciences: Incorporating Learning Apps

- **Align with Curriculum Standards:** Select learning apps that align with curriculum standards and learning objectives for science education. Choose apps that cover relevant scientific topics, concepts, and skills outlined in the curriculum.

- **Supplement Hands-on Activities:** Use learning apps to supplement hands-on laboratory activities and experiments, providing students with additional opportunities to explore scientific phenomena.

- **Differentiate Instruction:** Leverage the adaptive features of learning apps to differentiate instruction and meet the diverse learning needs of students.

- **Promote Collaboration and Inquiry:** Encourage collaboration and inquiry-based learning by incorporating cooperative learning activities, group projects, and peer discussions into app-based learning experiences.

III. BEST PRACTICES GUIDELINES

For Sciences: Incorporating Learning Apps

- **PhET** provides a collection of free interactive simulations covering a wide range of scientific topics, including physics, chemistry, biology, and earth science. These simulations allow students to explore scientific concepts through hands-on experimentation, visualizations, and interactive models, making abstract concepts more concrete and accessible.

- **Labster** offers virtual laboratory simulations that allow students to conduct realistic experiments in a virtual environment. These simulations provide students with opportunities to practice laboratory techniques, perform experiments, and analyse data, all without the need for physical laboratory equipment or materials.

- **ExploreLearning Gizmos** offers interactive simulations and virtual experiments covering math and science topics for grades 3-12. These simulations allow students to manipulate variables, observe cause-and-effect relationships, and test hypotheses in a virtual laboratory setting, promoting inquiry-based learning and scientific inquiry skills.

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III. BEST PRACTICES GUIDELINES

For Arts: Incorporating Learning Apps

Learning apps offer a wide range of features and functionalities that enhance arts and crafts lessons by providing students with **access to instructional tutorials, virtual workshops, creative tools,** and **inspiration galleries**.

These apps often include **step-by-step instructions, video demonstrations,** and **interactive activities** that guide students through the process of creating art and crafts projects, while also offering opportunities for **experimentation**, **exploration**, and **self-expression**.

By leveraging digital technology, learning apps make arts and crafts education more accessible, interactive, and engaging, empowering students to unleash their creativity and develop their artistic abilities.

III. BEST PRACTICES GUIDELINES

For Art: Incorporating Learning Apps

- **Select Appropriate Apps:** Look for apps that offer a variety of creative tools, project ideas, and instructional resources tailored to the needs and interests of students.

- **Supplement Hands-On Activities:** Use learning apps to supplement hands-on arts and crafts activities. Apps can offer tutorials, tips, and techniques to enhance students' skills and expand their creative repertoire.

- **Encourage Exploration and Experimentation:** Encourage students to explore and experiment with different artistic techniques, mediums, and styles using learning apps.

- **Promote Reflection and Feedback:** Use learning apps to facilitate reflection and feedback on students' artwork. Apps can provide features for annotating, commenting, and sharing artwork, promoting a culture of collaboration and constructive criticism.

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III. BEST PRACTICES GUIDELINES

For Art: Incorporating Learning Apps

- **Medibang Paint** is a digital painting app that offers a wide range of tools and features for creating digital artwork. Students can use it to sketch, paint, and illustrate using a variety of brushes, layers, and effects.

- **Canva** is a graphic design website that allows students to create posters, flyers, and digital artwork using customizable templates, graphics, and text. Students can use it to design visual compositions, experiment with typography, and express their ideas creatively.

- **Tinkercad** is a 3D modelling app that enables students to design and create 3D models for printing or virtual rendering. Students can use it to explore concepts of geometry, spatial reasoning, and prototyping as they design objects, sculptures, and architectural models.

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IV. EXAMPLES OF TOOLS

Suplementary Resources

Video “Top 5 Apps to Make Virtual Lesson Interactive”

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IV. EXAMPLES OF TOOLS

Suplementary Resources

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