



Co-funded by the  
Erasmus+ Programme  
of the European Union

## Learn2Analyze (L2A)

**An Academia-Industry Knowledge Alliance for enhancing Online Training Professionals' (Instructional Designers and e-Trainers) Competences in Educational Data Analytics**



# Learn2Analyze

Erasmus+ Program

Knowledge Alliances (Key Action 2)

AGREEMENT NUMBER: 2017 - 2733 / 001 – 001

PROJECT NUMBER: 588067-EPP-1-2017-1-EL-EPPKA2-KA

## **R10. Implementation Report for Learn2Analyze MOOC Pilot Phase B**

**Public**

**Disclaimer:**

*The **Learn2Analyze project results** are developed with co-funding by the European Commission through the **Erasmus+ Program** of the European Union (Cooperation for innovation and the exchange of good practices - **Knowledge Alliances**, Agreement n. 2017-2733 / 001-001, Project No 588067-EPP-1-2017-1-EL-EPPKA2-KA). The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflects the views only of the authors, and the Commission will not be held responsible for any use which may be made of the information contained therein.*

## Learn2Analyse Consortium



# Contact

**Professor Demetrios Sampson, Learn2Analyse Project Co-ordinator**

Department of Digital Systems, University of Piraeus,  
80, Karaoli and Dimitriou Street, Piraeus, 18534 / Greece

Phone: +30-210-4142766

E-mail: [sampson@unipi.gr](mailto:sampson@unipi.gr)

## **Executive Summary**

The scope of **Result 10** (*Implementation Report for Learn2Analyze MOOC Pilot Phase B*) is to present an overview of the delivery of the Learn2Analyze MOOC for Phase B including textual, tabular and chart depictions of different indicators such as number of participants, demographics, success rates etc. The educational data presented in this report are derived both through the data collected in the MOOC platform that implemented and supported the course, as well as through the pre- and post-course questionnaire-based surveys (described in detail under Result 14) with the participants of the second implementation of the L2A MOOC which were conducted from the 1st of February 2021 (when the enrolment process started) through the 6th of June 2021.

## Table of Contents

1. Introduction.....	8
1.1 Scope .....	8
1.2 Background.....	8
1.3 Synopsis of the Learn2Analyze MOOC Pilot Phase B .....	9
2. Key Performance Indicators for Enrolled Participants Profile.....	10
3. Overview of L2A MOOC Participants Profile .....	13
3.1 Enrolled users .....	13
3.2 Participants' geographical distribution .....	13
3.3 Distribution of participants per professional role .....	14
3.4 EDL competences advancement of participants who completed the course.....	14
4. Key Performance Indicators for Enrolled Participants Engagement .....	15
5. Overview of Enrolled Participants' Engagement & Learning Experience.....	19
5.1 Participants' level of engagement with MOOC learning material per module .....	19
5.2 Participation in micro-quizzes per module.....	19
5.3 Engagement with concluding self-assessed assignment per module .....	20
5.4 Forum participation.....	20
5.5 Badges collected by the course-completed users.....	21
5.6 Learning experience per module.....	22

## List of Figures

<b>Figure 1</b> Participants' geographical distribution .....	13
<b>Figure 2</b> Distribution of participants per professional role .....	14
<b>Figure 3</b> Perceived EDL competences advancement .....	14
<b>Figure 4</b> Participants' level of engagement with MOOC learning material per module.....	19
<b>Figure 5</b> Participation in micro-quizzes .....	19
<b>Figure 6</b> Average participation in micro-quizzes per module .....	20
<b>Figure 7</b> Concluding self-assessed assignment completion .....	20
<b>Figure 8</b> Level of engagement in collaborative learning activities .....	21
<b>Figure 9</b> Total number of learners per Module Badge.....	21
<b>Figure 10</b> Distribution of learners by the number of total Module Badges they collected .....	21
<b>Figure 11</b> Learning experience per module.....	22

## List of Tables

<b>Table 1</b> WP4 KPIs.....	11
<b>Table 2</b> Enrolments .....	13
<b>Table 3</b> Geographical distribution .....	13
<b>Table 4</b> WP5 KPIs.....	15

<b>Table 5</b> Level of engagement .....	15
<b>Table 6</b> Participation in micro-quizzes per module.....	16
<b>Table 7</b> Concluding self-assessed assignment participation .....	17
<b>Table 8</b> Number of collaborative activities per module.....	17
<b>Table 9</b> Participation in collaborative activities per module.....	18
<b>Table 10</b> Participation in Level A and Level B assessment .....	18

# 1. Introduction

## 1.1 Scope

The scope of this report is to present an overview of the delivery of the Learn2Analyze MOOC for Phase B including textual, tabular and chart depictions of different indicators such as number of participants, demographics, success rates etc. clearly outlined in the Result #14 Learn2Analyze MOOC Final Evaluation Report (Phases A and B).

The educational data presented in this report are derived both through the data collected in the MOOC platform that implemented and supported the course, as well as through the pre- and post-course questionnaire-based surveys (described in detail under Result #14) with the participants of the second implementation of the L2A MOOC which were conducted from the 1<sup>st</sup> of February 2021 (when the enrolment process started) through the 6<sup>th</sup> of June 2021.

## 1.2 Background

Learn2Analyze (L2A) (<http://learn2analyze.eu>) is an Academia-Industry Knowledge Alliance for enhancing Online Training Professionals' Competences in Educational Data Literacy, co-funded by the European Commission through the Erasmus+ Program of the European Union. The key objectives of the Learn2Analyze (L2A) initiative are (i) to develop comprehensive proposal for an Educational Data Literacy Competence Framework for instructional designers and e-trainers of online and blended learning courses, and (ii) to design, develop and offer a competence-based Professional Development MOOC for cultivating these competences.

Regarding objective (i), the L2A EDL CF was produced and evaluated in Result 2, Result 3, and Result 4. With respect to objective (ii), the initial version of the L2A MOOC Phase A was built and consisted of 8 modules combining EDL theory (Modules 2-4) and practice with EDL tools in 3 widely used Course Management Systems, namely, Moodle, the Exact Suite and the IMC Learning Suite (Modules 5-7) following a self-directed MOOC educational design. Based on the overall evaluation of the L2A MOOC Phase A, specific areas for improvement were identified and prioritized in the implementation of Phase B. The revised educational design and materials, as well as the new set-up of L2A MOOC Phase B are available in Results 5b, 6b, and 7b.

All modules (2 to 7) were thoroughly revised to address issues related to comprehensiveness, clarity, overlap, and remove content that promotes disengagement (e.g., long videos, irrelevant MCQs). All module revisions went through a rigorous internal review process by two partners of the L2A consortium, to guarantee the advancement in the quality of the produced learning materials.

Based on the recommendations from Phase A evaluation, a concluding self-assessed assignment was implemented at the end of each module (2 to 7), reproducing a real-life scenario activity based on a use case (storytelling) in order to enable participants to apply the L2A EDL competences. The self-assessed assignments were using rubrics with adequate criteria and an exemplary solution to support learners in assessing their own work. These assignments also included discussion forums to encourage learners' collaboration.



Moreover, in the revised version of the L2A MOOC, gamification was implemented both on the content and on the instructional design (structure) of the course aiming to boost motivation and engage learners to the content. The content gamification (rapid feedback and freedom to fail) and formative assessment/assessment for learning was strongly supported via the use of Learning Activities added after each content subtopic throughout the course in the form of automated quiz test with immediate feedback. The aim of these new learning activities was to improve the overall learning experience of the participants, provide useful feedback and motivate learners to re-attempt, as well as to reproduce real-life contexts by using a suitable use case scenario (storytelling), encouraging learners to link theory with practice.

The final assessment mechanism, along with the grading policy and certification were also revised and redesigned. In Phase B, there were two levels of the L2A Certificate of Achievement: Level A Certificate aiming to assess the understanding of the core concepts presented in the 6 core modules and required from learners to develop a *basic set of competences* for EDL and Level B Certificate of Achievement on Educational Data Literacy that required demonstration of a *higher expertise* assessed through hands-on assignments based on simulated practice scenarios.

### **1.3 Synopsis of the Learn2Analyze MOOC Pilot Phase B**

The pilot of Learn2Analyze MOOC Phase B, the refined MOOC based on the improvements elicited from the Phase A implementation, started on February 1<sup>st</sup>, 2021 and was open until June 6<sup>th</sup>, 2021. During this time frame, **2971** participants were registered. From these, 2880 accounts were activated, 2204 registered users enrolled in Module 1, and **1249** participants distributed in **69** countries answered the pre-course survey and started the MOOC. From the 1249 participants, **286** participants passed at least one of the assessments and answered the post-course survey to receive their certificates.

We consider that a participant has completed the course when s/he has received the certificate of achievement (i.e., succeeded at least one final assessment and submitted both pre- and post-course surveys).

**Completion Rate = 22.90%**

**Completion Rate of Phase A: 20.45%**

In total, there was an **increase** both in terms of registrations (2971 in Phase B compared to 1920 in Phase A), initiation of the L2A MOOC (1249 in Phase B compared to 1147 in Phase A), and certification and completion (286 in Phase B compared to 235 in Phase A).

The majority of participants that started the MOOC originated from Greece (60.0%, N=750), while fewer were from Germany (13.1%, N=164), and less from Italy (7.3%, N=91). With respect to their educational background and their overall educational profiles, 56.4% (N=705) of participants hold a Master's Degree, while 18.7% (N=234) hold a Bachelor's Degree, 11.6% (N=145) have acquired a Doctoral Degree, and fewer are the participants who have higher academic qualifications (2.3%, N=29). With respect to their current job sector, 67.7% (N=845) of the participants reported that they work in K-12, University, or College, while 11.3% (N=141)

come from Industry/Business (Small/Large – for/non -profit), 9.8% (N=122) were reported as Self/Not-employed, and 11.3% (N=141) work somewhere else. Participants reported 12.26 years of experience in professional role and 6.96 years of experience in online teaching and learning (in average).

With regards to the level of competence advancement that participants attained, the participants self-evaluated their perceived initial EDL competence level for all dimensions to approximately 2=Advanced beginner while the concluding EDL competence level was approximately 3=Competent. Thus, **completing the course resulted to one-level advancement of competences** for each EDL competence dimension.

Considering the Learning Experience from the course attendance, participants who completed Phase B rated relatively high their agreement to statements about the instructional design of the course (learning objectives clearly stated, variety of content types, relevance of the assessments with the LOs), the content (relevant educational materials, current up-to-date information, graphics), as well as the comprehensibility of content, appropriateness of the instructional videos, and the micro-quizzes in all modules, and marginally their agreement to appropriateness of further readings and learning activities in all modules.

Regarding the enrolled participants' engagement, overall **13.311 posts** were published to the several forum discussions, while forums in Modules 2, 3 and 4 seem to be more active than in other modules. Moreover, the quizzes throughout the course were very popular as **62315** micro-quizzes interactions were reported in a total of **161** quiz learning activities, while **1273** concluding self-assessed assignments were successfully completed in the 6 core modules (Module 2 -7).

With respect to gamification, more than **half of the users earned 5 or 6 Module Badges** while a quarter did not get any, even though they had successfully completed the course. The mean number of Badges per user is approximately 3.66. In respect of earned Points, the majority of participants who completed the course reached **level 5 of Engagement and Content**. In **Test Level**, almost **half of them reached level 5**.

Regarding the certificates, out of the 1249 participants who answered the pre-course survey and started the MOOC, **280** passed the assessment for certificate level A (22.4%), **137** passed the assessment for certificate level B (10.97%), and 286 (22.90%) of them answered the post-course survey to receive their certificate of achievement (females: 68.2%, males: 31.5%, mean age: 40.99 [SD=11.794]).

## **2. Key Performance Indicators for Enrolled Participants Profile**

The consortium has defined a number of indicators to monitor the progress of the core project activities for the implementation of the pilot Phase A. These indicators also support the assessment of the quality of the project outcomes from a quantitative perspective.

**Table 1** WP4 KPIs

WP#	WP PI	
WP4	<b>PI4.3</b> Number of MOOC Participants Involved in Phase B	During L2A MOOC Phase B, 2971 initially registered for the course. Out of these, 1249 participants answered the pre-course survey and started the MOOC. These participants were distributed in 69 countries. We consider that an enrolled user has “started the MOOC” only if (s)he submits the Pre-course survey to unlock Modules 2-8.
	<b>PI4.4</b> Number of MOOC participants successfully completed the MOOC during Phase B	During Phase B, 286 participants successfully completed the L2A MOOC and received their certificate of achievement.  <b>Completion Rate = 22.90%</b>
	<b>PI4.6</b> Diversity in demographics of participants Involved in Phase B	<b>Age diversity:</b> The age of participants follows the normal distribution with mean value 42.82 and standard deviation 10.640.  <b>Gender diversity:</b> Although approximately 1.4% of the participants chose not to respond to the question related to their gender, the participants were mostly females (65.7%) than males (32.8%).  <b>Geographical distribution:</b> Although the participants are distributed in 69 countries around the world, the majority (86%) comes from Greece (N=750), Germany (N=164) and Italy (N=91), which are among the core Learn2Analyse partners' countries.
	<b>PI4.7</b> Diversity in competence profiles of participants Involved in Phase B	<b>Educational background:</b> 56.4% (N=705) of the participants hold a Master’s Degree, while 18.7% (N=234) hold a Bachelor’s Degree, and 11.6% (N=145) hold a Doctoral Degree.  <b>English proficiency:</b> 70.0% reported high (N=874) and very high level (N=442) in English proficiency.  <b>Comfort with technology:</b> 80.5% reported comfort (N=502) and much comfort (N=503) with technology.  <b>Previous experience with MOOCs:</b> 55.1% (N=688) reported that they had enrolled in at least 2-4 MOOCs before, and 48.6% (N=607) that they had completed

	<p>the MOOCs they had enrolled in.</p> <p><b>Initial EDL competence level:</b></p> <p>The initial EDL competence level for all six dimensions is approximately 2 corresponding to an Advanced beginner. The initial level of EDL competences in all dimensions does not differ significantly between the three groups of professional roles.</p> <p><b>Experience with Gamification:</b></p> <p>61.6% (N=770) of the participants reported that they were familiar with gamification in teaching and learning so far, and half of the participants (50.6%, N=632) reported that they had experienced gamification in learning context before. Many participants (44.8%, N=560) reported that they have used gamification in their educational design. However, most of the participants (71.4%, N=892) had never enrolled in a gamified MOOC in the past.</p> <p><b>Gamification User Types:</b></p> <p>The prevailing type is the Philanthropist (24.0%, N=300), followed by the Free Spirit (12.9%, N=161), Achiever (10.9%, N=136), and Socializer (10.5%, N=131). The types of Player and Disruptor were less represented in the participants' sample (3.0%, N=37 and 0.7%, N=9 respectively).</p>
<p><b>PI4.8</b> Diversity in professional experience of participants Involved in Phase B</p>	<p><b>Current job sector:</b></p> <p>67.7% (N=845) of the participants reported that they work in K12 and Higher Education, while 11.3% (N=141) come from the Industry/Business sector. 9.8% (N=122) reported "Self/Not-employed" and 11.3% (N=141) reported that they work somewhere else.</p> <p><b>Professional role:</b></p> <p>17.0% (N=212) of the participants describe themselves as eLearning Professionals, while 11.7% (N=146) are Higher Education Students, and 49.8% (N=622) are School Teachers.</p> <p><b>Years of experience in professional role:</b></p> <p>Participants reported on average 12.26 years of experience in professional role. Specifically, School Teachers have 16.83 (SD=6.941) years of professional experience, eLearning Professionals have reported a mean of 8.12 (SD=6.713) years in the professional role, and Higher Education Students have a mean experience of 4.99 (SD=5.042) years.</p>

		<b>Years involved in digital teaching and learning:</b>  Participants reported on average 6.96 years of experience in online teaching and learning.
--	--	---

### 3. Overview of L2A MOOC Participants Profile

This section presents the overall participants' profile that enrolled to the MOOC as derived from the answers of the 1249 participants that answered the pre-course survey (after removing 5 duplicates), as well as EDL competence advancement for the participants that completed the course.

#### 3.1 Enrolled users

**Table 2** Enrolments

Enrolled users	Frequency	Percentage
Started the MOOC: Enrolled users that submitted the pre-course survey	1254	42.21
Registered but never activated their account	91	3.06
Enrolled in the MOOC but never accessed Module 1	676	22.75
Started Module 1 but dropped without Pre-course	950	31.98
<b>Total</b>	<b>2971</b>	<b>100</b>

#### 3.2 Participants' geographical distribution

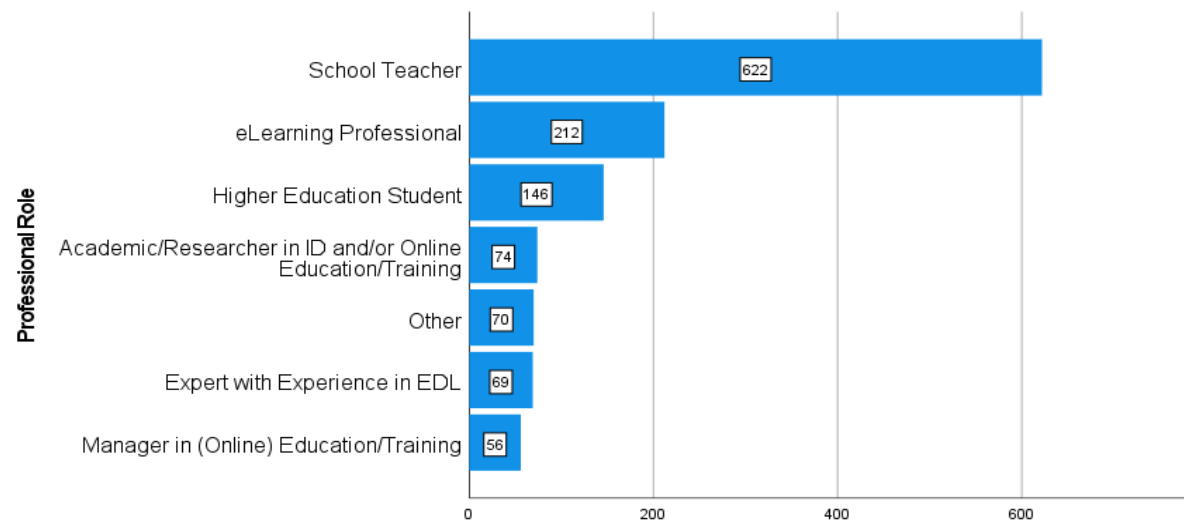


**Figure 1** Participants' geographical distribution

**Table 3** Geographical distribution

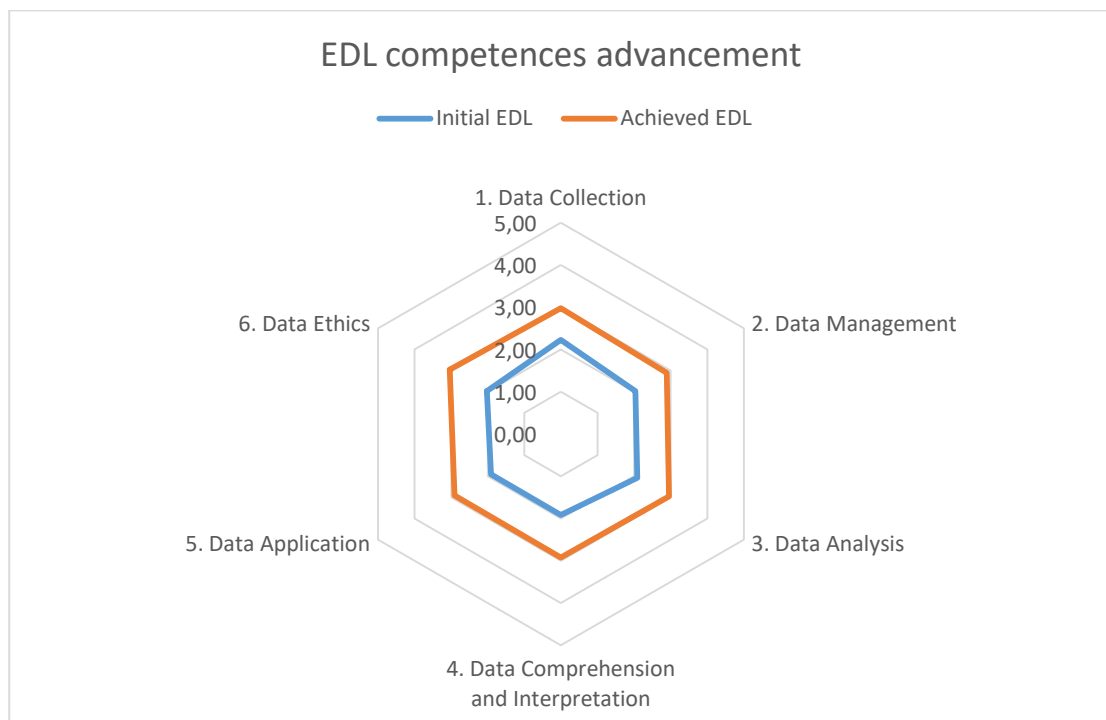
	Frequency	Percent	Valid Percent
Greece	750	60.0	60.0
Germany	164	13.1	13.1
Italy	91	7.3	7.3
Ireland	27	2.2	2.2
United Kingdom	21	1.7	1.7
France	20	1.6	1.6
Other	176	14.1	14.1
<b>Total</b>	<b>1249</b>	<b>100.0</b>	<b>100.0</b>

### 3.3 Distribution of participants per professional role



**Figure 2** Distribution of participants per professional role

### 3.4 EDL competences advancement of participants who completed the course



**Figure 3** Perceived EDL competences advancement

In the pre-course survey, participants self-evaluated their perceived initial EDL competence level, from Novice (1) to Expert (5), and the initial EDL competence level for all dimensions was approximately 2=*Advanced beginner*.

After the completion of the course, participants were requested to provide again their perceived current EDL competence level for each EDL statement and each EDL dimension. The concluding EDL competence level for all dimensions was approximately 3=*Competent*, thus, completing the course resulted to one-level advancement of competences for each EDL dimension.

## 4. Key Performance Indicators for Enrolled Participants Engagement

The consortium has defined a number of indicators to monitor the progress of the core project activities for the implementation of the pilot Phase A. These indicators also support the assessment of the quality of the project outcomes from a quantitative perspective.

**Table 4** WP5 KPIs

L2A MOOC Phase B																															
Summary of Enrolled participants engagement	Collected data																														
PI5.2: Number of recommendations for improvements collected from MOOC participants (per module, in total)	In the Post-course survey 278 participants in total, reported <b>recommendations for improvements</b> , mainly related to: the course content (85 comments), the assessment mechanism: learning activities/quizzes throughout the course (23 comments), self-assessed assignments based on real-life scenarios (10 comments) and the type of the final assessments (8 comments), the workload (55 comments), the discussion forums (17 comments), the platform functionality (41 comments), the multilevel structure of the course (14 comments), hands-on activities by allowing learners to practice using the 3 LMS, option to access course material in .pdf format.																														
PI5.3: Participants' level of educational objectives attainment (per module, in total)	<b>EDL competence level advancement:</b>  The initial EDL competence level for all dimensions, as reported in the pre-course survey, was on average of level 2 corresponding to the Advanced beginner level. The achieved EDL competence level for all dimensions, as reported in the post-course survey, is approximately of level 3corresponding to the Competent level. Thus, the completion of the course resulted in one-level advancement of the competences for each EDL competence dimension.																														
PI5.4: Participants level of engagement with MOOC learning material (access patterns, timeframe and frequency) (per module, in total)	<b>Level of engagement with MOOC learning material</b>  The table below depicts the level of engagement with MOOC learning material during Phase B:  <div>Table 5 Level of engagement</div> <table><tr><th>Progress</th><th>Mod 1a</th><th>Mod 1b</th><th>Mod 2</th><th>Mod 3</th><th>Mod 4</th><th>Mod 5</th><th>Mod 6</th><th>Mod 7</th><th>Mod 8</th></tr><tr><td>LEVEL1 (&lt; 20%)</td><td>971</td><td>556</td><td>344</td><td>150</td><td>101</td><td>118</td><td>89</td><td>78</td><td>42</td></tr><tr><td>LEVEL2 (20% - 40%)</td><td>54</td><td>145</td><td>140</td><td>49</td><td>12</td><td>16</td><td>14</td><td>4</td><td>13</td></tr></table>	Progress	Mod 1a	Mod 1b	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8	LEVEL1 (< 20%)	971	556	344	150	101	118	89	78	42	LEVEL2 (20% - 40%)	54	145	140	49	12	16	14	4	13
Progress	Mod 1a	Mod 1b	Mod 2	Mod 3	Mod 4	Mod 5	Mod 6	Mod 7	Mod 8																						
LEVEL1 (< 20%)	971	556	344	150	101	118	89	78	42																						
LEVEL2 (20% - 40%)	54	145	140	49	12	16	14	4	13																						

LEVEL3 (40% - 60%)	19	121	55	14	10	18	3	4	11
LEVEL4 (60% - 80%)	38	281	40	24	7	5	9	2	166
LEVEL5 (> 80%)	1104	281	380	279	253	223	202	199	88
<b>Grand Total</b>	<b>2186</b>	<b>1384</b>	<b>959</b>	<b>516</b>	<b>383</b>	<b>380</b>	<b>317</b>	<b>287</b>	<b>320</b>

**PI5.5a:** Participants level of engagement with MOOC individual learning activities (access patterns, timeframe and frequency) (per module, in total)

### Level of engagement with learning activities

During L2A MOOC Phase B learning activities where in the form of collaborative learning activities, i.e. questions in the forum discussions (see Participants level of engagement with MOOC collaborative learning activities), polls and micro-quizzes. Furthermore, at the end of each module, there was a concluding self-assessed assignment.

#### Micro-Quizzes

The micro-quiz activities throughout the course were very popular as 62315 micro-quizzes interactions where reported in a total of 161 quiz learning activities. Table 6 describes the participation in micro-quiz activities per module:

**Table 6** Participation in micro-quizzes per module

	<b>Module 2</b>	<b>Module 3</b>	<b>Module 4</b>	<b>Module 5</b>	<b>Module 6</b>	<b>Module 7</b>
Number of micro-quizzes per module	80	28	11	4	26	12
Total participation in micro-quizzes per module	41119	9221	2993	948	5610	2424
Average participation in micro-quizzes per module	514	329	272	237	216	202

#### Polls

During the L2A MOOC Phase B **46235** poll interactions where reported in a total of **131** poll questions.



## Engagement with concluding self-assessed assignment per module

**Table 7** Concluding self-assessed assignment participation

Module	Enrolled in the module	Passed self-assessment	%
Module 2	959	302	31.49%
Module 3	516	239	46.32%
Module 4	383	226	59.01%
Module 5	380	177	46.58%
Module 6	317	176	55.52%
Module 7	287	153	53.31%

## Engagement and Gamification:

More than half of the users earned 5 or 6 Module Badges while a quarter did not get any, even though they had successfully completed the course. The mean number of Badges per user is approximately 3.66. In respect of earned Points, the majority of participants who completed the course reached level 5 of Engagement and Content. In Test Level, almost half of them reached level 5.

On the other hand, according to Test, Engagement and Content Level, 21,7% to 23% stayed at level 0 or 1, indicated that, although they wanted to complete the course, they did only the necessary things without chasing for earning gamification rewards.

**PI5.5b:** Participants level of engagement with MOOC collaborative learning activities (access patterns, number of contributions, Social Network Analysis) (per module, in total)

## Forum participation

Table 8 shows the distribution of the collaborative activities per module, while Table 9 depicts the participation in the collaborative learning activities per module.

**Table 8** Number of collaborative activities per module

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8
1	18	10	10	5	7	7	1

**Table 9** Participation in collaborative activities per module

Module 1	Module 2	Module 3	Module 4	Module 5	Module 6	Module 7	Module 8	Total
804	5851	1944	1568	812	1103	1129	100	13311

**PI5.6:** Participants level of engagement with MOOC learning assessment activities (access patterns, timeframe and frequency) (per module, in total)

The table below contains data from the participation in the final assessment (Level A and B)

**Table 10** Participation in Level A and Level B assessment

Assessment module	Enrolled in the module	Passed Final Assessment
Level A Final Assessment	335	280
Level B Final Assessment	206	137

## 5. Overview of Enrolled Participants' Engagement & Learning Experience

This section presents chart depictions of different indicators of the participants' engagement and learning experience, as derived from the analytics of the platform of the MOOC as well as through answers of the 286 participants that answered the post-course survey.

### 5.1 Participants' level of engagement with MOOC learning material per module

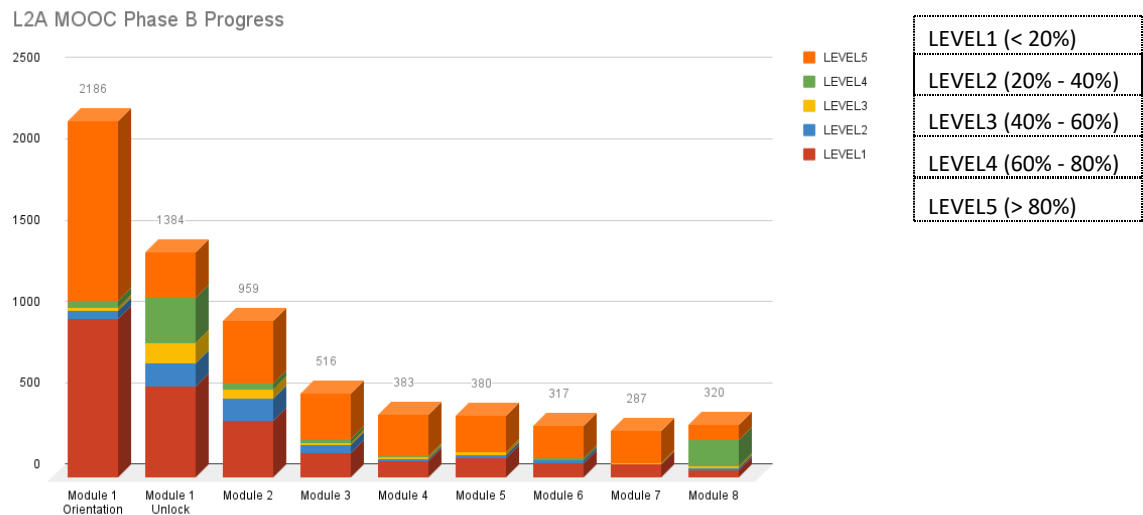


Figure 4 Participants' level of engagement with MOOC learning material per module

### 5.2 Participation in micro-quizzes per module

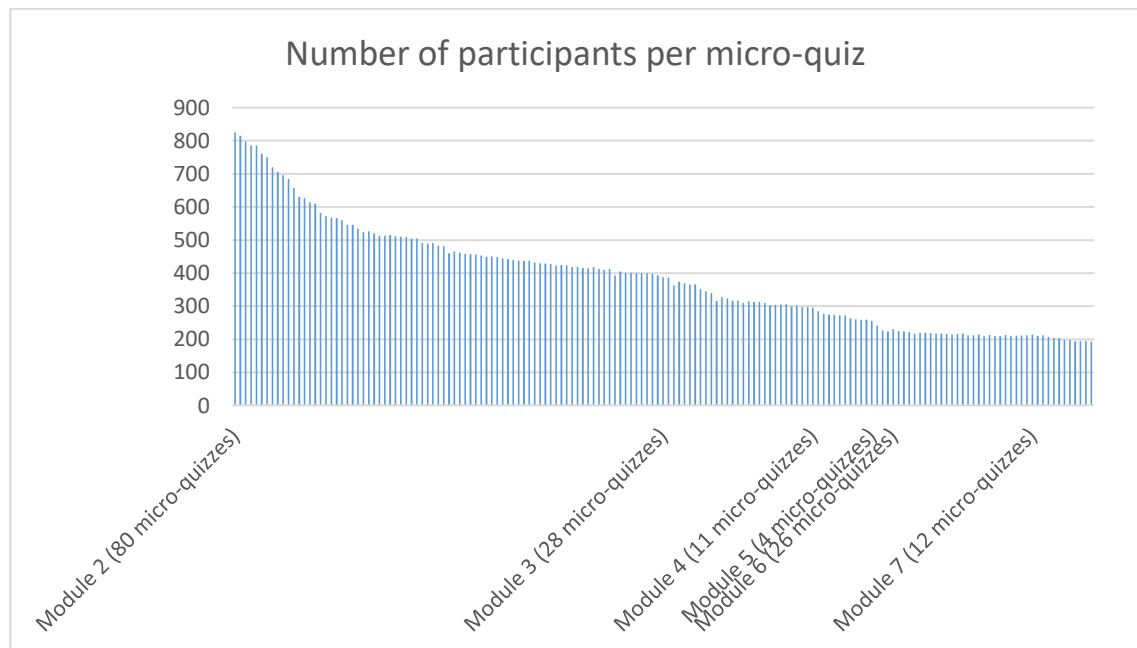
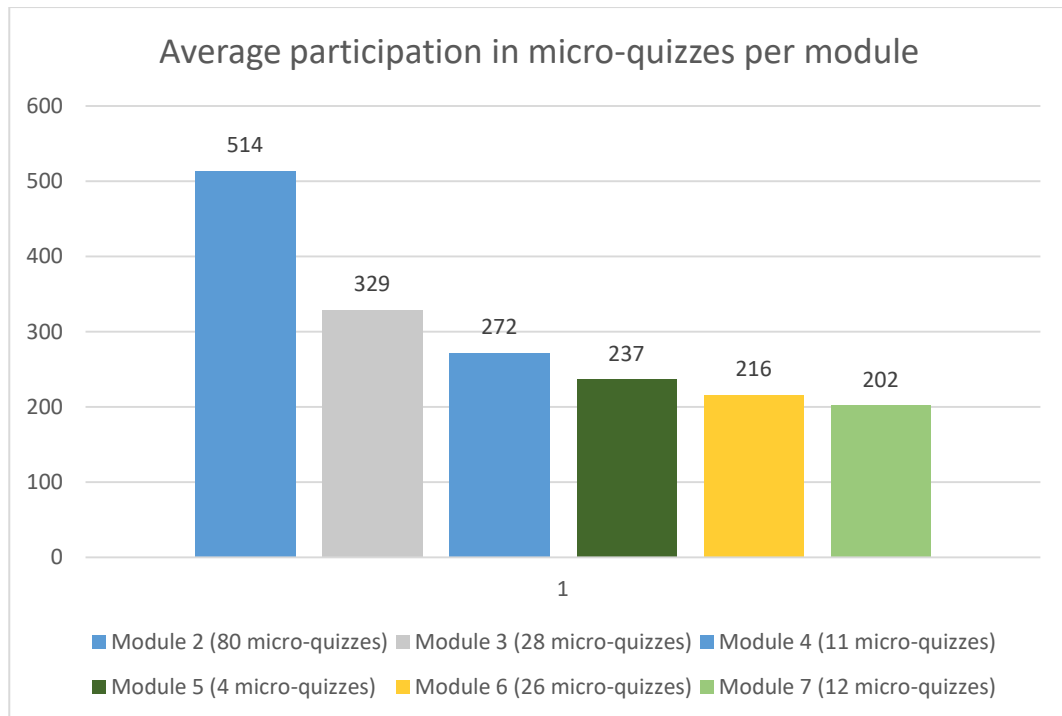


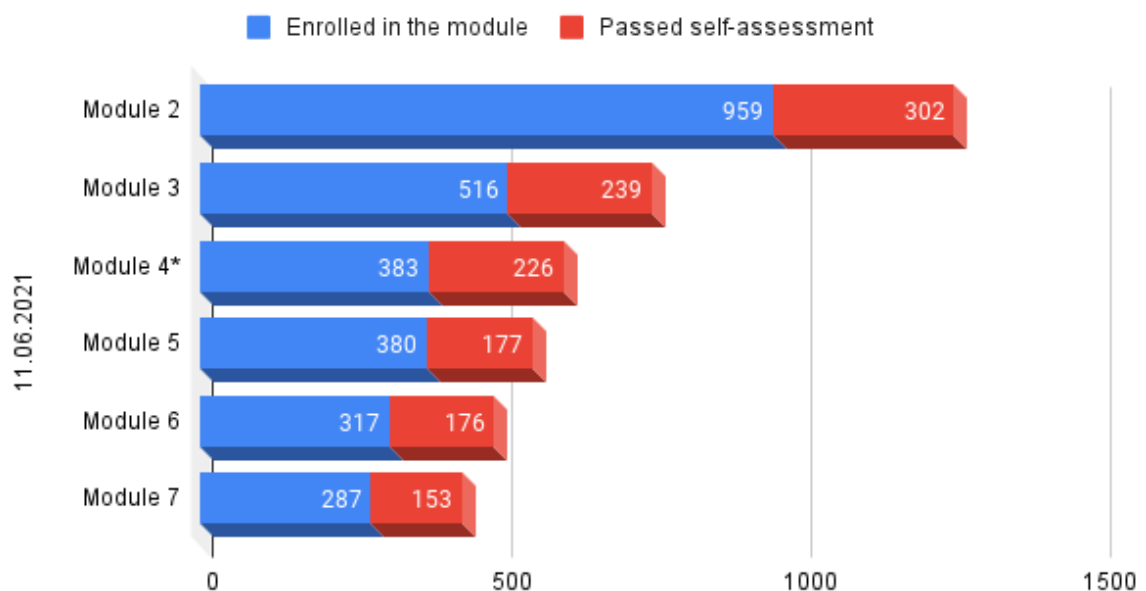
Figure 5 Participation in micro-quizzes



**Figure 6** Average participation in micro-quizzes per module

### 5.3 Engagement with concluding self-assessed assignment per module

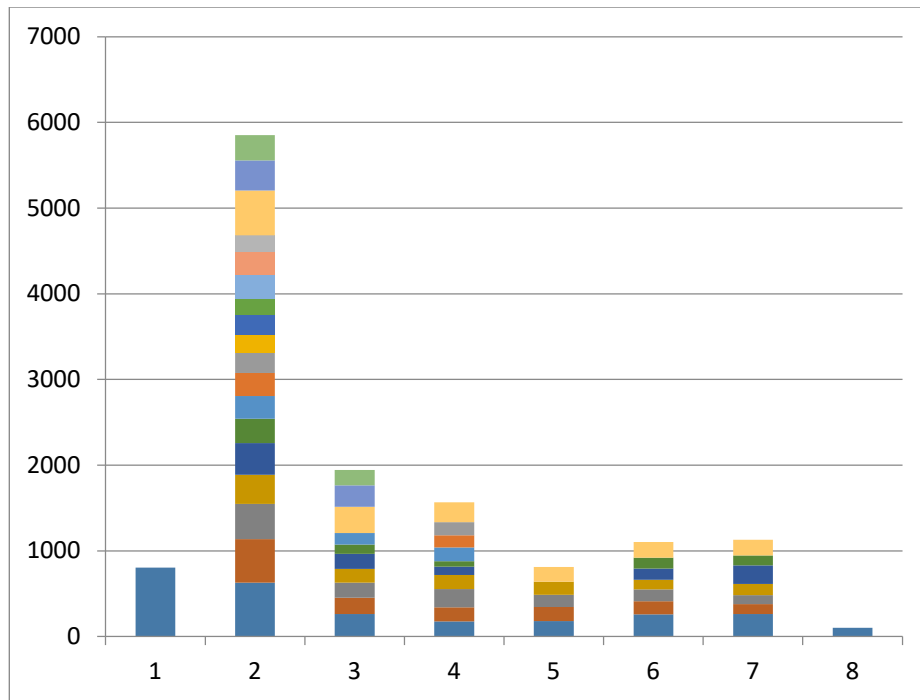
#### Concluding Self-Assessment completion per module



**Figure 7** Concluding self-assessed assignment completion

### 5.4 Forum participation

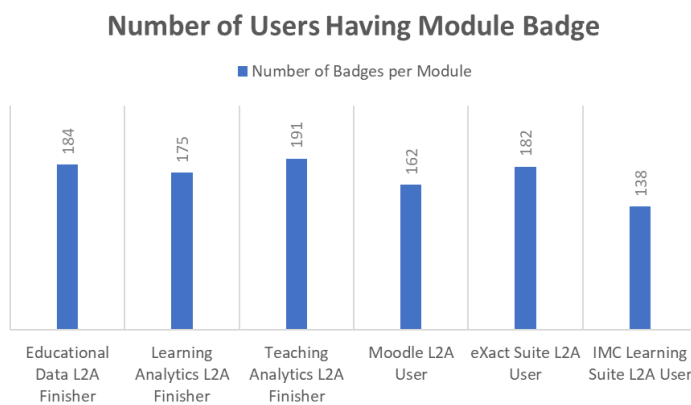
Level of engagement in collaborative learning activities (forum participation and workshops) per module (platform data) are shown in figure below:



**Figure 8** Level of engagement in collaborative learning activities

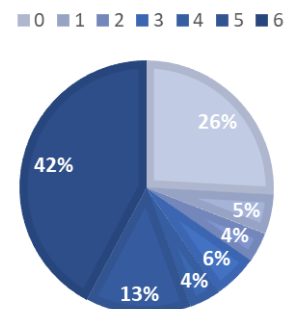
Different colors indicate the different collaborative learning activities (forum discussions and workshops)

### 5.5 Badges collected by the course-completed users



**Figure 9** Total number of learners per Module Badge

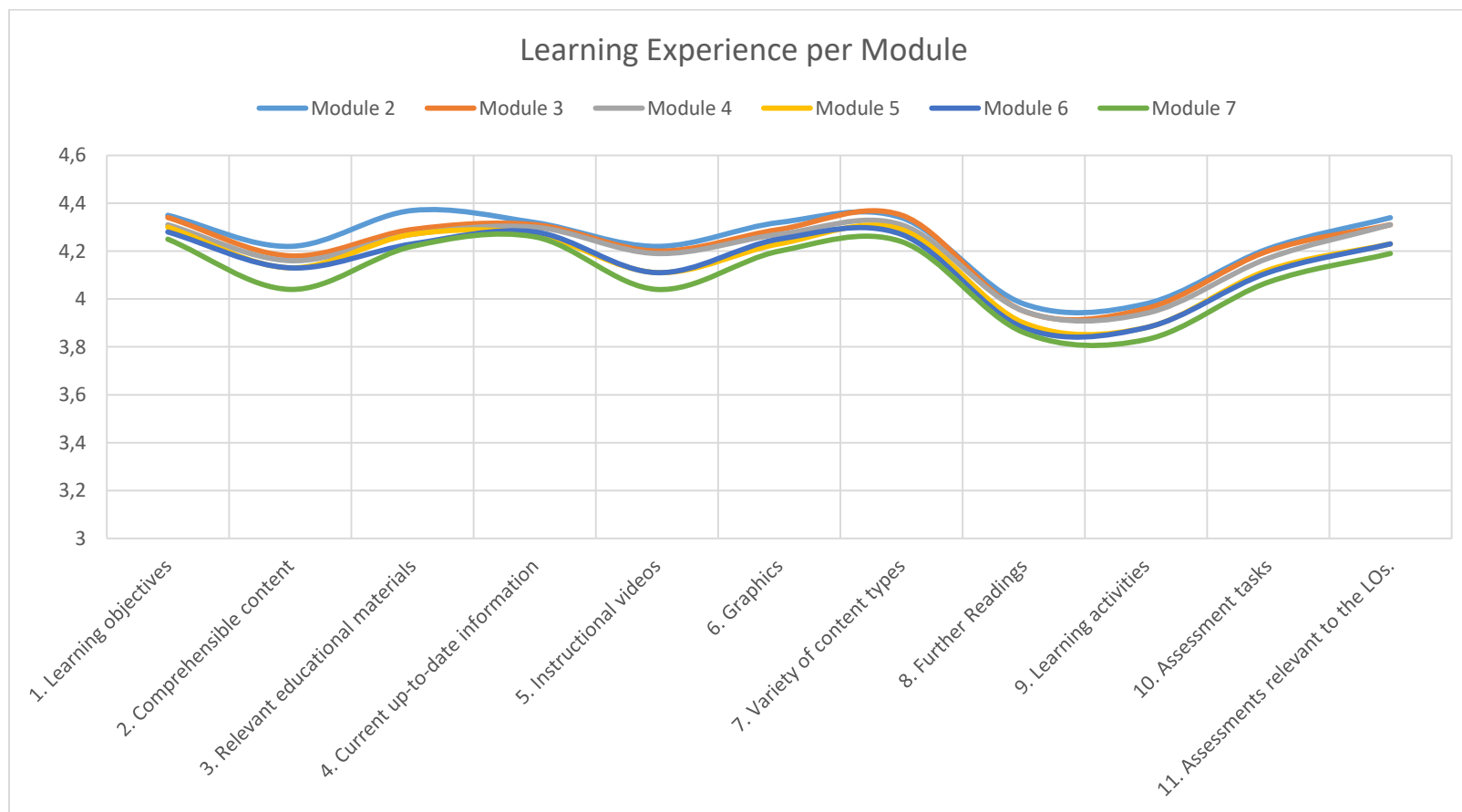
### Number of Badges



**Figure 10** Distribution of learners by the number of total Module Badges they collected

## 5.6 Learning experience per module

Learning experience in each module of the course (as reported by learners that completed the course), based on users' rating from 1 to 5 (1=Strongly Disagree, 2=Disagree, 3=Neither agree nor disagree, 4= Agree, 5=Strongly agree) to 11 statements of the post-course survey is depicted in the figure below.



**Figure 11** Learning experience per module