DiSHEd
Digitalisation of Sustainable Health Education

Digital Transformation - Best Practices in VET Food and Health Education

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Table of content

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Introduction

The COVID-19 pandemic has accelerated the need for digital transformation across all sectors, including vocational education. As traditional face-to-face learning was interrupted, institutions and educators rapidly transitioned to online channels to maintain educational continuity. This transition illuminated both the prospective solutions and the obstacles linked to digital learning, offering significant insights that can influence the future of vocational education.

This booklet presents the best practices for digital teaching identified across current food and health vocational education programmes. It outlines key strategies that proved successful in adapting vocational education to the digital landscape and highlights areas for enhancement. This information seeks to assist educational institutions, policymakers, and stakeholders in developing a more resilient, accessible, and effective vocational education system in food and health for the digital era. By analysing successful strategies and identifying potential challenges and solutions, we can foster meaningful digital transformation that enhances learning outcomes, expands accessibility, and equips students for the evolving demands of the workforce.

Ollscoil Teicneolaíochta an Atlantaigh

Atlantic Technological University

Ireland - best practices in digital education

Atlantic Technological University (ATU)

Digital Discovery Tool

Brief Description
A digital skills assessment tool to provide educators and students with a self-assessment of their digital competencies. The assessment highlights where an individual's strengths and weaknesses are and provide targeted suggestions for appropriate training and courses after. The test takes approximately 20 minutes to complete and, once completed, you are provided with a summary report of your skill level.

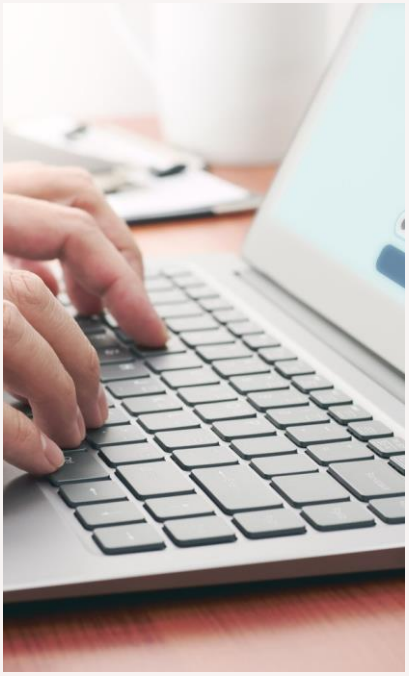
Source
DigitalEd.ie and Teaching and Learning Office, ATU Galway.

Available From
Digital Discovery Tool is freely accessible at https://www.digitaled.ie/discovery-tool/

Objective
To highlight an individual's current digital capabilities and direct to appropriate training and resources for further upskilling in areas of identified weakness.

Practical Use
The digital self-assessment tool will identify digital capabilities, and highlight areas for upskilling to increase educators and students digital competency and ability to meet modern workforce digitalisation needs.

Group(s) Addressed
Educators/staff and students



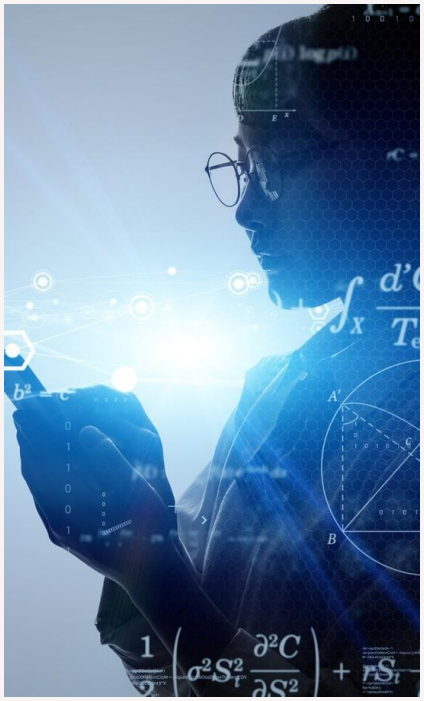
E-portfolios

Brief Description

Research indicates that incorporating e-portfolio based learning into curricula enhances graduates' competitive edge in the labour market. The purposeful incorporation of digital technology into a module can ensure learners are developing a level of specialist digital skills, that are vital for learning and work in an increasingly digitised world. An e-portfolio can provide learners with a digital tool to enable them to collect, curate and communicate their knowledge and skills. Through this learners can also showcase personal achievements and reflections in their e-portfolio.

Practice Identified From

BA (Hons.) Culinary and Gastronomic Science, ATU Galway



Group(s) Addressed

Students

Objective

To provide students with digital upskilling to enhance their employability to meet the modern needs of the workforce and showcase how digital technology can be used to collate and communicate their knowledge and skills learned.

Methodology

The lecturer devised a series of online introductory lectures, which were delivered at the beginning of the semester. This helped learners with the development of their e-portfolio. The purpose of the e-portfolio was communicated with the learners, in order to encourage buy in. A lecture on digital ethics was given, and following on from that, a practical e-portfolio workshop was executed. The learners used the portfolio platform Pebblepad to create their e-portfolio. Every effort was made by the lecturer to ensure that the e-portfolio could be successfully adopted. Exemplars were created and shared, and support was provided.

Challenges Faced

A lot of time and effort is required for the development of an e-portfolio by learners. Equally, there is a need to build in time for the lecturer to fully develop their learning strategy and resources, to reap the benefits.

Padlet

Brief Description
Class reports pre covid were only shared between individual students and the lecturer. Padlet created an innovative way of sharing reflections between students, creating a community of practice. This tool was applied to the Modern Classics and Global Cuisine module as each menu ran for a two-week period, with students completing different tasks each week. Students were tasked with posting their reflections and uploading a photograph of their dish each week. Padlet enabled students to learn from the reflections of their peers. To provide guidance and a clear structure to students an assessment rubric was developed prior to introducing Padlet. In addition, students were given access to samples that represented different standards of reflective practice.

Objective
Encourage reflective practice and peer learning through the Padlet platform.

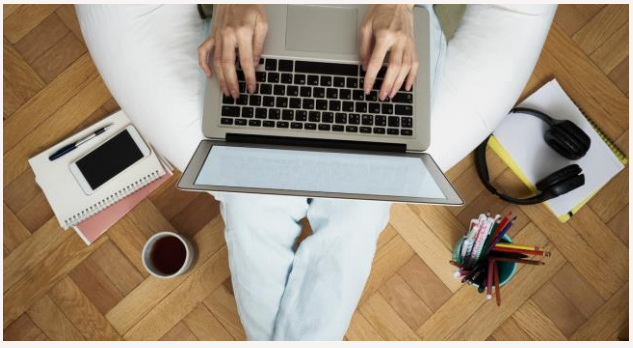
Group(s) Addressed
Students

Practice Identified From
Culinary Arts, ATU Galway

Methodology
ATU Galway's digital strategy designed pre Covid informed the adoption of Padlet as an interactive tool to encourage students to develop their reflective practice. The use of Padlet provided students with a collaborative space, offering them an invaluable life skill to improve the quality of learning, enabling students to identify their own strengths and weaknesses once they were willing to question their own way of doing things. Padlet provided students with a tool that allowed them to showcase their dishes and to see how their peers interpreted dishes. This tool was applied to the Modern Classics and Global Cuisine module as each menu ran for a two-week period, with students completing different tasks each week. Students were tasked with posting their reflections and uploading a photograph of their dish each week. Padlet enabled students to learn from the reflections of their peers. It stimulated the students to compare, contrast, and reflect on each other's dishes, allowing them to comment on visual aspects such as shapes, colours, and flow. A survey was conducted to evaluate the impact of digital tools while online teaching during the pandemic. Student feedback showed that they valued Padlet as a digital tool for reflection, to share ideas and learn from each other. Students also commented favourably on the social aspect of using Padlet in breakout rooms during group work.

Available From
https://padlet.com/

Challenges Faced
Time required to secure student engagement and promote peer reflection on their practices.



Lithuania - best practices in digital education

Kaunas Food Industry and Trade Training Centre

Google Classroom

Brief Description

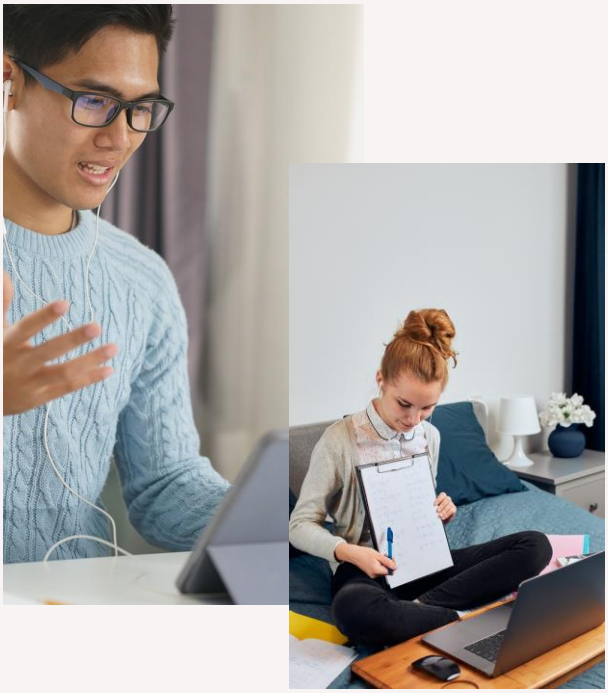
Google Classroom is a free, online platform designed to help teachers create, distribute, and manage assignments, communicate with students, and streamline classroom activities. It facilitates collaboration, organizes learning materials, and allows for easy sharing of feedback and grades in a digital learning environment.

Objective

Provides an easy way for teachers to communicate with students, share announcements, and foster class discussions. Teachers can create, distribute, and track assignments and quizzes online, reducing paperwork and improving organization. Students can collaborate on projects, share documents, and receive feedback from their teachers directly within the platform. Teachers can share a variety of learning materials (videos, PDFs, links, etc.) with students, ensuring they have access to all the necessary resources for their studies.

Group(s) Addressed

General education, vocational education and special educational needs students.



Practical Use

Provides a comprehensive platform for digitalizing and sustaining health education by organizing content delivery, facilitating interactive learning, promoting engagement, and enabling continuous assessment and feedback in a flexible and accessible digital environment.

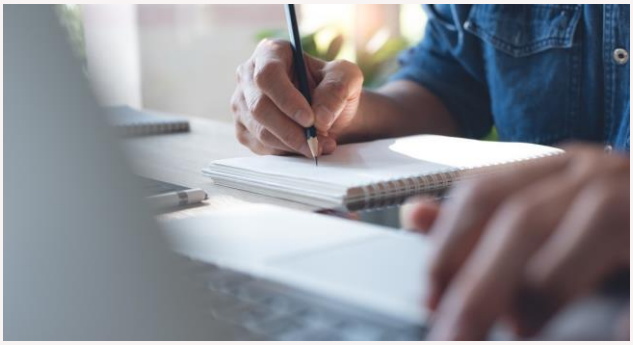
Available From

https://edu.google.com/workspace-for-education/classroom/

Challenges Faced

Comprehensive training is needed for both teachers and pupils. Creative ways of combining hands-on learning with digital tools are hard to find. Some educators and students are unable to embrace digital platforms due to a lack of confidence. Developing lessons and digital content requires sufficient time and effort.

Moodle



Brief Description

Moodle is an open-source learning management system (LMS) designed to provide educators, administrators, and learners with a flexible platform to create personalized learning environments. It supports online courses, collaboration, assessments, and communication tools, making it ideal for educational institutions and organizations. Moodle is highly customizable, scalable, and supports various teaching methods, including blended and fully online learning.

Objective

A flexible learning platform that allows educators to create and manage personalised online learning environments, facilitating collaboration, communication and assessment. It aims to meet a wide range of educational needs by offering a customisable, scalable system that enhances both the teaching and the learning experience, with tools and features designed to promote student engagement and effective knowledge transfer.

Available From

https://moodle.org/

Practical Use

Allows educators to design flexible, interactive courses that encourage exploration, discussion and problem-solving. Teachers can create different activities related to sustainability and health, considering the curriculum. "Moodle" supports a variety of pedagogical approaches such as blended learning, flipped classrooms and fully online courses. It allows teachers to integrate activities such as quizzes, forums, assignments and multimedia to encourage both individual learning and peer-to-peer collaboration. The platform also emphasises continuous feedback, evaluation and accessibility.

Group(s) Addressed

General education, vocational education and special educational needs students.

Challenges Faced

Teachers required a long time to adapt to the Moodle platform. Educators with poor digital skills required an extended duration of time to master the functionalities of Moodle. Developing dynamic, enjoyable, and captivating activities can consume significant amounts of teachers' time.

Microsoft Teams

Brief Description
Microsoft Teams is a collaboration platform developed by Microsoft as part of the Microsoft 365 suite. It provides a centralized workspace where users can chat, hold video meetings, share files, and collaborate on documents in real-time. Teams integrates with other Microsoft services like Word, Excel, and OneNote, as well as third-party apps, making it a versatile tool for both remote and in-office work. It is widely used for team communication, project management, and online learning.

Objective
Facilitate seamless collaboration and communication among team members and educational class groups by providing a unified platform that integrates chat, video conferencing, file sharing, and project management tools, thereby enhancing productivity and enabling efficient teamwork in both remote and in-school settings.

Available From
https://www.microsoft.com/en-us/microsoft-teams/group-chat-software

Group(s) Addressed
Administration, teachers, students

Practical Use
Recorded sessions are flexible and learners can review the material at their convenience. Learners can collaborate in real time using shared documents sharing educational resources such as articles, videos and presentations. Students can access lesson notes, research materials and study guides. Quizzes and surveys tools can be utilised to assess understanding and gather feedback. Dedicated channels can be created for different topics or courses, so that relevant information is targeted for discussion and easy access.

Challenges Faced
Infrastructure development, data protection, and opposition to change are some of the challenges that have been encountered with integrating Microsoft Teams.

Microsoft Teams

Cyprus - best practices in digital education

University of Cyprus

Blackboard

Brief Description

Due to the introduction of lockdown measures, it was necessary to convert courses from in-person to online formats. Blackboard Collaborate is a web conferencing platform that facilitates online meetings and instructional sessions. Educators can utilise the platform to host classes, presentations, and share additional documents. Students can present and complete their examinations via this site. Additionally, the Department advised Faculty to augment their Office Hours with virtual office hours (e.g., through Blackboard Collaborate) to offer students flexible support choices.

Available From

https://www.class.com/collaborate/

Objective

To continue teaching and training practices in the online environment and ensure students can complete their educational programmes remotely.

Group(s) Addressed

Administration, teachers, students

Methodology

Throughout the lockdown period, frequent training was provided to enhance digital skills and effectively utilize these platforms.

Challenges Faced

While theoretical courses transitioned smoothly to online learning without significant issues, practical and laboratory-based courses presented major challenges. Conducting lessons that required hands-on components, such as laboratory work or internships, proved difficult.

For example, during the first lockdown, students enrolled in Internship II, which normally takes place in a hospital setting, were unable to access hospitals due to strict health measures. As a result, students had to complete virtual case studies under the guidance of their mentors. These adaptations highlighted the limitations of online platforms in replicating essential in-person experiences for practical skill development.

Flipped lectures

Brief Description
In flipped lectures, students gain familiarity with content before class, and class time is used to assess and build upon student understanding using active learning.

Group(s) Addressed
Administration, teachers, students

Objective
The main objective of this practice was to encourage students how to learn to study independently first and then discuss with others.

Practical Use
To gain familiarity with background material in the synchronous online course, students completed assigned scientific article readings and watched recorded lectures from the instructor before class.

Challenges Faced
The biggest challenge is to encourage students to engage with the material prior to lectures and initiate independent learning and research.

Innovative teaching methods using digital technologies

Brief Description

Use of innovative software for online teaching (e.g., Kahoot, Flipped Classrooms, Kialo). Other activities through teaching platforms (e.g., solving quizzes, polls, chat, presentations). Solving Virtual Case Studies.

Objective

Active participation of all students in the class. To make online classes more interactive and create a suitable environment for learning that is active, innovative, and challenging for the students.

Group(s) Addressed

General education, vocational education and special educational needs students.

Challenges Faced

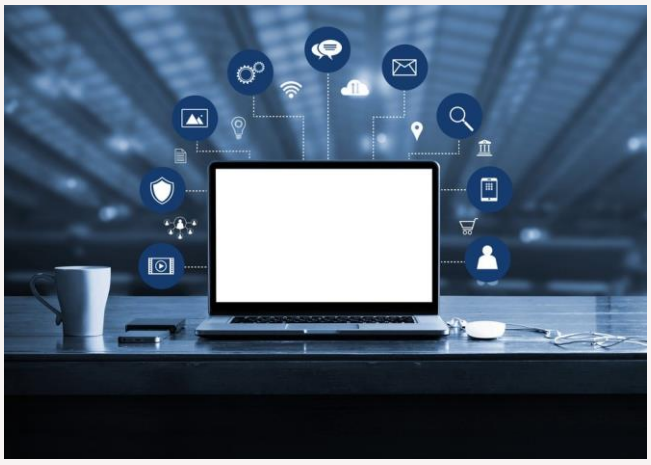
Educators must be trained and coached by a specialized group of Faculty to introduce innovative pedagogical approaches using the Universities' Learning Management System (LMS) platforms to organize assignments, project-based work, group work, constant communication between students and instructors, synchronous and asynchronous activities (including chats, forums, wikis, online quizzes, journals, etc). The D.e.L. Ad-Hoc Committee organizes, at least once per semester, colloquia where instructors meet, discuss and share experiences on discipline-specific approaches.

Methodology

Our University adopts a wide range of contemporary pedagogical approaches which apply to higher education for delivering the course and achieving the learning outcomes. To this end, since 2015, European University Cyprus (EUC) has introduced the Digital Enhanced Learning (D.E.L.) intervention project which aims to integrate digital teaching and learning approaches to all its campus-based programmes of study. As part of this initiative, instructors are trained and coached by a specialized group of Faculty to introduce innovative pedagogical approaches using the Universities' Learning Management System (LMS) platforms to organize assignments, group assignments, peer feedback in assignments, project-based work, group work, constant communication between students and instructors, synchronous and asynchronous activities (including chats, forums, wikis, online quizzes, journals, etc).

Furthermore, beyond PowerPoint presentations instructors are advised to use other methods of teaching to develop critical thinking such as case studies.

Moreover, EUC adopts the approach of the "Professional Learning Community" (PLC) where teaching personnel of the Program meet once a month for 1 hour to exchange experiences, identify needs and discuss good practices. One of the major interests of our PLC is the student-centred approach and the best practices in delivering the course and achieving the learning outcomes..



Poland - best practices in digital education

The Polish Farm Advisory and Training Centre not-for-profit Sp. z o.o.

Librus

Brief Description

Librus is a popular electronic school diary in Poland, which was expanded during the pandemic to allow for remote lessons. The system allows for the uploading of materials, homework assignments and communication between teachers, students and parents. The system also keeps track of attendance, assignments to be graded and teacher feedback to ensure continuity of education. In addition to supporting teaching, Librus also facilitates administrative matters related to education, such as attendance and uploading relevant documents.

Promoter(s)

Librus, a leading provider of digital solutions for schools in Poland

Group(s) Addressed

Students, teachers, and parents

Objective

To streamline school communication, improve learning management, and enhance digital education access.

Practical Use

The platform offers real-time access to school information, online assignments, grades, and resources. It integrates tools for attendance tracking, communication, and online learning, utilizing both mobile and desktop applications for accessibility.

Challenges Faced

Ensuring equal access to technology for all students and addressing concerns over data privacy.

Zoom Classes

Brief Description
Universities switched to using Zoom for lectures, seminars, and exams. This allows for large group meetings and was flexible for online assessments.

Available From
https://zoom.us/

Group(s) Addressed
University students and faculty.

Objective
To enable students to continue their studies and complete the semester without delay, despite the closure of the campuses. Zoom offered a stable tool for lectures, seminars and consultations. It was also a challenge to adapt traditional exams to a remote format, taking into account academic integrity and the ability to monitor students during testing. For programmes taught in English, Zoom allowed foreign students who could not return to Poland or attend classes in person to continue their studies.

Practical Use
To gain familiarity with background material in the synchronous online course, our students completed assigned scientific articles readings and watched recorded lectures from the instructor before class.

Challenges Faced
Students and lecturers faced various technical problems, such as unstable internet connections, login problems or difficulties in using platform features (e.g. screen sharing, breakout rooms).
Conducting exams online posed challenges in terms of monitoring and ensuring fairness. There were concerns about the possibility of students downloading and behaving dishonestly, necessitating the introduction of new examination methods such as open tests and group projects.
Despite the availability of videoconferencing, the lack of face-to-face contact with students made it difficult for some lecturers to teach effectively, particularly in classes requiring active discussion or group work.

EduPolska- E-learning platform

Brief Description
The Polish government promoted a specific e-learning platform designed for primary and secondary school students. It provided access to lessons, resources, and assignments.

Promoted By
Ministry of National Education.

Groups Addressed:
Primary and secondary school students.

Objective
EduPolska offers high-quality online courses to make education more accessible and flexible. These cover preschool education to specialised professional development to fulfil users' different demands. The platform uses interactive e-learning modules, video lessons, quizzes, and evaluations. The platform also uses gamification and adaptive learning to engage learners in live and on-demand sessions. User certifications are approved by educational institutions after course completion.

Practical Use
EduPolska combines interactive e-learning modules with video lessons, quizzes, and assessments to provide a comprehensive learning experience. It offers both live and on-demand content, using gamification and adaptive learning technologies to engage users and tailor educational pathways to individual needs.

Challenges Faced
One of the major issues is ensuring digital inclusivity, especially for students in remote or underprivileged regions. Another challenge is keeping students engaged in a fully online learning environment, which requires continuous innovation in teaching methods. Additionally, the platform must regularly update its content to align with changing educational standards and market needs. It also faces technical challenges, such as ensuring platform accessibility, cybersecurity, and providing an optimal user experience.

Summary

This booklet examines the integration of digital teaching and learning by educators inside their programs to facilitate the digital transformation of vocational education and assure the continuity of education throughout the Covid-19 epidemic. It illustrates how educational institutions transitioned to online learning in response to face-to-face disruptions, highlighting both the achievements and obstacles encountered during this process. The booklet presents effective solutions derived from worldwide educators and learners, directing to useful resources and digital teaching tools, and highlights areas requiring enhancement. This booklet will act as a useful guide to educational institutions, policymakers, and stakeholders in developing more robust and efficient vocational education systems, improving learning outcomes, expanding access, and adequately preparing students for evolving workforce requirements.

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Digitalisation of Sustainable Health Education

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