

## **THE TACCLE4 CPD SHOWCASE – A new collection of online resources to promote digital competences of vocational teachers and trainers**

– Report 2b (VET) for the TACCLE4-CPD project; November 2019

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### **Contents**

#### **Overview**

#### **Introduction**

- 1. Presenting the use of Learning Toolbox as support for ePosters**
- 2. TACCLE4 CPD Showcase as a group picture of LTB-stacks**
- 3. Comprehensive LTB-stacks on the Learning Layers and the TACCLE4 CPD projects**
- 4. Thematic stacks on uses of Open Educational Resources (OER) and on Theme Room training concept**
- 5. Concluding remarks**

#### **References**

**Annex: Collection of mini-posters for the LTB-stacks presented in this report**

## Overview

This document is a special report for the TACCLE4 CPD project with focus on the field of *vocational education and training* (VET). The aim of earlier TACCLE projects has been to promote digital competences of teachers and trainers with materials that are linked to their educational practice. The fourth TACCLE project took the task to develop models and concepts for *continuing professional education* (CPD) that support educational authorities as well as education and training providers. In addition to the school-based education and adult education this project seeks to serve the field of VET.

During the work of the project it became clear that there is a need to prepare separate VET-specific reports for each intellectual output in the work plan of the project. These reports give insights the boundary conditions, work-related challenges, pedagogic traditions and learning opportunities in the field of VET. From this perspective the reports have covered the following themes:

- Report 1: Policy analyses;
- Report 2: Legacy of predecessor projects and impulses from parallel projects;
- Report 3: Uses of open educational resources (OER) in vocational learning;
- Report 4a: Analyses on strategies and training concepts to be considered;
- Report 4b: Shaping of a new Theme Room-based training framework;
- Report 5: Insights into civic learning on artificial intelligence and into organizational learning on using digital toolsets.

Based on these reports it has been possible to prepare a short input on the field of VET for the main result of the project – an interactive handbook for teacher trainers. However, during the preparation of the VET-related multiplier event in Germany it became clear that there is a possibility to develop a parallel VET-related digital resource environment. From this perspective this document provides insights into the use of Learning Toolbox (LTB) as support for ePosters in conferences and as a basis for broader LTB-powered showcases that cover a wider range of knowledge resources, training materials and reports on learning designs.

In the light of the above this report gives firstly insights into the first pilot activities to present the use of Learning Toolbox in educational research and for knowledge sharing on field activities of the Learning Layers project. Then, the report presents the LTB-based showcase that includes several LTB-powered stacks (digital resources) that have been prepared for the TACCLE4 CPD project. Subsequently, the report presents more comprehensive and more focused stacks. Finally, the report presents the mini-posters that have been generated for the LTB-stacks that have been referred to in the report.

## Introduction

This document is that last one in the series of special reports for the TACCLE4 CPD project produced by the German partner organisation Institut Technik & Bildung (ITB). The fourth TACCLE<sup>1</sup> project has continued a tradition of promoting digital competences of teachers and trainers. The three first ones focused on classroom teachers in primary and secondary education. The first one provided a general handbook that introduced digital tools and web resources to be used as support for e-learning. The second project worked with teachers in different subject areas (and with teachers in primary education). The third project focused on teachers who were introducing a new transversal learning area ‘coding and programming’ into primary education.

The current TACCLE project builds upon the immediate predecessor projects, but it differs from them in several respects. Firstly, it has shifted the emphasis from particular teacher groups to supporting their organisations in shaping *continuing professional development* (CPD). Secondly, it has widened the scope of activities from *general education* to cover also the fields of *adult education* and *vocational education and training* (VET). Thirdly, with this broader scope it has also taken into consideration another set of predecessor project that focus on enhancing digital competences in workplace-based learning.

In the light of the above-presented changes of perspective the contribution of ITB to the project has had a special role. ITB was not involved in the earlier TACCLE projects. Instead, ITB was centrally involved in the EU-funded project Learning Layers (LL) that focused on developing digital tools to support (informal) learning in the context of work – notably in the pilot sectors Healthcare and Construction. ITB had the task to support and document the co-design, training and pilot activities that were carried out with application partners in North-German construction industries. This work led to the development and introduction of the Learning Toolbox (LTB) as a digital toolset to support vocational and workplace learning.

Thus, the role of ITB in the TACCLE4 CPD was to make transparent differences *between* school-based approaches to promote digital competences of teachers *and* work process-oriented approaches to promote the competences of vocational teachers and trainers. This has become manifest in the series of VET-specific reports produced by ITB for the project. This final report has the task to highlight the uses of LTB as support for training, conferences and for continuing professional development. From this perspective **the first section** gives insights into the introduction of LTB-powered ePosters at the European Conference of Educational Research (ECER) in 2018. This was also the first activity in which the use of LTB was linked to the TACCLE4 CPD project. **The second section** gives an overview of the LTB-

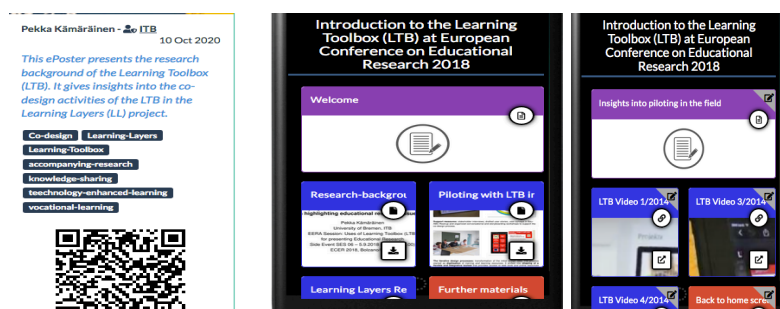
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<sup>1</sup> The acronym TACCLE stands for “Teachers aids for creating content for learning environments”.

powered TACCLE4 CPD Showcase that presents contributions of ITB to the project in a digital form. **The third section** presents two comprehensive stacks that give an overview of ITB reports for the Learning Layers and TACCLE4 CPD projects. **The fourth section** gives insights into two thematic stacks that focus on use of Open Educational Resources (OER) and on the Theme Room training concept. The Annex presents mini-posters based on the stacks that have been presented in this report.

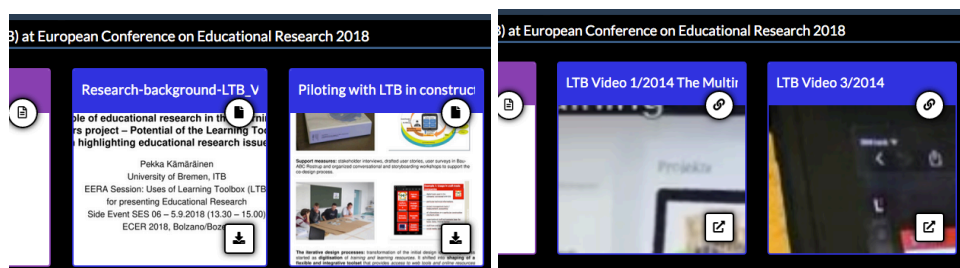
## 1. Presenting the use of Learning Toolbox as support for ePosters

For the European Conference on Educational Research (ECER) in 2018 a team of researchers from ITB proposed a special session on using ePosters as means of knowledge sharing before, during and after conferences. This session and a related interactive Poster session were organised as part of the VETNET network activities at ECER. This activity was implemented by a pilot team consisting of researchers from ITB and of LTB-developers<sup>2</sup>. Below the first screenshots from the LTB-powered ePoster (technically an LTB-stack) portray the opening screen and a further stack screen).



### Screenshot 1a and 1b: Opening screen and further screen of the “Introduction” stack

The views presented above give also a picture, how the stacks are compiled when they are edited. The stacks are composed of different tiles that are packed on one ore more screens. They give access to documents (reports, presentations, audio recordings or videos) or to online resources. Below the further screenshots portray the view that appears when the screens have been opened with the “Preview” function. Here, the screenshots demonstrate, what kind of documents from the fieldwork of the Learning Layers were included into the “Introduction” stack.

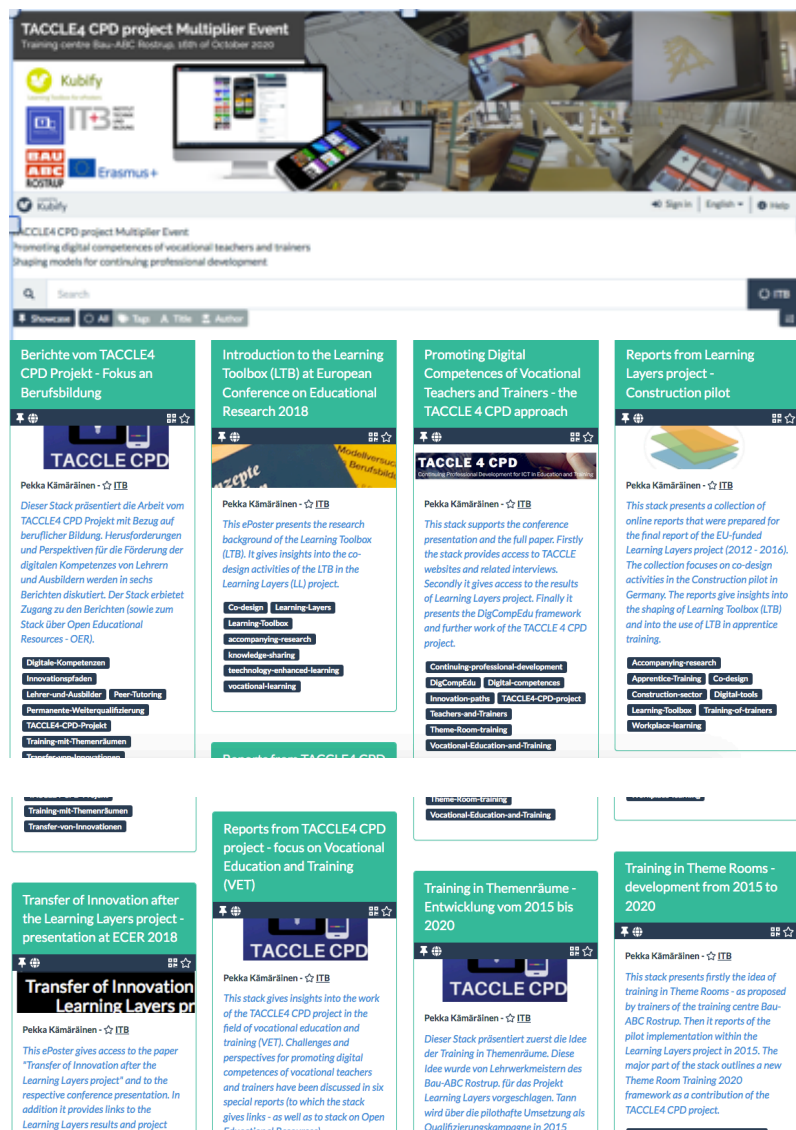


### Screenshots 2a and 2b: Insights into the documentation of the Learning Layers project

<sup>2</sup> Parallel to this pilot the initial LTB-developers launched a start-up company Kubify that has developed the use of ePosters further and promoted it on a wide scale since 2018.

## 2. TACCLE4 CPD Showcase as a group picture of LTB-stacks

In the ECER conferences of the year 2018 and 2019 some further LTB-stacks were prepared to demonstrate the VET-related work in the TACCLE4 CPD project. When the VET-related reports were finalised at the end of 2019 and the Multiplier Event was being prepared, it was appropriate to collect the stacks into TACCLE4 CPD Showcase<sup>3</sup>. Below, the three screenshots illustrate the overview that can be seen on one screen.

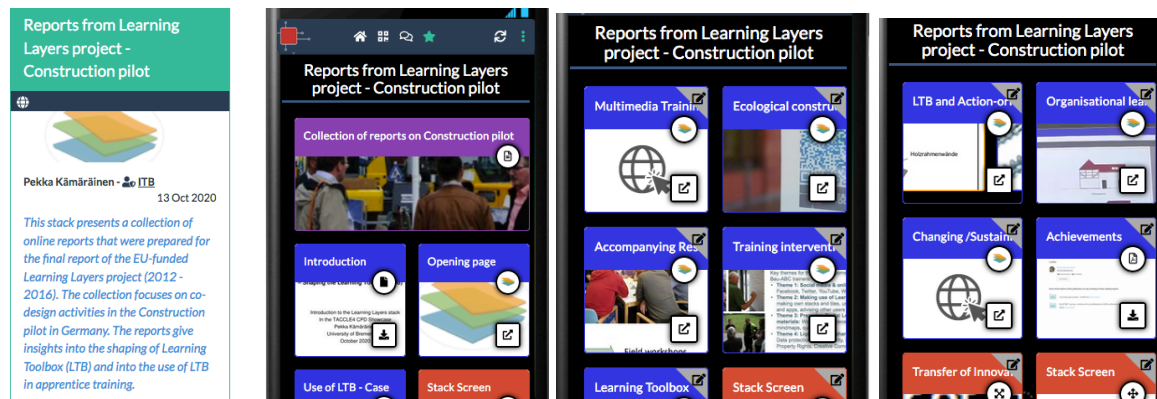


Screenshots 3a, 3b and 3c: The TACCLE4 CPD Showcase

<sup>3</sup> The concept of showcase, developed by Kubify, gives a group picture of the use of ePosters in conferences. At a later phase a meta-showcase was introduced to provide a group picture of exemplary ePosters in parallel showcases. More information on the work of Kubify is provided in Report 5 for the TACCLE4 CPD project.

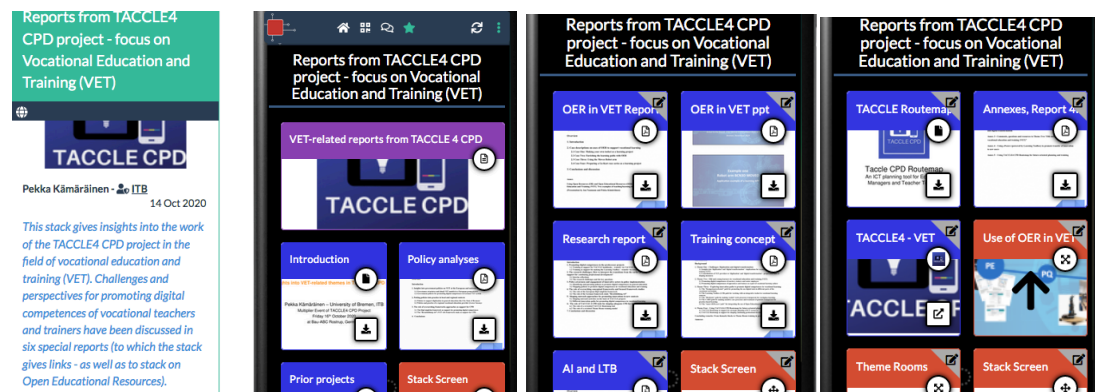
### 3. Comprehensive LTB-stacks on the Learning Layers and the TACCLE4 CPD projects

For the TACCLE4 CPD Showcase it was appropriate to create a comprehensive stack that provides links to the online reports of the Learning Layers project that deal with the development and utilization of Learning Toolbox. From the perspective of TACCLE4 CPD these reports give insights into co-design processes and training activities as capacity-building for the actual use of the Learning Toolbox in the context of vocational learning.



**Screenshots 4a, 4b and 4c: The screens of the LTB-stack on Learning Layers project**

In a similar way a comprehensive LTB-stack has been compiled to give an overview on the VET-related reports that have been prepared for the TACCLE4 CPD project. Most of the tiles give access to the finalized reports (as pdf-files). Some of the tiles give access to annexes of the reports.



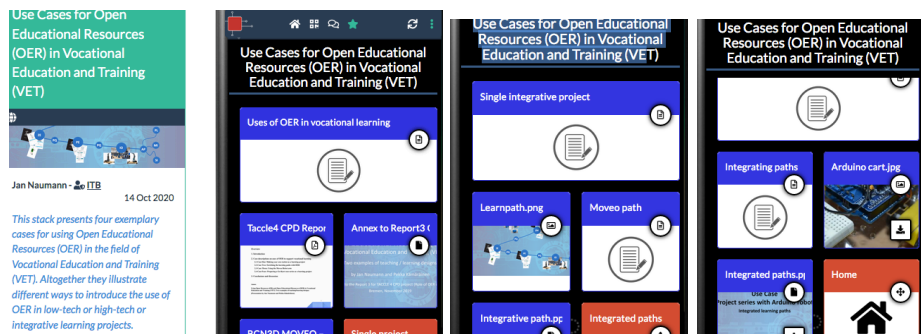
**Screenshots 5a, 5b and 5c: The screens of the LTB-stack on TACCLE4 CPD project**

In the light of the above it is possible to characterize the LTB-showcase as a small library, whilst the LTB-stacks can be seen as collections of digital learning resources within the library.



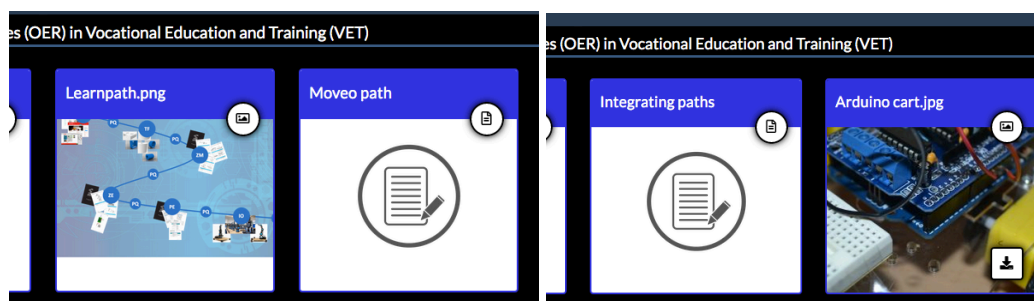
## 4. Thematic stacks on uses of Open Educational Resources (OER) and on Theme Room training concepts

From the perspective of promoting continuing professional development (CPD) it is worthwhile to draw attention to the stacks that present *innovative learning designs* and outline *frameworks for training strategies and training concepts*. An exemplary case of the first type is the stack that portrays uses of Open Educational Resources (OER) in the context of vocational learning arrangements (see the three subsequent screenshots).



### Screenshots 6a, 6b and 6c: The screens of the LTB-stack on Uses of OER in VET

Here the above-presented views of the three screens can at best give an idea of different resources behind the tiles. When the screens are opened with the Preview-function, it is possible to anticipate that technical resources are incorporated into an smart pedagogic learning design. This has been explained with content tiles and illustrations.

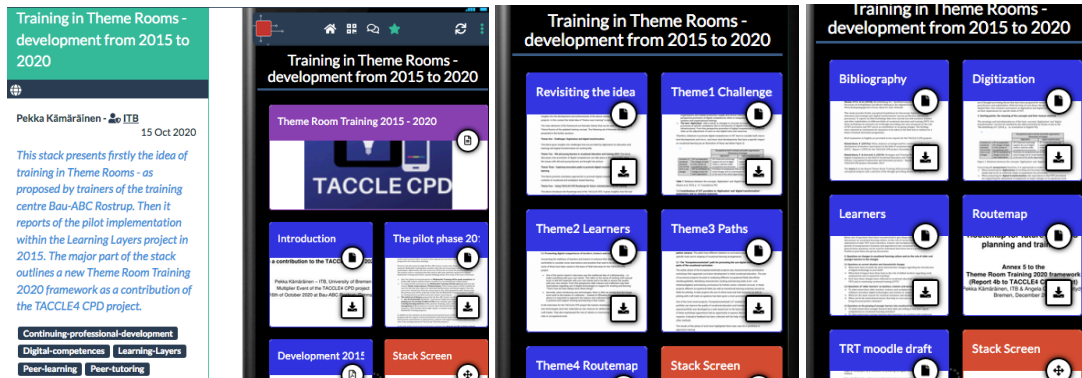


### Screenshots 7a and 7b: Preview of two screens of the LTB-stack on Uses of OER in VET



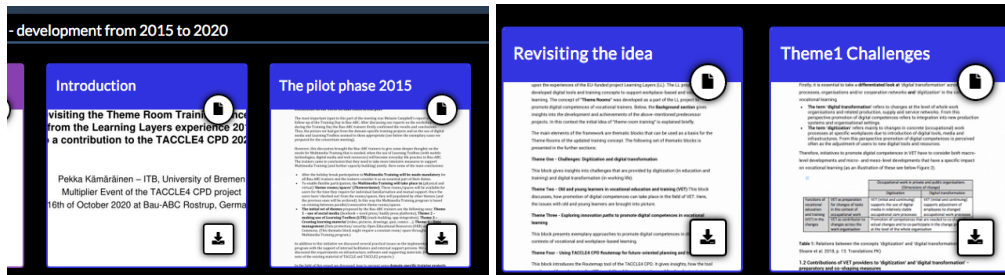
### Screenshots 8a and 8b: Preview of two tiles of the LTB-stack on Uses of OER in VET

The LTB-stack on Training in Theme Rooms gives an overview on the development of a specific training concept that was shaped and piloted in the context of the Learning Layers project. During the TACCLE4 CPD project the experiences with this training concept and some newer challenges were put into discussion in the fieldwork. This provided the basis for a revisited Theme Room Training 2020 framework. Below the three first screenshots provide an overview of the contents of this stack.

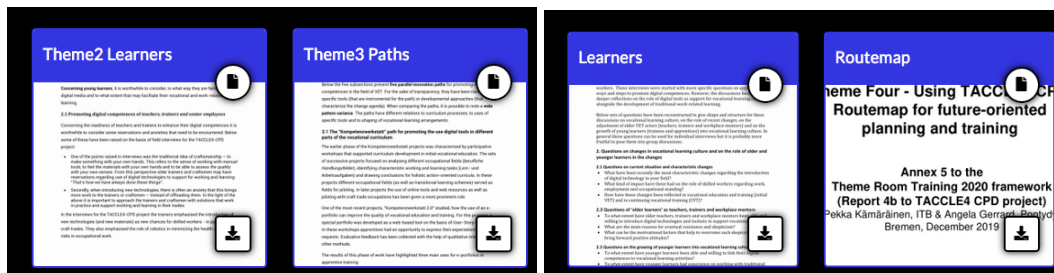


### Screenshots 9a, 9b and 9c: The screens of the LTB-stack on Training with Theme Rooms

Below, the two further sets of screenshots make transparent the revisiting of the earlier experience of the year 2015 and the outline of the new thematic structure.



### Screenshots 10a and 10b: Preview of screens of the LTB-stack on Theme Room training



### Screenshots 11a and 11b: Preview of screens of the LTB-stack on Theme Room training

In this way the structure of the LTB-stack makes transparent the work with the concept of training with Theme Rooms for further reading.



## 5. Concluding remarks

This report has been prepared to highlight the role of the TACCLE4 CPD Showcase as a ‘library’ of digital resources and of the nature of particular stacks as *comprehensive* or *thematic* collections of resources. Altogether this whole setup provides a rich resource environment for promoting digital competences in the field of VET. The LTB-stack on uses of OER in the field of VET serves as a introduction to several creative use cases. The LTB-stack on training with Theme Rooms gives insights into thematic blocks that and innovation paths that are worth considering when shaping new training initiatives. Below, the reference list gives direct links to the LTB-stacks and to the LTB-showcase that have been referred to in the text. In addition, the Annex presents mini-posters that have been generated with the LTB software to portray contents and to give access to the respective stacks via the QR-codes.

## References

- Kämäräinen, P. (2018): Introduction to the Learning Toolbox (LTB) at European Conference on Educational Research 2018. LTB-Stack. <https://my.ltb.io/#/viewStack/BWUFQ>
- Kämäräinen, P. (2020): Promoting digital competences beyond the accustomed realm of ICT skills – New challenges for civic learning and continuing professional development. Report 5 (VET) for the TACCLE4-CPD project.
- Kämäräinen, P. (2020a): TACCLE4 CPD project Multiplier Event. Training centre Bau-ABC Rostrup. 16<sup>th</sup> of October 2020. LTB-Showcase. <https://my.ltb.io/#/showcase/taccle4-cpd>
- Kämäräinen, P. (2020b): Reports from Learning Layers project - Construction pilot. LTB-Stack. <https://my.ltb.io/#/viewStack/BJUHA>
- Kämäräinen, P. (2020c): Reports from TACCLE4 CPD project - focus on Vocational Education and Training (VET). LTB-Stack. <https://my.ltb.io/#/viewStack/BKUFZ>
- Kämäräinen, P. (2020d): Training in Theme Rooms - development from 2015 to 2020. LTB-Stack. <https://my.ltb.io/#/viewStack/BOUII>
- Naumann, J. (2020): Use Cases for Open Educational Resources (OER) in Vocational Education and Training (VET). <https://my.ltb.io/#/viewStack/BQUFT>

## Annex: Collection of mini-posters for the LTB stacks presented in this report

### 1. Mini-poster for the introductory LTB-stack at ECER 2018

#### Introduction to the Learning Toolbox (LTB) at European Conference on Educational Research 2018

ECER 2018, Bolzano/Bozen, September 2018

*Pekka Kämäräinen*

*ITB, University of Bremen*

This ePoster presents the research background of the Learning Toolbox (LTB). It gives insights into the co-design activities of the LTB in the Learning Layers (LL) project.



Co-design   Learning-Layers   Learning-Toolbox   accompanying-research  
knowledge-sharing   technology-enhanced-learning   vocational-learning

Side Event SES 06 Presenting Educational Research with the help of the Learning Toolbox

This ePoster presents the research background of the Learning Toolbox (LTB). It gives insights into the co-design activities of the LTB in the Learning Layers (LL) project (2012-2016). It demonstrates, how LTB can highlight the pilot contexts and related research issues.



<https://api.ltb.io/show/BWUFQ>

### 2. Mini-poster for the comprehensive LTB-stack on the Learning Layers project

#### Reports from Learning Layers project - Construction pilot

Multiplier Event of TACCLE4 CPD project

*Pekka Kämäräinen*

*Institut Technik & Bildung (ITB), Universität Bremen*

This stack presents a collection of online reports that were prepared for the final report of the EU-funded Learning Layers project (2012 - 2016). The collection focuses on co-design activities in the Construction pilot in Germany. The reports give insights into the shaping of Learning Toolbox (LTB) and into the use of LTB in apprentice training.



Accompanying-research   Apprentice-Training   Co-design   Construction-sector  
Digital-tools   Learning-Toolbox   Training-of-trainers   Workplace-learning



<https://api.ltb.io/show/BJUHA>

### 3. Mini-poster for the comprehensive LTB-stack on the TACCLE4 CPD project

#### Reports from TACCLE4 CPD project - focus on Vocational Education and Training (VET)

Multiplier Event of TACCLE4 CPD project

Pekka Kämäräinen

Institut Technik & Bildung (ITB), Universität Bremen

This stack gives insights into the work of the TACCLE4 CPD project in the field of vocational education and training (VET). Challenges and perspectives for promoting digital competences of vocational teachers and trainers have been discussed in six special reports (to which the stack gives links - as well as to stack on Open Educational Resources).



Continuing-professional-development   DigCompEdu   Digital-competences  
Innovation-paths   Innovation-projects   Policy-analyses   TACCLE4-CPD-project  
Teachers-and-Trainers   Theme-Room-training



<https://api.ltb.io/show/BKUFZ>

### 4. Mini-poster for the thematic LTB-stack on Uses of OER in the field of VET

#### Use Cases for Open Educational Resources (OER) in Vocational Education and Training (VET)

TACCLE 4 CPD project

Jan Naumann & Pekka Kämäräinen

Universität Bremen, Institut Technik & Bildung (ITB)

This stack presents four exemplary cases for using Open Educational Resources (OER) in the field of Vocational Education and Training (VET). Altogether they illustrate different ways to introduce the use of OER in low-tech or high-tech or integrative learning projects.



Open-Educational-Resources   Open-resources   Project-based-learning  
Technology-enhanced-learning   User-driven-innovations   Vocational-learning

Use cases of OER in vocational learning contexts

This ePoster gives insights into enriching and combining learning paths into integrative vocational learning arrangements.



<https://api.ltb.io/show/BQUFT>

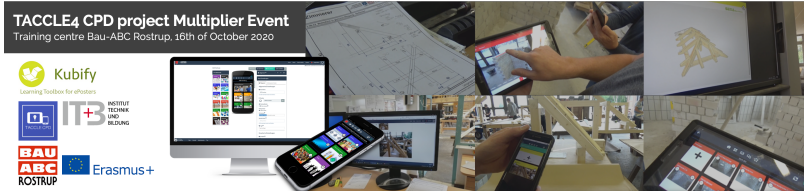
## 5. Mini-poster for the thematic LTB-stack on shaping the Theme Room training concept

### Training in Theme Rooms - development from 2015 to 2020

*Pekka Kämäräinen*

*ITB, Universität Bremen*

This stack presents firstly the idea of training in Theme Rooms - as proposed by trainers of the training centre Bau-ABC Rostrup. Then it reports of the pilot implementation within the Learning Layers project in 2015. The major part of the stack outlines a new Theme Room Training 2020 framework as a contribution of the TACCLE4 CPD project.



**Continuing-professional-development**   **Digital-competences**   **Learning-Layers**

**Peer-learning**   **Peer-tutoring**   **Training-of-trainers**

**Vocational-Education-and-Training**



<https://api.ltb.io/show/BOU11>