Technology Enhanced Learning

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Learning Journey 1:

Introduction to Technology Enhanced Learning

Foreword

Digital technologies are impacting not only on the way we work and play but also on how we teach and learn. It is creating opportunities for Vocational Education and Training (VET) teacher/trainers, VET institutes and the VET sector to innovate how training and education is delivered.

This Learning Journey has been developed as part of the Erasmus+ project called **Enterprises Growing Through Business Simulations (E-Growth).** This is about VET teacher/trainers in the use of **Technology Enhanced Learning** (TEL) within in VET courses. In addition to this set of seven **Learning Journeys**, the project has also developed a business simulation called, **PROSPER**, as an example of the use of TEL – the simulation supports the development of the knowledge and skills associated with running and growing an enterprise. The project has also published an e-book called, **A Guide to Technology Enhanced Learning in VET**.

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TEL Learning Journeys

This Learning Journey is called **Introduction to Technology Enhanced Learning** (TEL). It is part of a set of seven Learning Journeys exploring the use of TEL methodologies including simulations and serious games, e-assessment and e-portfolios and Virtual Learning Environments (VLEs).
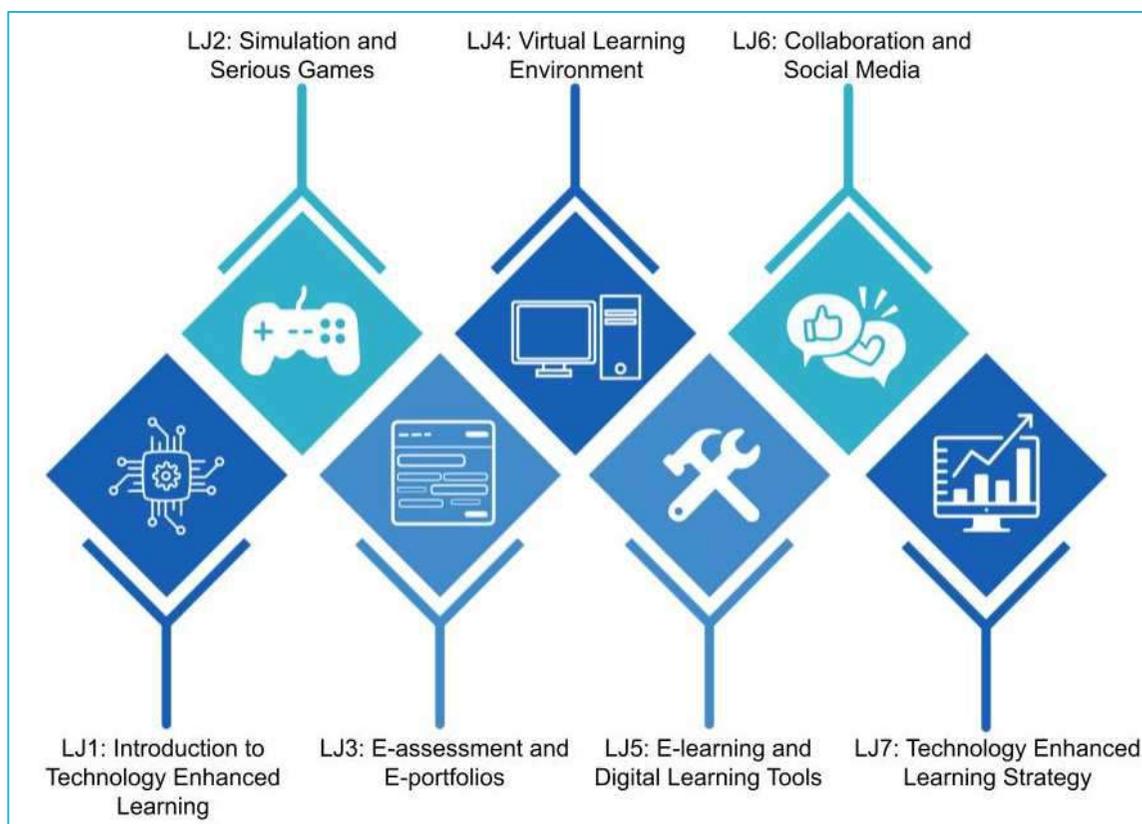

Figure 1: Learning Journeys - Technology Enhanced Learning

Each Learning Journey comprises an explanation of key terms, tools and methodologies. In some Learning Journeys, there are:

- Practical 'how to checklists'
- How to guides and
- Examples of digital tools

The last Learning Journey is designed to help you to plan and implement your own Technology Enhanced Learning Strategy.

LJ1: Introduction to TEL

Aim:

This Learning Journey explores the emergence of, and the concept of Technology Enhanced Learning (TEL). It looks at the benefits of using TEL for learners, teacher/trainers, and VET institutes and introduces examples of some of the most common TEL methodologies.

Learning Outcomes:

- Be able to explain what is meant by the term Technology Enhanced Learning (TEL).

- Identify trends in the increased use of technology enhanced learning within VET.

- Discuss how technology enhanced learning is transforming the effectiveness of VET and the learning experience.

- Identify different methodologies of technology enhanced learning and their benefits.

LJ1: Technology Enhanced Learning

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The learning landscape looks very different today than it did even just five years ago. Now we can see people learning in cafes, in subways, on buses and trains as well as at home and in the workplace – learning is no longer mainly a classroom activity.

The term, Technology Enhanced Learning (TEL), is used to describe the application of technology to teaching and learning.

Put simply, TEL refers to '*the use of technology to maximise the student or the learner's learning experience*'.

TEL enables learning to be flexible in terms of:

Place	**Pace**
Participation	**Mode of Learning**

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Place

TEL enables learning to be delivered and completed at any time and anywhere. The traditional classroom-based timetable is no longer a key factor when delivering and completing learning.

Participation

TEL offers the opportunity of engaging learning in interactive, synchronous, real-time experiences and learning activities – this helps to bring the learning to life.

Pace

The boundary of the classroom no longer exists as learning can be planned, designed, and completed anywhere – at work, home, and even on the move and at the pace that suits the learner.

Mode of Learning

Learning can be presented live or as micro bite-sized e-learning chunks, podcasts and videos, simulations and games, collaborative exercises or as problem-based learning activities.

TEL offers increased flexibility and the opportunity of integrating rich, engaging learning activities and expereinces into learning programmes. It provides the opportunity to implement individualised learning support and can empower learners to take ownership for their own learning. It can switch the focus away from teacher/trainer-centred learning to learner-centred learning. It can also make use of learners as teacher/trainers, and as experiential problem-solvers.

Five Trends in TEL

The shift to remote work and digital everything in 2020 forced change at a pace not previously seen. Organisations have had to both abruptly shift their workforce and their product/service delivery models to accommodate health and safety measures imposed by the global pandemic.

Prior to COVID-19, organisations focused on technology to drive and improve operational efficiency, customer engagement and the development of new products and services. This has now changed to include a focus on workforce enablement, productivity and remote working. This shift has and will impact on the skill development strategies of organisations large and small. Technology Enhanced Learning will become increasingly key to business success. Here are six trends in how technology is impacting on learning and skill development.

Microlearning

The use of microlearning will increase. It involves short bursts of learning content for learners to complete when and where they need - the emphasis is on convenience. Content takes many forms, from text to full-blown interactive multimedia, but the key is that it is always short. Examples of TEL tools include videos and podcasts, tests, quizzes and games and 5-minute e-learning modules. The benefits of microlearning include:

- It is faster to deliver
- It is more affordable
- It is flexible
- Learners find it more engaging
- It boosts knowledge retention
- Learners have time

Mobile Learning

The proliferation of mobile devices is changing many aspects of our lives, from how we work and communicate to how we learn. Mobile learning is designed to create engagement, which leads to course completion. It can also be tailored to match the habits and learning preferences of today's learners, especially 'millenials'. The benefits of mobile learning include:

- It can increase flexibility
- It creates on-line learning communities
- It leads to improved workplace performance
- It can improve completion/retention rates
- It works on multiple devices
- It provides simple and clear learning paths

Six Trends in TEL

The key to impactful technology enhanced learning is not to use technology for its own sake. TEL should be used to improve, simplify, and enrich the learning experience. It MUST NOT detract from the learning process. TEL should help learners to understand key points, support their knowledge and skill development and help them to transfer their new skills and knowledge to the workplace or scenario where it can be applied.

Real World Learning

The world in which we live, and work is changing faster than ever before. These changes mean that we are having to constantly adapt to new ways of working, utilising new forms of communication technology and collaborating with our colleagues in new and innovative ways. The benefits of real world learning include:

- It makes embracing change easier
- It keeps skills relevant
- It transfers skills to the workplace
- It supports innovation at work
- It increases productivty and performance
- It can be applied immediately

Gamification

Gaming and gamification is a technique which teacher/trainers can use to include gameplay elements into learning. Often, it involves including 'fun features' into learning activities and lessons which help to increase learning engagement, understanding and learner motivation. The benefits of real world learning include:

- It improves learner motivation and productivity
- It improves the acquisition of knowledge and skill
- It helps to transfer learning into the work place
- It provides a safe learning environment
- It builds confidence and rewards achievement
- It is scaleable and appeals to 'millenials'

Six Trends in TEL

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Learning takes place not in isolation, but in a social context, especially in the workplace. Helping learners to collaborate and connect encourages creativity, independent learning, and ownership of the learning process. Taking time to assess and evaluate skills and competences enables the planning of targeted learning and development as well as recognising learner's achievements and progress.

Social Learning

Collaboration and social learning are becoming mainstream tools for engaging learner in experiential based learning and decision-making processes by working together. It can help in the delivery of exciting and engaging learning experiences. The benefits of social and collaborative learning include:

- It increases engagement in learning activites
- It encourages collaboration and creativity
- It taps into learner's ideas and solutions

- It builds commitment to solutions
- It helps to pinpoint issues and problems
- It builds and develops teamworking

Skill Assessment

Assessing learner's skills and competence is a key part of the skills and performance improvement process. There are different ways to assess skills and competences of learners – much depends on whether they are technical, interpersonal, soft or hard skills. The benefits of social and collaborative learning include:

- It helps to identify areas for development
- It motivates learners to improve
- It builds personal and organisational capability

- It helps to meet future challenges
- It supports successon planning
- It drives increased performance and productivity

Learning can happen anywhere and at any time and **IS NOT** limited to an educational setting. Teacher/trainers need to embrace the use of technological and digital-based tools. Rather than replacing traditional learning methods, TEL should be used alongside and complement traditional methodologies. Here are eight ways teacher/trainers can use and integrate TEL into their day-to-day teaching practices.

1. Problem-based Learning

Problem-based learning (PBL) is a student-centred approach in which students learn about a subject by working in groups to solve an open-ended problem - the problem drives the motivation and the learning. TEL could involve the use of an interactive white board, on-line meeting tools such as ZOOM or collaborative tools such as:

https://asana.com/   https://monday.com/   https://teamwork.com/

The advent of digital technology means that learning can take place anywhere and learners can be contributors rather than just users of learning resources. It has enabled a rapid increase in collaborative learning. Tools such as ZOOM, Skype, wikis and Learning Management Systems (LMS) mean that collaborative learning is not restricted to the training room.

2. Learner-created Content

TEL can be used to enable learners to create content themselves that can then be shared with other learners. Wiki tools are simple, collaborative spaces enabling learners to share, contribute and modify ideas, pages and content and are great for building collaboration and joint-working. Social media such as Facebook and WhatsApp can also be used in a similar way to foster collaboration. Examples of such tools include:

https://www.notion.so/   https://new.edmodo.com/   https://voicethread.com/

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Work-based and competency-based learning has benefited from technology enabling a focus on effective learning, rather than time-based learning. The use of e-learning platforms, digital lecturing and webinars, videos and on-line assessment tools is transforming how learners develop skills and demonstrate competence. Microlearning, e-portfolios and e-assessment has the potential to transform the workplace into a learning resource.

3. Competence-based Learning

Rather than learners listening to teacher/trainers, TEL can enable learners to learn and directly apply new skills and competences to the workplace with an emphasis on performance rather than tested knowledge. Examples of such tools include:

https://e-leap.eu/   https://teammate360.eu/   https://onefile.co.uk/

Blended learning is a combination of online digital media and traditional training room methods where the teacher/trainer is present or via live webinar sessions. Typically, learning content and the learner's work are divided into parts to be completed digitally. This multi-modal learning approach can also include learning at home using digital tools and platforms, with assignments like watching a video or completing an online activity. When combined, these learning experiences complement and supplement each other.

4. Blended Learning

Blended learning provides a combination of face-to-face learning (or via webinars) and dynamic digital activities and content that facilitate anytime/anyplace learning. There are many digital technologies available on both proprietary and free-to-use platforms, making the use of blended learning open to teacher/trainers. Examples of such tools include:

https://moodle.org/   https://abaralms.com/   https://teachable.com/

Flipped learning is a type of blended learning that reverses the traditional teaching approach. It is about applying learning and increasing the learner and teacher/trainer interaction in the training room or live session. Instead of learning about a topic in the training room, learners use digital information and occasional micro-learning techniques (e.g. watching short videos remotely). The content is then explored and discussed in more detail in live sessions.

5. Flipped Learning

With traditional learning learners acquire knowledge in a 'lecture or lesson format' context, are then sent away to synthesise analyse and evaluate this after the class. In the flipped classroom learners acquire knowledge before the live sessions where they practice and apply concepts. Proponents of the flipped learning approach emphasise the 'deep learning' or higher-level cognitive skills that it encourages. Examples of tools to support flipped learning include:
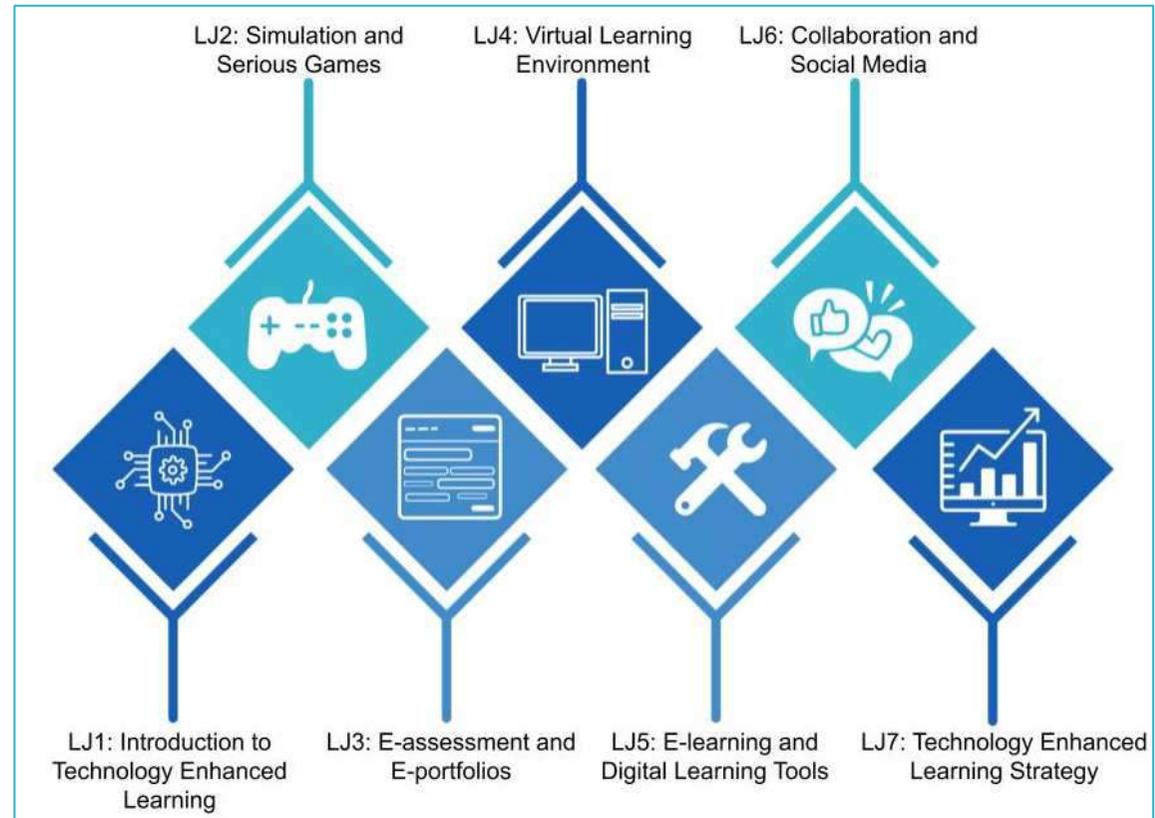
https://vimeo.com/

https://www.techsmith.com/

https://screencast-o-matic.com/

Other TEL Learning Journeys

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In this series of Learning Journeys, you will learn more about:

- The use of simulations and serious games to enhance learning.
- How e-assessment and e-portfolios are used to assess and certify learner's skills and competences.
- The effective use and selection of an appropriate Virtual Learning Environment (VLE).
- The range of digital tools that can enhance e-learning and the learning experience.
- How collaborative and social learning is transforming how we learn and interact in on-line communities.
- How to draft and implement your own Technology Enhanced Learning Strategy.

LJ2: Simulation and Serious Games

LJ4: Virtual Learning Environment

LJ6: Collaboration and Social Media

LJ1: Introduction to Technology Enhanced Learning

LJ3: E-assessment and E-portfolios

LJ5: E-learning and Digital Learning Tools

LJ7: Technology Enhanced Learning Strategy

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