UNIT 9

NEW TEACHING METHODS IN VET

2021-2-DE02-KA220-VET-000048785

INTRODUCTION

In the following unit, we will go through the most recent trends when it comes to teaching and educating different groups of learner, compare six newest trends in education, and share examples on how these methods can be used in diverse settings to enrich learner's experiences and make classes more interesting and fun. We will finally give the floor to you, providing you with the last set of activities that we hope can help you embrace the gained knowledge better and leave you with a new set of references that you can use to develop your knowledge further.

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“Minds are like parachutes.
They only work when they are open.”

—THOMAS DEWAR

01

MOST POPULAR TRENDS IN EDUCATION

TRENDING TEACHING METHODS 2023 AND BEYOND

FUTOUR

DIGITAL LITERACY	BLENDED LEARNING	BITE-SIZED LEARNING	MICROLEARNING	MOBILE LEARNING
PROJECT-BASED LEARNING	PROBLEM-BASED LEARNING	GAME-BASED LEARNING	GAMIFICATION	ROBOTICS CODING
SOCIAL/EMOTIONAL LEARNING	TEACHING EMPATHY	GENIUS HOUR	TEAM-BUILDING FOR LEARNING	PERSONALIZED LEARNING
GROWTH MINDSET	MAKER LEARNING	BRAIN-BASED LEARNING	ADAPTIVE LEARNING	ALTERNATIVES TO TRADITIONAL TEACHING

TRENDING TEACHING METHODS 2023 AND BEYOND

DIGITAL LITERACY

In classrooms where digital citizenship is taught effectively, teachers have two things in common: they **model ethical technology use** for their learners on a daily basis, and they naturally **incorporate conversations about it whenever technology is part of their lesson plan**.

MOBILE LEARNING

Mobile learning, also referred to as mLearning, is **a way of accessing learning content through mobile devices**. This method empowers learning at the point of need, enabling users to access content whenever and wherever suits them.

ROBOTICS / CODING

Coding and Robotics is an innovative way to integrate with our modern classroom. Robotics and coding **develop and teach skills in analytical, critical, practical, and creative thinking.** People with robotics and coding knowledge and training know how to and can actually think in ways that many cannot.

Visit these sites for more information on these teaching methods:
https://www.educationcorner.com/how-to-teach-digital-literacy/
https://oxford-review.com/blog-mobile-learning-methods/
https://www.ballerstatus.com/2021/01/28/the-3-basic-robot-programming-methods/

TRENDING TEACHING METHODS 2023 AND BEYOND

SOCIAL/EMOTIONAL LEARNING

Social-emotional learning (SEL) is the process of **developing the self-awareness, self-control, and interpersonal skills that are vital for school, work, and life success**. People with strong social-emotional skills are better able to cope with everyday challenges and benefit academically, professionally, and socially.

TEACHING EMPATHY

Effective cooperation in the school is possible only through empathy: the a**bility to understand and respond to the feelings of others.** This creates a new educational imperative to ensure that each child fully develops their innate capacity for empathy.

GROWTH MINDSET

People with growth mindsets believe that skill and intelligence are something that people can develop. They believe that **while people have inherent qualities and traits, success comes from constant personal development.** By contrast, those with fixed mindsets believe that talent and intelligence are something you either have or you don't.

Visit these sites for more information on these teaching methods:
https://casel.org/fundamentals-of-sel/
https://www.teachthought.com/pedagogy/quick-guide-teaching-empathy-classroom/
https://www.opencolleges.edu.au/informed/features/develop-a-growth-mindset/

TRENDING TEACHING METHODS 2023 AND BEYOND

GENIUS HOUR

Genius Hour is **time set aside once per week during class for students to work independently on a topic of their choice**. The purpose is to give learners independence and teach them to be self-learners while researching a topic that genuinely interests and motivates them.

MAKER LEARNING

Maker education and the maker movement is all about **project-based or problem-based learning**.
It relies on hands-on, collaborative experiences where projects focus on solving real problems in order to demonstrate learning.

BRAIN-BASED LEARNING

Brain-based learning refers to **teaching methods, lesson designs, and school programs that are based on the latest scientific research about how the brain learns, including such factors as cognitive development** — how students learn differently as they age, grow, and mature socially, emotionally, and cognitively.

Visit these sites for more information on these teaching methods:
https://www.highspeedtraining.co.uk/hub/genius-hour-in-the-classroom/
https://www.teachthought.com/the-future-of-learning/maker-education/
https://soeonline.american.edu/blog/brain-based-learning/

TRENDING TEACHING METHODS 2023 AND BEYOND

TEAM-BUILDING FOR LEARNING

The purpose of team building activities is **to motivate learners to work together, to develop their strengths, and to address any weaknesses**, where implemented team building exercise should encourage collaboration rather than competition.

ADAPTIVE LEARNING

Adaptive learning — or adaptive teaching — is the **delivery of custom learning experiences that address the unique needs of an individual** through just-in-time feedback, pathways, and resources (rather than providing a one-size-fits-all learning experience).

PERSONALISED LEARNING

Personalised learning is an educational approach that **considers specific needs, interests and strengths of each pupil and provides a unique learning experience to learners on basis of those individual learner traits**. Teachers and learners work with one another to create a customised learning plan for the classroom.

Visit these sites for more information on these teaching methods:
https://www.mindtools.com/akp37i0/team-building-exercises-and-activities
https://blog.google/outreach-initiatives/education/adaptive-learning-technology/
https://www.ballerstatus.com/2021/01/28/the-3-basic-robot-programming-methods/

ALTERNATIVES TO THE TRADITIONAL SCHOOLS

People around the world are constantly thinking about the ways to improve the existing schools, teaching and learning methods or whole educational systems. There are traditionalists and dreamers who are engaged in a never ending battle of wits whether the school should still follow the traditional teacher-learner path or transform the education completely by tearing down the school walls and taking the education out in the open.

In the next slides, we will present some of the ideas that are circling in the Internet in regards to the potential changes and transformations of the existing educational systems and schools in general.

ALTERNATIVES TO THE TRADITIONAL SCHOOLS

Schools

attendance not compulsory
allow learners to decide what they do and don't want to learn
allow usage of smartphones in the classroom
make school budgets entirely transparent
link school with business, NGOs, and higher education entities
transform school to a cultural center
use curriculum based on the ability to self-direct and design their own learning pathways
design every school as a think tank to understand and address local problems and opportunities

Teachers

live stream classrooms
throw out all content-based academic standards
eliminate all in-person staff meetings
rebrand teaching and learning
let teachers drive their own professional development
use YouTube channels or curated, updated video/digital playlists instead of textbooks
use podcasts and social media channels and live video streaming to supplement physical classrooms

ALTERNATIVES TO THE TRADITIONAL SCHOOLS

Learners

learners designing their own quality criteria and frameworks
holding learners accountable if they underperform
stopping to encourage all learners to go to universities
making learners accountable to one another
designing complex mentorship and apprenticeship programs for all student

Diverse ideas

stopping to oversimplify teaching and learning
asking parents what families need from the school
making middle school about self-discovery, accountability, and an introduction to how to find and evaluate information they care about
making high school about citizenship, thinking habits, and guided participation in physical and digital networks
promoting learning through networks, not curriculum
pushing the government out of schools completely
require parents, community experts, and business leaders to teach or co-teach

02

PROJECT-BASED LEARNING VS PROBLEM- BASED LEARNING

PROJECT-BASED LEARNING VS PROBLEM-BASED LEARNING

Project-based learning (PBL) is another collaborative, learner-centered instructional approach where students work in groups to construct their knowledge and gain mastery of the course content. Project-Based Learning is often confused with Problem-based Learning. One source of the confusion is that they have the same acronym PBL. One way to think about the difference between the two is to look at the outcome.

While in Project-based Learning, students have to produce an artefact to demonstrate their mastery of content, in Problem-Based Learning, students have to present a solution to a clearly defined authentic problem. This definition is simplistic but allows for a distinction between the two concepts. Also, it has been argued that Problem-based Learning is, in fact, a subset of Project-based Learning in the sense that one way an instructor can frame a project is by asking students to solve one or many problems.

Source: https://www.uvu.edu/otl/resources/group_work/pbl.html

PROJECT-BASED LEARNING VS PROBLEM-BASED LEARNING

project-based learning

begins with the assignment of tasks that will lead to the creation of a final product or artefact. The emphasis is on the end product.

Learners:

work on open-ended assignments

analyse the problems and generate solutions

design and develop a prototype of the solution

refine the solution based on feedback from experts, instructors, and/or peers

problem-based learning

begins with a problem that determines what students study. The problem derives from an observable phenomena or event. The emphasis is on acquiring new knowledge and the solution is less important.

Learners:

are presented with an open-ended, authentic question

analyse the question

generate hypotheses that explain the phenomena.

identify further follow-up questions

seek additional data to answer the questions

PROJECT-BASED LEARNING IDEAS FOR CLASSROOM*

- planting and manage a garden to feed local homeless
- designing an alert system to halt the spread of a deadly disease
- making a documentary on an issue that few people recognise
- redesigning the complete school, including new content areas, grading, collaboration and community involvement
- redesigning public transport in your city
- developing a brand new invention
- planning a school party
- working out a modern school library system that encourages students to read
- creating and manage a YouTube channel for a certain cause
- designing a book with educative physical exercises to keep students moving during the day
- helping local businesses increase environmental sustainability

* Sources include: www.teachthought.com, https://helpfulprofessor.com/, https://www.bookwidgets.com/

PROJECT-BASED LEARNING IDEAS FOR CLASSROOM*

- launching a profitable business with actual documentation of real-world business metrics: profit, loss, cost control, etc. (depending on the nature of the product, service, or platform)
- designing a modern city for the year 2100 with current trends in climate change in mind, (clean-sheet design), or re-imagining existing cities and how they might cope with climate change
- imagining a dating app in 2050 considering anticipated shifts in technology (e.g., biotechnology) and social norms (e.g., gender, sexuality, class, etc.)
- designing a new form of government (or democracy, specifically) that addresses some perceived shortcoming of existing democratic forms (partisanship, non-functioning checks-and-balances, etc.)
- analyzing the five most popular social media platforms for teens, then predict and design a new platform based on existing trends and past trajectory of change
- launching a recycling program that solves an identified problem with existing recycling programs. This can be done at a household-level, school-level, neighborhood-level, or city-level

* Sources include: www.teachthought.com, https://helpfulprofessor.com/, https://www.bookwidgets.com/

PROBLEM-BASED LEARNING IDEAS FOR CLASSROOMS*

- identifying an invasive species in the nearest environment and devising a plan how to mitigate its impact on local fauna and flora
- designing and laying out a home for a challenged person (wheelchair-bonded, hearing or vision-impaired, ADHD, etc)
- developing a protocol for protecting infrastructure of high importance for the country (nuclear plant, power plant, hospital, government seat, etc) against a cyber attack,
- writing a business plan for a newly created company that wants to address the problems occurring in the local society
- creating your own board game (with the board, rules, pawns and dices)
- finding a solution to increase the participation in voting,
- creating a model of sustainable city
- finding a new home for your town after it was contaminated with nuclear event or zombie apocalypse

* Sources include: www.teachthought.com, https://helpfulprofessor.com/, www.teachingexpertise.com

PROBLEM-BASED LEARNING IDEAS FOR CLASSROOMS*

- creating an application that will solve learners problems (it can be school - related but does not have to)
- creating a podcast based on the needs and problems of listeners' peers that were identified in an evidenced way (questionnaire, poll, etc.)
- creating a social media campaign that will raise awareness of a social issue or a problem that is affecting learners or their close ones
- creating own business from the scratch (fro the official registration to grand opening),
- creating solutions for the local business so that they could compete with chain enterprises or big supermarkets/malls
- building a model inclusive playground,
- creating a new holidays and ways to celebrate it on different levels

* Sources include: www.teachthought.com, https://helpfulprofessor.com/, www.teachingexpertise.com

03

MICROLEARNING VS BITE-SIZED LEARNING

MICROLEARNING VS BITE-SIZED LEARNING

Microlearning is a way of teaching and delivering content in small, very specific bursts. The learners are in control of what, and when, they are learning. Where bite-sized learning is focused on outcomes, microlearning is focused on the approach. Generally, microlearning refers to digital forms of learning which may include videos, articles, online modules.

Bite-sized learning is sometimes misconceived to simply mean 'short' modules. Just because a course takes only 5 minutes, does not necessarily make it bite-sized. What makes learning bite-sized is more about the learning objectives. As opposed to traditional courses which typically try to achieve multiple learning objectives, bite-sized learning is normally focused just on one key objective. It is also important to understand the rationale behind bite-sized learning. No pun intended, but bite-sized learning is more easily consumed and makes for better knowledge retention. It could be presented in any form – not just "eLearning". Reading an article or watching a video could be considered bite-sized learning if it aims to achieve a specific objective.

Source: https://elearningindustry.com/

MICROLEARNING VS BITE-SIZED LEARNING

microlearning

variety of online learning techniques and technologies to choose from

enables personalized learning that is adapted to each learner's needs

facilitates knowledge retention and recall easy

accessibility to learning modules when and where the learners need them

easy to integrate with the bite-sized learning approach

bite-sized learning

self-contained modules ranging from one to 15 minutes

just-in-time training support for immediate use

focused on completing a single learning objective

lesser time and attention span required

suitable for "on the go" mobile-based learning

lower employee development and training cost

MICROLEARNING TOOLS FOR CLASSES

Microcopy - short, targeted, highly contextual messages or hints, to help users learn, such as error messages, contact from explainers, eCommerce hints.

Microlearning videos - standalone nugget that offers a specific learning takeaway, such as explainer videos, brief & interactive videos, micro-lectures, whiteboard animations, kinetic text-based animation.

Microlearning apps or mobile apps - micro-lessons on-the-go, such as Google, Youtube, Headspace, Lasting, Word of the day, TED.

Micro-challenges and games - that can include an award, benefits, badges, notoriety, or other incentives for taking part or achieving a high score, such as multiple question quizzes, polls, flashcards, Q&A, simulations, learners recordings to answer questions.

Infographics - visual representations of information, data or knowledge, such as statistical infographics, informational infographics, timeline infographics, process infographics, geographic infographic, comparison infographic, hierarchical infographics, list infographics.

BITE-SIZED LEARNING TOOLS FOR CLASSES

Learning units - small learning nuggets ranging from a few minutes to a maximum of 2 hours.

Supporting tools that include videos, games, infographics, audio podcasts, iPDFs, short web-based training demos, podcasts, crossword puzzles, quizzes, etc.

Online surveys and traffic data monitoring that are used to check how many times a certain learning/supporting tool was accessed and worked with.

Virtual or in-person focus groups that are used to monitor the learning progress and solving potential bottlenecks or problems.

Quick poll or one open-ended question that are used to verify if the presented units and tools were useful for the users.

04

GAMIFICATION VS GAME-BASED LEARNING

GAMIFICATION VS GAME-BASED LEARNING

Games-based learning and gamification sound alike but are really two different approaches. Games-based learning is an educational or an instructional method that uses games to teach a specific skill or reach a learning outcome. Games-based learning takes the content of your learning material and makes it fun.

Gamification is an application of game like elements in a non-game context. This is done to promote a specific desired behavior to drive those learning outcomes. You can see this clearly in the most public forms of gamification: points, badges, and leaderboards.

The main difference between both of them is their application and integration. Games-based learning fully integrates games into the educational content. You can say the entire course or class has been turned into a game. Gamification on the other hand uses just elements from games to incentive rewards or for making progress.

GAMIFICATION VS GAME-BASED LEARNING

gamification

means adding game elements to a non-game scenario by rewarding certain behaviours with benefits or by "unlocking" new features or services

adding game-like elements (badges, experience points, etc.) to a lesson

motivational as the rewards are tied to grades

assessment is not within the game itself

game-like aspects are adjusted to fit the lesson content

game-based learning

rather than implement game-like tropes into lesson, it uses actual games to teach

using games (such as Minecraft or simulators) to teach specific learning objectives

motivational because games are designed to be rewarding

assessment is in-game

lesson content is adjusted to fit the game

GAMIFICATION IDEAS FOR CLASSROOMS*

POINTS / POINTS SYSTEM	PROGRESS/ FEEDBACK	LEADERBOARDS	GUILDS/ TEAMS	PHYSICAL PRIZES
BADGES / ACHIEVEMENTS	PROGRESS BAR	EXPERIENCE POINTS / SKILL POINTS	COMPETITION	CHALLENGES
UNLOCKING EXTRA/ RARE CONTENT	BOSS BATTLES	SHARING KNOWLEDGE/ COOPERATION	QUESTS	VOTING
GIFT POINTS	SIGNPOSTING	VIRTUAL CURRENCY	CERTIFICATES	... AND MANY MORE!

Source: https://mambo.io/blog

GAME-BASED LEARNING IDEAS FOR CLASSROOMS

MINECRAFT	MEMORY	BINGO	CHARADES
FINISH THE SENTENCE	JEOPARDY	WORD DEFINITION	ECONOMY OR REAL-LIFE SIMULATOR
STACKING COMPETITION	INVENT A SOLUTION	PUZZLES	TEAM-BUILDING GAMES
CARD GAMES	BOARD GAMES	VIDEO GAMES	... AND MANY MORE!

DOES GAME-BASED LEARNING WORK?

Some educators and researchers still argue that game-based learning can be detrimental to educational experience. However, studies continue to show that games can positively impact things like students' math and language learning in many ways. Game-based learning:

- helps problem-solving
- encourages critical thinking
- increases student engagement and motivation
- introduces situational learning
- addresses special education needs

However, depending on your personal teaching approaches or a student's individual learning style, there can be drawbacks to game-based learning:

- too much screen time
- games aren't always created equally
- games can be a source of distraction
- it requires a technology skills
- doesn't replace traditional learning strategies

Just like the other learning methods presented in this unit, gamification and game-based learning methods may not be suitable for all subjects and all teachers. Some surveys suggest that teachers who are gamers in their private life are able to implement both these approaches into their teaching routine without problems.

05

ACTIVITIES

INTRODUCTION TO THE ACTIVITIES

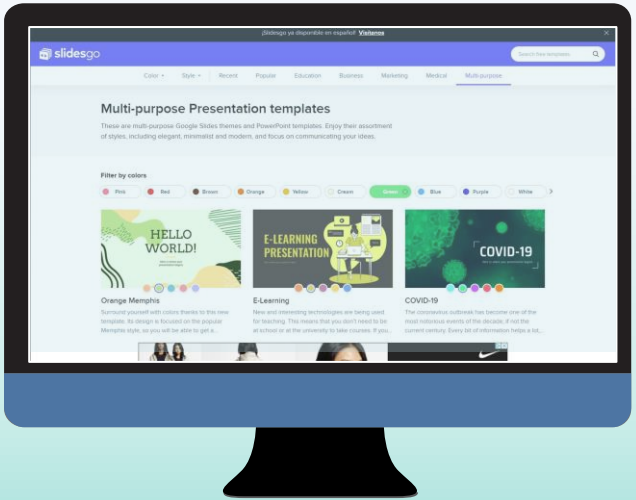
Just like in the previous unit, take a look at your class schedule for the next week and month. Make note of what topics you are to present and to what classes and choose one topic that you would like to concentrate on during the next activities. We would recommend to choose the one you personally like and feel confident about because it will come in handy later on.

You can always choose more than one topic to work with or change it whenever you want if you discover that the achieved results are not on par with your expectations.

There is no time limit to implement those activities - you can do them in one sitting or make one at a time. Implementing the tasks is not obligatory, but we think they are a great opportunity to come out of our comfort zone and brave the winds of change.

Remember, “Rome was not built in a day”, therefore the transformation from the traditional way of teaching and training to more digitalized and learner-oriented one is also a long-term process that may not necessarily be finished in a week or two.

ACTIVITY 1

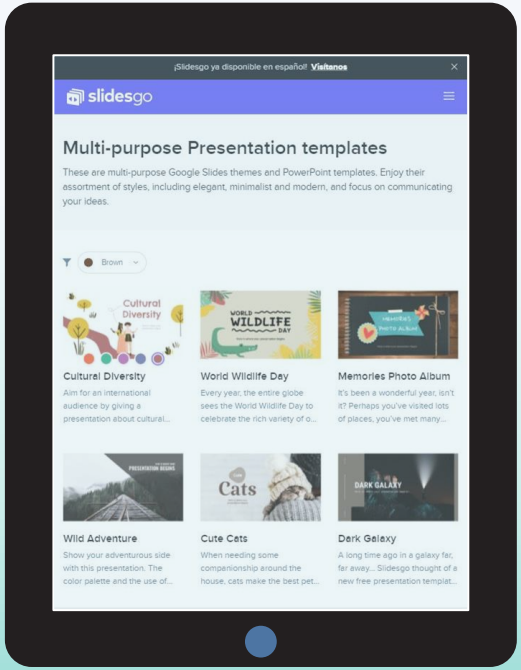


Go back to the part 02 of this unit. Reacquaint yourself with the project-based and problem-based ideas for the class activities. Now think about the classes you are going to implement in this semester. Is there a topic that could be converted into a project- or problem-based case? Or maybe proposed topics have spiked your interest and you would like to do an extra project with your learners?

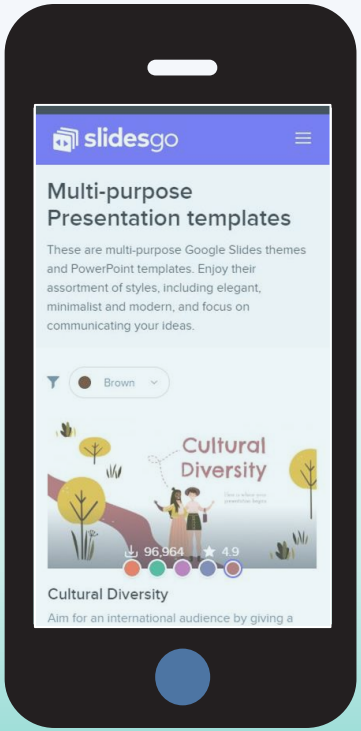
Prepare a draft of the class concept for both teaching methods, together with the background information on the chosen problem/project, your expected outcomes, selected materials and tools (such as information sources, deliverables, etc.) and potential problems your learners can encounter.

ACTIVITY 2

Reacquaint yourself with the information presented in part 03 of this unit. Think about a class that you are going to held in a week time. Check if microlearning or bite-sized learning method would be suitable for this class. If yes, check your materials and Internet resources for learning materials that could be transformed according to the rules of micro- or bite-sized learning. Write down the draft of the class concept with a short schedule how would you divide your class and what kind of tools would you use. If the usage of the microlearning is not possible for the whole class, write down the content that could be exchanged for microlearning tools or bite-sized learning tools, together with used resources and materials that are be freely accessible by your learners.



ACTIVITY 3



Reacquaint yourself with the tables from part 04 of this unit. This time, take a look at your whole teaching programme. Are there places where you think adding some gamification tools would be suitable? Think what tools could be added to make your classes more animated and interesting, tools that could help you monitor learners' progress and potential bottlenecks in learning. Write down your ideas and try to think where to place them during the class (in the beginning, at the end) as well as the frequency of their implementation (at every class, once per month, quarterly, etc.)

Extra activity for gaming teachers: think about the games that you usually play. Write them down and share with us the information whether they could be used in your daily training routine, what skills and abilities could they foster, what tasks (activities) could be implemented in them, etc. Do not forget to add the information if the mentioned games are easily accessible (free of charge or online games) and if their technical requirements are easy to reach with both school and your learners' computers/smartphones.

ACTIVITIES SUMMARY

How did you find the proposed activities?

Were they easy to implement or did you have problems with impromptu changes in your normal working routine?

Did they bring you out of your comfort zone or it is something that you often encounter in your working routine?

Would you like to participate in similar training activities in the future or are they too difficult for you to adapt to?

06

READING CORNER

INTERNET RESOURCES

Buchem, Ilona & Hamelmann, Henrike. (2010). Microlearning: a strategy for ongoing professional development. https://www.researchgate.net/publication/341323117_Microlearning_a_strategy_for_ongoing_professional_development

(n.d.). *Innovating technical and vocational education and training*. UNEVOC. https://unevoc.unesco.org/pub/innovating_tvet_framework.pdf

(n.d.). *Library of facilitation techniques*. SessionLab. https://www.sessionlab.com/library

(n.d.). *The Mentor Handbook: A Practical Guide for VET Teacher Training*. CEDEFOP European Centre for Development of Vocational Training. https://www.cedefop.europa.eu/en/news/mentor-handbook-practical-guide-vet-teacher-training

Wang, Tianchong & Towey, Dave & Ng, Ricky. (2020). Microlearning in Technical and Vocational Education and Training (TVET): A Case Study during the COVID-19 Outbreak in Hong Kong. https://www.researchgate.net/publication/357929157_Microlearning_in_Technical_and_Vocational_Education_and_Training_TVET_A_Case_Study_during_the_COVID-19_Outbreak_in_Hong_Kong

PUBLICATIONS

Best Practices for Mentoring in Online Programs: Supporting Faculty and Students in Higher Education, Susan Ko, Olena Zhadko, Best Practices in Online Teaching and Learning, Routledge 2022, ISBN: 9780429434754

Catch a fire: fuelling inquiry and passion through project-based learning, Henderson, Matt A, Portage & Main Press 2019, ISBN:9781553797517,9781553797890,1553797892,9781553797906,1553797906

Gamification, Digitalisierung und Industrie 4.0: Transformation und Disruption verstehen und erfolgreich managen, Lutz Anderie (auth.), Gabler Verlag 2018, ISBN: 978-3-658-19864-0, 978-3-658-19865-7

Gamification in Learning and Education: Enjoy Learning Like Gaming, Sangkyun Kim, Kibong Song, Barbara Lockee, John Burton, Advances in Game-Based Learning, Springer International Publishing 2018, ISBN: 978-3-319-47282-9, 978-3-319-47283-6

Global Perspectives on Project-Based Language Learning, Teaching, and Assessment: Key Approaches, Technology Tools, and Frameworks, Gulbahar H. Beckett (editor), Tammy Slater (editor), Routledge Studies in Applied Linguistics, Routledge 2019, ISBN: 113835175X,9781138351752

Project-Based Learning: How to Approach, Report, Present, and Learn from Course-Long Projects, Harm-Jan Steenhuis, Lawrence Rowland, Business Expert Press 2018, ISBN: 1631574752,9781631574757

Project Based Learning Made Simple: 100 Classroom-Ready Activities that Inspire Curiosity, Problem Solving and Self-Guided Discovery, April Smith, Books For teachers, Ulysses Press 2018, ISBN: 9781612438191

Student-Centered Mentoring: Keeping Students at the Heart of New Teachers' Learning, Amanda Brueggeman, Corwin 2022, ISBN: 1071855190,9781071855195

THANKS!

Do you have any questions?

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.