

# SUMMARY REPORT

## 4.1 Development of the web-based e-learning Toolkit



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## 1. INTRODUCTION

### 1.1. Rationale and aim of the output

1. The purpose of Output 4 was to achieve the development and testing of an open-access web-based e-learning Toolkit (e-Tollkit) to improve the digital competence of teachers and mobility students. The Toolkit will provide innovation focusing on course creation, quality enhancement, using technology-enhanced teaching (in the way of Online Distance learning) and improving digital competencies. Additionally, it aims to support teachers in digital course development and decreases development time and costs for organizations in course development. This web-based e-learning Toolkit will offer students better open and distance learning courses and enhance their learning success.

Activity 1.1 aims to define the design of the user interface of the Toolkit, its content, and its development online.

### 1.2. Aim and objectives of the review

The Activity aimed to analyze the previous work of all outputs and decide on the user interface, the content it would include, and how it would be distributed/categorized. Finally, online development would take place based on the structure established.

## 2. METHODS

The team partners from IO3 and IO4 were involved in deciding the user interface, the content, and the categories that the e-Toolkit would include.

### 2.1. User Interface

The WITEA-ID partners were involved in reviewing other similar e-toolkits interfaces. Some of the e-toolkits were

Additionally, information from IO1 and IO3 was utilized. Specifically, information on other similar studies on mobility was fundamental as the e-toolkit would need to be easily accessed and relevant to Integrate theoretical current knowledge and research in the teaching process. Furthermore, IO3 findings on the needs of students were vital as they shaped the way the digital e-toolkit would need to be associated with the mobility toolkit.

Subsequently, the user interface was decided based on these reviews and the findings from IO1 and IO3.

### 2.2. Content and categorization

The content that was decided to be included in the first version of the e-toolkit would be the materials and resources from IO2. Additionally, more content was included to support the workshops during the implementation stage. Moreover, content related to improving the e-toolkit based on the users' demands during Activities 4.2 and 4.3 would also be included in later stages.

The content categorization was based on information from IO3, which referred to the needs of mobility students and staff, and a review of current literature. Specifically, digital skills were categorized (Van Deursen & Van Dijk, 2009; Van Deursen et al., 2014; Van Deursen et al., 2016; Van Laar et al., 2017) :

- Operational skills
- Formal skills
- Information skills
- Digital communication skills
- Digital content creation skills
- Strategic skills

### 3. E-toolkit for digital skills: Design and development

#### 3.1 Digital skills e-toolkit design: Categorization of Content

**Table 1-8** summarises the main categories, sub-categories, definitions and materials of each sub-category as they were implemented into the e-toolkit

**Table 1. Main categories, sub-categories of digital skills, and definitions of them**

Learning area	Categories based on use	Sub Categories	Definitions
Digital Skills	Effective Use of Digital Environments	Operational skills	Operational skills mean using and operating various digital media, devices, and applications to accomplish practical tasks and recognize specific online environments. Also, you must be able to navigate through them while maintaining orientation. For instance, they are operating an Internet browser, online search engines, and completing online forms and documents.
		Formal skills	Formal skills are defined as the ability to handle the unique structures of digital media. These structures are often referred to as hypermedia, meaning a nonlinear information medium that includes graphics, audio, video, plain text, and hyperlinks. Unlike conventional media, in digital environments, especially the Internet, users can move forward and backwards to unknown locations. For instance, they use hyperlinks, maintain a sense of location when accessing websites, surf the Internet, and open search results.
		Information skills	Information skills mean choosing a specific search system or digital place that holds information, formulating search queries that focus on the information problem, selecting the most relevant results, and evaluating the information source. For instance, selecting the correct search engine on a browser, using proper keywords to search for information, identifying the most relevant resources given, and evaluating the credibility of the findings.
	Purpose of Use of Digital Environments	Digital communication skills	Digital communication skills mean being able to make use of digital media and ICT to establish communication and collaboration with others within digital environments, ensuring that the meaning is expressed effectively. For instance, they transmit ideas effectively to multiple audiences using various media and online formats.
		Digital content creation skills	Digital content creation skills are considered the skills to use digital media towards generating new or previously

			<p>unknown content, or editing, integrating, and modifying familiar ideas in a new way and transforming such ideas into a product, service, or process that is recognized as a novel within a particular domain. For instance, utilizing ICT tools and media to generate ideas, present a topic, or acquire the opinion of people.</p>
		Strategic skills	<p>Strategic skills are defined as the capacity to utilize digital media and network sources to reach a particular personal or professional goal. However, strategic skills will depend on more than operational and formal skills. Together with information skills, they serve as the means to reach a particular goal by one's initiative. In order to acquire strategic skills, someone must have a high degree of information skills and be critical and analytical. For instance, taking advantage of the Internet by developing an orientation toward a particular objective, evaluating your options (e.g. hypermedia), taking the right actions to reach this objective, and gaining its benefits.</p>

**Table 2. An overview of the content of Operations skills material**

A/A	Title of material	Link
1	Cloud computing	<a href="https://www.linkedin.com/learning/topics/cloud-computing-5">https://www.linkedin.com/learning/topics/cloud-computing-5</a>
2	Data Science	<a href="https://www.linkedin.com/learning/topics/data-science">https://www.linkedin.com/learning/topics/data-science</a>
3	Build an e-Learning website with LearnWorlds-I	<a href="https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;t=6s&amp;ab_channel=LearnWorlds">https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;t=6s&amp;ab_channel=LearnWorlds</a>
4	Build an e-Learning website with LearnWorlds-II	<a href="https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;index=3&amp;ab_channel=LearnWorlds">https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;index=3&amp;ab_channel=LearnWorlds</a>
5	Microsoft Excel - Improve your skills quickly	<a href="https://www.udemy.com/course/microsoft-excel-improve-your-skills-quickly/">https://www.udemy.com/course/microsoft-excel-improve-your-skills-quickly/</a>
6	How to Make an Online Community Platform	<a href="https://www.udemy.com/course/create-online-community/">https://www.udemy.com/course/create-online-community/</a>
7	GCP - Google Cloud Platform Concepts	<a href="https://www.udemy.com/course/gcp-google-cloud-platform-concepts/">https://www.udemy.com/course/gcp-google-cloud-platform-concepts/</a>
8	How to properly present PowerPoint slides in Zoom	<a href="https://www.youtube.com/watch?v=wNOZRa089-U&amp;ab_channel=KevinStratvert">https://www.youtube.com/watch?v=wNOZRa089-U&amp;ab_channel=KevinStratvert</a>
9	Conducting High-Engagement Smart Tutorials For Your Students	<a href="https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/">https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/</a>
10	Google slides	<a href="https://www.youtube.com/playlist?list=PLpQ QipWcxwt8VFQWcbUcmlHKejroVSzs0">https://www.youtube.com/playlist?list=PLpQ QipWcxwt8VFQWcbUcmlHKejroVSzs0</a>
11	Basic Computer Skills - Skills To Help You Succeed	<a href="https://www.udemy.com/course/taking-online-classes/">https://www.udemy.com/course/taking-online-classes/</a>
12	Basic Computer Skills - Skills To Help You Succeed	<a href="https://www.udemy.com/course/excel-2019-beginner-to-microsoft-intermediate/">https://www.udemy.com/course/excel-2019-beginner-to-microsoft-intermediate/</a>
13	Open Virtual Mobility MOOCs	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
14	Educate -it - University of Utrecht:	<a href="https://educate-it.uu.nl/en/">https://educate-it.uu.nl/en/</a>
15	Quizizz:	<a href="https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVsQUQin-TDV/edit#slide=id.p1">https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVsQUQin-TDV/edit#slide=id.p1</a>
16	Kahoot:	<a href="https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1">https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1</a>
17	Tutorial Name: Hello Codi!	<a href="https://appinventor.mit.edu/explore/ai2/hello-codi.html">https://appinventor.mit.edu/explore/ai2/hello-codi.html</a>

<b>18</b>	Tutorial Name: Android, Where is My Car?	<a href="https://appinventor.mit.edu/explore/ai2/android-where-is-my-car">https://appinventor.mit.edu/explore/ai2/android-where-is-my-car</a>
<b>19</b>	Tutorial Name: Mole Mash	<a href="https://appinventor.mit.edu/explore/ai2/mole-mash">https://appinventor.mit.edu/explore/ai2/mole-mash</a>
<b>20</b>	Tutorial Name: Colored Dots	<a href="https://appinventor.mit.edu/explore/ai2/colored-dots">https://appinventor.mit.edu/explore/ai2/colored-dots</a>



**Table 3. An overview of the content of Formal skills material**

A/A	Title of material	Link
1	Working with computers to create opportunity	<a href="https://www.linkedin.com/learning/working-with-computers-and-devices/working-with-computers-to-create-opportunity?autoplay=true">https://www.linkedin.com/learning/working-with-computers-and-devices/working-with-computers-to-create-opportunity?autoplay=true</a>
2	Digital Twin: A Comprehensive Overview	<a href="https://www.udemy.com/course/digital-twin-a-comprehensive-overview/">https://www.udemy.com/course/digital-twin-a-comprehensive-overview/</a>
3	Interactive Online Teaching with Demo	<a href="https://www.udemy.com/course/interactive-online-teaching-with-demo/">https://www.udemy.com/course/interactive-online-teaching-with-demo/</a>
4	How to properly present PowerPoint slides in Zoom	<a href="https://www.youtube.com/watch?v=wNOZRa089-U&amp;ab_channel=KevinStratvert">https://www.youtube.com/watch?v=wNOZRa089-U&amp;ab_channel=KevinStratvert</a>
5	Google slides	<a href="https://www.youtube.com/playlist?list=PLpQ QipWcxwt8VFQWcbUcmlHKejroVSzs0">https://www.youtube.com/playlist?list=PLpQ QipWcxwt8VFQWcbUcmlHKejroVSzs0</a>
6	Basic Computer Skills - Skills To Help You Succeed	<a href="https://www.udemy.com/course/taking-online-classes/">https://www.udemy.com/course/taking-online-classes/</a>
7	Open Education: Information / Digital Literacy & Research Skills - Virginia Tec	<a href="https://guides.lib.vt.edu/oer/digiLit">https://guides.lib.vt.edu/oer/digiLit</a>
8	Open Virtual Mobility MOOCs:	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
9	Educate -it - University of Utrecht	<a href="https://educate-it.uu.nl/en/">https://educate-it.uu.nl/en/</a>
10	Quizizz	<a href="https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVSqUQin-TDV/edit#slide=id.p1">https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVSqUQin-TDV/edit#slide=id.p1</a>
11	Kahoot	<a href="https://www.udemy.com/course/taking-online-classes/">https://www.udemy.com/course/taking-online-classes/</a>
12	Tutorial Name: Hello Codi! <a href="https://appinventor.mit.edu/explore/ai2/hello-codi.html">https://appinventor.mit.edu/explore/ai2/hello-codi.html</a>	<a href="https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1">https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1</a>
13	Tutorial Name: Android, Where is My Car?	<a href="https://appinventor.mit.edu/explore/ai2/android-wheres-my-car">https://appinventor.mit.edu/explore/ai2/android-wheres-my-car</a>
14	Tutorial Name: Mole Mash	<a href="https://appinventor.mit.edu/explore/ai2/mol-emash">https://appinventor.mit.edu/explore/ai2/mol-emash</a>
15	Tutorial Name: Colored Dots	<a href="https://appinventor.mit.edu/explore/ai2/colored-dots">https://appinventor.mit.edu/explore/ai2/colored-dots</a>
16	Tutorial Name: LEGO EV3 Tilt-to-Drive Tutorial	<a href="https://appinventor.mit.edu/explore/ai2/lego--ev3-tilt-drive">https://appinventor.mit.edu/explore/ai2/lego--ev3-tilt-drive</a>

**Table 4. An overview of the content of Information skills material**

A/A	Title of material	Link
1	Data Science	<a href="https://www.linkedin.com/learning/topics/data-science">https://www.linkedin.com/learning/topics/data-science</a>
2	Computing with confidence, getting job skills and staying safe online.	<a href="https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online">https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online</a>
3	Digital Twin: A Comprehensive Overview	<a href="https://www.udemy.com/course/digital-twin-a-comprehensive-overview/">https://www.udemy.com/course/digital-twin-a-comprehensive-overview/</a>
4	Smart eLearning Content Development Course for All	<a href="https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/">https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/</a>
5	Learning Microlearning	<a href="https://www.udemy.com/course/learning-microlearning/">https://www.udemy.com/course/learning-microlearning/</a>
6	How to Make an Online Community Platform	<a href="https://www.udemy.com/course/create-online-community/">https://www.udemy.com/course/create-online-community/</a>
7	GCP - Google Cloud Platform Concepts	<a href="https://www.udemy.com/course/gcp-google-cloud-platform-concepts/">https://www.udemy.com/course/gcp-google-cloud-platform-concepts/</a>
8	Conducting High-Engagement Smart Tutorials For Your Students	<a href="https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/">https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/</a>
9	MIT Open Courseware	<a href="https://ocw.mit.edu/help/get-started-with-ocw/">https://ocw.mit.edu/help/get-started-with-ocw/</a>
10	Open Education: Information / Digital Literacy & Research Skills - Virginia Tec	v
11	Open Virtual Mobility MOOCs	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
12	Educate -it - University of Utrecht	<a href="https://educate-it.uu.nl/en/">https://educate-it.uu.nl/en/</a>
13	The Campus	<a href="https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid">https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid</a>

**Table 5. An overview of the content of Digital Communiv material**

A/A	Title of material	Link
1	Computing with confidence, getting job skills and staying safe online.	<a href="https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online">https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online</a>
2	How to Create an Online Course: The Official Udemu Course	<a href="https://www.udemy.com/course/official-udemy-create-course/">https://www.udemy.com/course/official-udemy-create-course/</a>
3	How To Create and Record Online Courses	<a href="https://www.udemy.com/course/create-record-online-courses/">https://www.udemy.com/course/create-record-online-courses/</a>
4	How to Make an Online Community Platform	<a href="https://www.udemy.com/course/create-online-community/">https://www.udemy.com/course/create-online-community/</a>
5	Smart eLearning Content Development Course for All	<a href="https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/">https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/</a>
6	Conducting High-Engagement Smart Tutorials For Your Students	<a href="https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/">https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/</a>
7	Basic Computer Skills - Skills To Help You Succeed	<a href="https://www.udemy.com/course/taking-online-classes/">https://www.udemy.com/course/taking-online-classes/</a>
8	Developing Online/Hybrid Learning Models for Higher Education Programs	<a href="https://www.semanticscholar.org/paper/Developing-Online%2FHybrid-Learning-Models-for-Higher-Young-Allen/452e269f1d18af84834b9e857de185425449ea13">https://www.semanticscholar.org/paper/Developing-Online%2FHybrid-Learning-Models-for-Higher-Young-Allen/452e269f1d18af84834b9e857de185425449ea13</a>
9	Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?	<a href="https://eric.ed.gov/?id=EJ1099109">https://eric.ed.gov/?id=EJ1099109</a>
10	Open Virtual Mobility MOOCs	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
11	Ablconnect - Harvard University	<a href="https://ablconnect.harvard.edu/going-digital">https://ablconnect.harvard.edu/going-digital</a>
12	The Campus	<a href="https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid">https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid</a>
13	Digi Guide	<a href="https://evamariabaecker.files.wordpress.com/2021/05/digiguide_deutsch_v4_web-1.pdf">https://evamariabaecker.files.wordpress.com/2021/05/digiguide_deutsch_v4_web-1.pdf</a>
14	Social Content Curation for Learning Communities	<a href="https://www.flickr.com/photos/22417120@N08/8134106973">https://www.flickr.com/photos/22417120@N08/8134106973</a>
15	Social Learning Strategy Framework	<a href="https://www.flickr.com/photos/jaycross/3953558009/in/photolist-9pscNh-Vd8Z9S-nS1Erd-27A4bX1-GBnCaT-nTWbce-adxDzj-51Addy-nTWc2F-Mfv3VR-N5CpYi-2jS7N9m-cztGCh-dB2Fzd-72n24g-9Vuuu8-66uCSw-dWPLdP-">https://www.flickr.com/photos/jaycross/3953558009/in/photolist-9pscNh-Vd8Z9S-nS1Erd-27A4bX1-GBnCaT-nTWbce-adxDzj-51Addy-nTWc2F-Mfv3VR-N5CpYi-2jS7N9m-cztGCh-dB2Fzd-72n24g-9Vuuu8-66uCSw-dWPLdP-</a>

		6f2DsJ-51vYXP-51AcaE-51vZp2-51AdAG- cssDqU-B7ajJo-BBxqcW-BBxqhf-C4ER2v- Bv9UZB-Bv9VUH-24crQkK-nzEpLf-51vZE8- 51vYHr-51AcHA-51vYQK-51vYAz-51vZhF- 51vZMk-51AcQb-51Adjy-oQb1ww-gV4Bnq- gV5iCc-gV4fZS-gV4P3i-gV4mEP
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**Table 6. An overview of the content of Digital content creation skills material**

A/A	Title of material	Link
1	Working with computers to create opportunity	<a href="https://www.linkedin.com/learning/working-with-computers-and-devices/working-with-computers-to-create-opportunity?autoplay=true">https://www.linkedin.com/learning/working-with-computers-and-devices/working-with-computers-to-create-opportunity?autoplay=true</a>
2	Build an e-Learning website with LearnWorlds-I	<a href="https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;t=6s&amp;ab_channel=LearnWorlds">https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;t=6s&amp;ab_channel=LearnWorlds</a>
3	Build an e-Learning website with LearnWorlds-II	<a href="https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;index=3&amp;ab_channel=LearnWorlds">https://www.youtube.com/watch?v=2aelK3SJuwE&amp;list=PLOn2LyVWrDJmVRXA4xrZSyzE_86oGGkCl&amp;index=3&amp;ab_channel=LearnWorlds</a>
4	How To Create and Record Online Courses	<a href="https://www.udemy.com/course/create-record-online-courses/">https://www.udemy.com/course/create-record-online-courses/</a>
5	Digital Twin: A Comprehensive Overview	<a href="https://www.udemy.com/course/howtomake moneyfromhome/">https://www.udemy.com/course/howtomake moneyfromhome/</a>
6	Online Teaching Course: Basics of Teaching Online	<a href="https://www.udemy.com/course/online-teaching-course-basics-of-teaching-online/">https://www.udemy.com/course/online-teaching-course-basics-of-teaching-online/</a>
7	How to Make an Online Community Platform:	<a href="https://www.udemy.com/course/create-online-community/">https://www.udemy.com/course/create-online-community/</a>
8	Smart eLearning Content Development Course for All	<a href="https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/">https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/</a>
9	Conducting High-Engagement Smart Tutorials For Your Students	<a href="https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/">https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/</a>
10	How to properly present PowerPoint slides in Zoom	<a href="https://www.youtube.com/watch?v=wNOZRao89-U&amp;ab_channel=KevinStratvert">https://www.youtube.com/watch?v=wNOZRao89-U&amp;ab_channel=KevinStratvert</a>
11	Google slides:	<a href="https://www.youtube.com/playlist?list=PLpQQipWcxwt8VFQWcbUcmIHKejroVSzs0">https://www.youtube.com/playlist?list=PLpQQipWcxwt8VFQWcbUcmIHKejroVSzs0</a>
12	Open Virtual Mobility MOOCs	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
13	Ablconnect - Harvard University:	<a href="https://ablconnect.harvard.edu/going-digital">https://ablconnect.harvard.edu/going-digital</a>
14	Educate -it - University of Utrecht	<a href="https://educate-it.uu.nl/en/">https://educate-it.uu.nl/en/</a>
15	Quizizz	<a href="https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVSqUQin-TDV/edit#slide=id.p1">https://docs.google.com/presentation/d/1TA3eTRWki_3ex44zP0ZMrVSqUQin-TDV/edit#slide=id.p1</a>
16	Kahoot	<a href="https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1">https://docs.google.com/presentation/d/1dyM7isEzVp5y4duZKq5g5SWpATgltbaX/edit#slide=id.p1</a>

17	Tutorial Name: Hello Codi!	<a href="https://appinventor.mit.edu/explore/ai2/hello-codi.html">https://appinventor.mit.edu/explore/ai2/hello-codi.html</a>
18	Tutorial Name: Android, Where is My Car?	<a href="https://appinventor.mit.edu/explore/ai2/android-where-is-my-car">https://appinventor.mit.edu/explore/ai2/android-where-is-my-car</a>
19	Tutorial Name: Mole Mash	<a href="https://appinventor.mit.edu/explore/ai2/mole-mash">https://appinventor.mit.edu/explore/ai2/mole-mash</a>
20	Tutorial Name: Colored Dots	<a href="https://appinventor.mit.edu/explore/ai2/colored-dots">https://appinventor.mit.edu/explore/ai2/colored-dots</a>
21	Tutorial Name: LEGO EV3 Tilt-to-Drive Tutorial	<a href="https://appinventor.mit.edu/explore/ai2/lego-ev3-tilt-drive">https://appinventor.mit.edu/explore/ai2/lego-ev3-tilt-drive</a>

**Table 7. An overview of the content of Strategic skills material**

A/A	Title of material	Link
1	Computing with confidence, getting job skills and staying safe online.	<a href="https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online">https://www.linkedin.com/learning/working-and-collaborating-online/computing-with-confidence-getting-job-skills-and-staying-safe-online</a>
2	Teaching Online: Mindset & Strategies for Instructor Success	<a href="https://www.udemy.com/course/teaching-online-strategies-for-success/">https://www.udemy.com/course/teaching-online-strategies-for-success/</a>
3	Online Course Crash Course: Win at Teaching Online Courses	<a href="https://www.udemy.com/course/online-course-crash-course-win-at-teaching-online-courses/">https://www.udemy.com/course/online-course-crash-course-win-at-teaching-online-courses/</a>
4	Learn How To Create An Online Course In 10 Days. Unofficial	<a href="https://www.udemy.com/course/howtomake moneyfromhome/">https://www.udemy.com/course/howtomake moneyfromhome/</a>
5	Online Teaching Course: Basics of Teaching Online	<a href="https://www.udemy.com/course/online-teaching-course-basics-of-teaching-online/">https://www.udemy.com/course/online-teaching-course-basics-of-teaching-online/</a>
6	How to Make an Online Community Platform	<a href="https://www.udemy.com/course/create-online-community/">https://www.udemy.com/course/create-online-community/</a>
7	Smart eLearning Content Development Course for All	<a href="https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/">https://www.udemy.com/course/create-video-elearning-content-quiz-easy-quick-teachers-course/</a>
8	Learning Microlearning	<a href="https://www.udemy.com/course/learning-microlearning/">https://www.udemy.com/course/learning-microlearning/</a>
9	Conducting High-Engagement Smart Tutorials For Your Students	<a href="https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/">https://www.udemy.com/course/conducting-high-engagement-smart-tutorials-for-your-students/</a>
10	How to properly present PowerPoint slides in Zoom	<a href="https://www.youtube.com/watch?v=wNOZRao89-U&amp;ab_channel=KevinStratvert">https://www.youtube.com/watch?v=wNOZRao89-U&amp;ab_channel=KevinStratvert</a>
11	Functions of digital learning within the international mobility program – perspectives of university students and staff from Europe	<a href="https://link.springer.com/article/10.1007/s10639-021-10855-y">https://link.springer.com/article/10.1007/s10639-021-10855-y</a>
12	Developing Online/Hybrid Learning Models for Higher Education Programs	<a href="https://www.semanticscholar.org/paper/Developing-Online%2FHybrid-Learning-Models-for-Higher-Young-Allen/452e269f1d18af84834b9e857de185425449ea13">https://www.semanticscholar.org/paper/Developing-Online%2FHybrid-Learning-Models-for-Higher-Young-Allen/452e269f1d18af84834b9e857de185425449ea13</a>
13	Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?	<a href="https://eric.ed.gov/?id=EJ1099109">https://eric.ed.gov/?id=EJ1099109</a>

14	MIT Open Courseware	<a href="https://mitocw.zendesk.com/hc/en-us/categories/4414679122971-Get-Started-with-MIT-OpenCourseWare">https://mitocw.zendesk.com/hc/en-us/categories/4414679122971-Get-Started-with-MIT-OpenCourseWare</a>
15	Open Virtual Mobility MOOCs	<a href="https://hub.openvirtualmobility.eu/course/index.php?categoryid=19">https://hub.openvirtualmobility.eu/course/index.php?categoryid=19</a>
16	Ablconnect - Harvard University	<a href="https://ablconnect.harvard.edu/going-digital">https://ablconnect.harvard.edu/going-digital</a>
17	Educate -it - University of Utrecht	<a href="https://educate-it.uu.nl/en/">https://educate-it.uu.nl/en/</a>
18	The Campus	<a href="https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid">https://www.timeshighereducation.com/campus/collections/higher-education-goes-hybrid</a>
19	Erasmus+ project culture & languages for all	<a href="http://e-culture.eu/">http://e-culture.eu/</a>
20	6 Questions to Consider When Developing an Annual Learning Strategy	<a href="https://www.flickr.com/photos/81441473@N00/4300585096">https://www.flickr.com/photos/81441473@N00/4300585096</a>
21	Immigrant Women: Paths to Employability	<a href="https://www.flickr.com/photos/91406258@N00/5374021856">https://www.flickr.com/photos/91406258@N00/5374021856</a>
22	Inquiry Cycle	<a href="https://www.flickr.com/photos/23346165@N03/2304444220">https://www.flickr.com/photos/23346165@N03/2304444220</a>
23	Social Content Curation for Learning Communities	<a href="https://www.flickr.com/photos/22417120@N08/8134106973">https://www.flickr.com/photos/22417120@N08/8134106973</a>
24	Social Learning Strategy Framework	<a href="https://www.flickr.com/photos/jaycross/3953558009/in/photolist-9pscNh-Vd8Z9S-nS1Erd-27A4bX1-GBnCaT-nTWbce-adxDzj-51Addy-nTWc2F-Mfv3VR-N5CpYi-2jS7N9m-cztGCh-dB2Fzd-72n24g-9Vuuu8-66uCSw-dWPLdP-6f2DsJ-51vYXP-51AcaE-51vZp2-51AdAG-cssDqU-B7ajJo-BBxqcW-BBxqhf-C4ER2v-Bv9UZB-Bv9VUH-24crQkK-nzEpLf-51vZE8-51vYHr-51AcHA-51vYQK-51vYAz-51vZhF-51vZMk-51AcQb-51AdJy-oQb1ww-gV4Bnq-gV5iCc-gV4fZS-gV4P3i-gV4mEP">https://www.flickr.com/photos/jaycross/3953558009/in/photolist-9pscNh-Vd8Z9S-nS1Erd-27A4bX1-GBnCaT-nTWbce-adxDzj-51Addy-nTWc2F-Mfv3VR-N5CpYi-2jS7N9m-cztGCh-dB2Fzd-72n24g-9Vuuu8-66uCSw-dWPLdP-6f2DsJ-51vYXP-51AcaE-51vZp2-51AdAG-cssDqU-B7ajJo-BBxqcW-BBxqhf-C4ER2v-Bv9UZB-Bv9VUH-24crQkK-nzEpLf-51vZE8-51vYHr-51AcHA-51vYQK-51vYAz-51vZhF-51vZMk-51AcQb-51AdJy-oQb1ww-gV4Bnq-gV5iCc-gV4fZS-gV4P3i-gV4mEP</a>
25	The Flexible Classroom, HEQCO keynote by Susan McCahan, UofT	<a href="https://www.flickr.com/photos/59217476@N00/8553975181">https://www.flickr.com/photos/59217476@N00/8553975181</a>
26	Uber community model	<a href="https://www.flickr.com/photos/66684537@N00/5647522617">https://www.flickr.com/photos/66684537@N00/5647522617</a>
27	Teaching Large Classes: Discussion	<a href="https://www.flickr.com/photos/59217476@N00/8261536706">https://www.flickr.com/photos/59217476@N00/8261536706</a>
28	Digi Guide	<a href="https://evamariabaecker.files.wordpress.com/2021/05/digiguide_deutsch_v4_web-1.pdf">https://evamariabaecker.files.wordpress.com/2021/05/digiguide_deutsch_v4_web-1.pdf</a>



### 3.2. Conclusions

Drawing upon the publicly available resources- materials, and existing evidence for designing an effective intervention, we develop the e-toolkit for digital competencies. The expected impact of the e-toolkit is the following:

- Enable a new approach to course development
- Allow the use of a completely new created tool in teaching
- Be more motivating for teachers to use new technologies
- Improve the quality of created courses and teaching methods using newly created
- Improve the quality of courses and the learning results
- Modernize the working situation
- Integrate theoretical current knowledge and research in the teaching process

#### 4. References

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