LEAD2 MOOC Report

(LEAD2 MOOC Edition 3: February-July 2020)

PROJECT

Enhancing Academic Leadership and Governance of Chinese and European
Universities in the Context of Innovation and Internationalization (LEAD2)
Ref N° 598874-EPP-1-2018-BE-EPPKA2-CBHE-JP

This report is part of project deliverables of WP2 (D2.1 Improvement and
implementation of MOOCs) and part of WP3 (D3.2, internal quality assurance reports)

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I. Introduction

The LEAD2 MOOC is part of the LEAD2 project which aims to enhance knowledge, skills, and competencies regarding University Governance and Academic Leadership. This MOOC course is one of the deliverables of the LEAD2 project. The LEAD2 MOOC is open for all people regardless of their countries, institutions, or academic positions, focusing on European and Chinese university governance and academic leadership. The MOOC has two versions of the Canvas Learning Management System (LMS), one in English and one in Chinese. Therefore, people can enroll in either version. In February 2020, the third edition of the MOOC was launched with 939 learners enrolled.

Within this context, learners of the course were invited to participate in two surveys at the end of the MOOC course. On the one hand, the LEAD2 MOOC survey to evaluate the perceived effectiveness of MOOCs on leadership development (a total of 126 responses were obtained); On the other hand, the Canvas user experience survey to evaluate the perceived effectiveness of the course (a total of 127 responses were obtained). The two surveys include both quantitative data (close-ended questions) and qualitative data (open-ended questions). Additionally, data from the LMS Canvas Network® (the platform hosting the LEAD2 MOOC) is also utilized to analyze the participation's engagement and learning results in the MOOC. This Learning Tool Interoperability (LTI) provides an overview of MOOC participants' activity and it has been used to complement the analyses of the user experience in this report.

Therefore, this report includes a combination of these three sources. The overview of MOOC participants' activity, the LEAD2 MOOC survey (LEAD2 survey from now on), and the Canvas' user experience survey (Canvas survey from now on). A summary of the result section of the report is depicted in Figure 1. Consequently, this report presents the results divided into three sections. First, the sociodemographic characteristics of the participants including age, gender, type of institution, academic position, and experience in academic leadership and with online or blended learning were introduced. Second, the results of the close-ended questions in terms of motivation for taking the course, learning progress, perceived usefulness of MOOCs on leadership development, perceived effectiveness of the LEAD2 MOOC, challenges in completion of the LEAD2 MOOC, and suggestions to enhance course quality were presented. Third, the results of the open-ended questions regarding the effectiveness of the course in addressing/achieving personal or professional goals, barriers and challenges in the completion of the MOOC, general feedback on the course, suggested alternative topics about university governance and academic leadership, and other learning activities and materials needed for further development. A final section with discussions and conclusion derived from the analyses of the results is provided to summarize a comprehensive view of the experiences of the MOOC participants.

Sociodemographics
- Age
- Gender
- Type of institution
- Academic position
- Experience in academic leadership and with online or blended learning

Close-ended questions
- Motivation for taking the course
- Learning progress
- Perceived usefulness of MOOCs on leadership development
- Perceived effectiveness of the LEAD2 MOOC
- Challenges in completion of the LEAD2 MOOC
- Suggestions to enhance course quality

Open-ended questions
- Effectiveness of the course in addressing/achieving personal or professional goals
- Barriers and challenges in the completion of the MOOC
- General feedback on the course
- Alternative topics about university governance and academic leadership
- Other learning activities and materials needed for further development

Figure 1. Summary of the result section of the report

II. Results

This section of the report presents the details of the sociodemographic characteristics (data obtained from the LEAD2 survey) of the participants, the results of the close ended-questions and the analysis of the open-ended questions.

2.1. Sociodemographic characteristics

Below is the set of sociodemographic characteristics of the respondents in the following order: age, gender, type of institution, academic position, and years of experience in academic leadership and online or blended learning.

2.1.1. Age

Figure 2. shows the age ranges of the participants. Most of the participants (41%) are between 30 and 40 years old, followed by a 31% of people over 40 years old, and 28% of remaining people with ages below 30 years old.
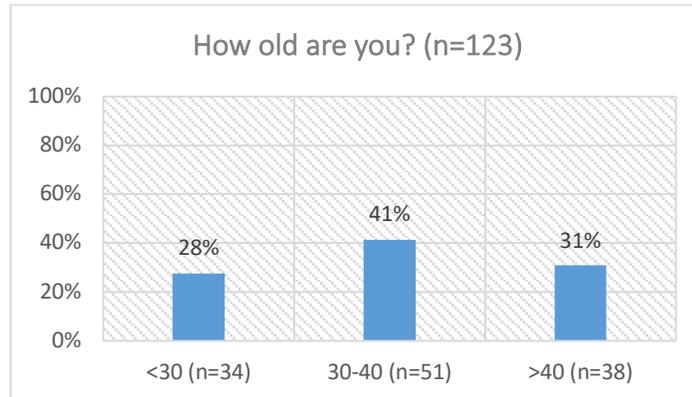
Figure 2. Age ranges

Table 1. shows some measures of central tendency and one measure of dispersion. In particular, the minimum age of the participants is 18 years old while the maximum is 83 years old. The average age is 36 years old. However, the most common age is 38 years old. The standard deviation (SD) is 10, indicating that the dispersion of the data around the average age is 10 percentage points.

Table 1. Measures of central tendency and dispersion about the age

Min	Max	Mean	Mode	SD
18	83	36	38	10

2.1.2. Gender

Figure 3. shows the gender of the participants. In this regard, 68% of the participants are male and 32% are female.
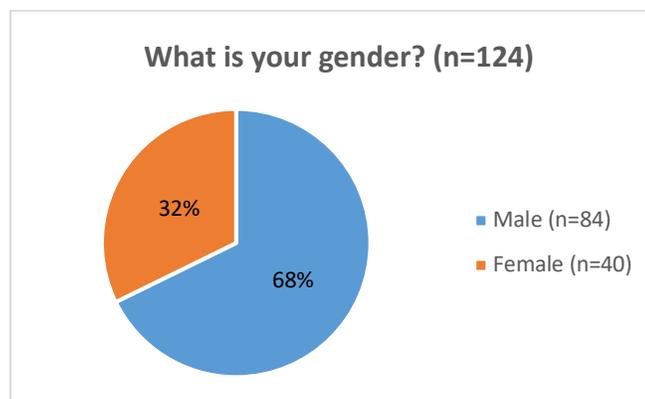
Figure 3. Gender of the participants

2.1.3. Type of institution

Figure 4. shows the type of institution that participants belong to. In this regard, 63% of the participants belong to a public university/institution, 28% to a private university/institution, and 9% to another type of institution.
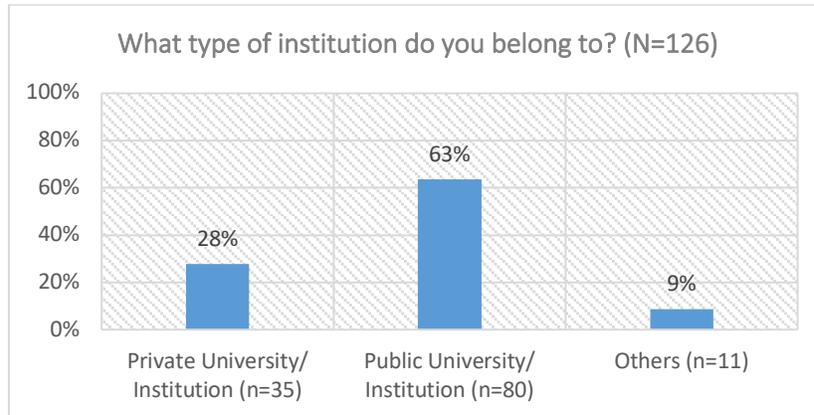
Figure 4. Type of institution that participants belong to

2.1.4. Academic position

Figure 5. shows whether participants hold an academic position. In this regard, 57% of the participants do hold and academic position.
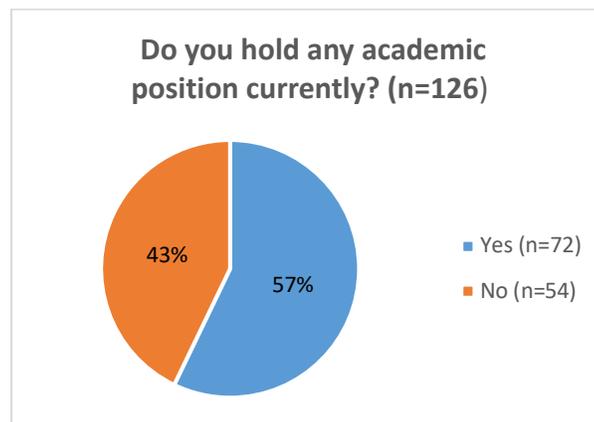
Figure 5. Participants holding an academic position

2.1.5. Experience in academic leadership and with online or blended learning

Figure 6. shows the years of experience in academic leadership and with online or blended learning that participants have. Most participants have between 0 and 4 years of experience in academic leadership (65%) and with online or blended learning (74%).
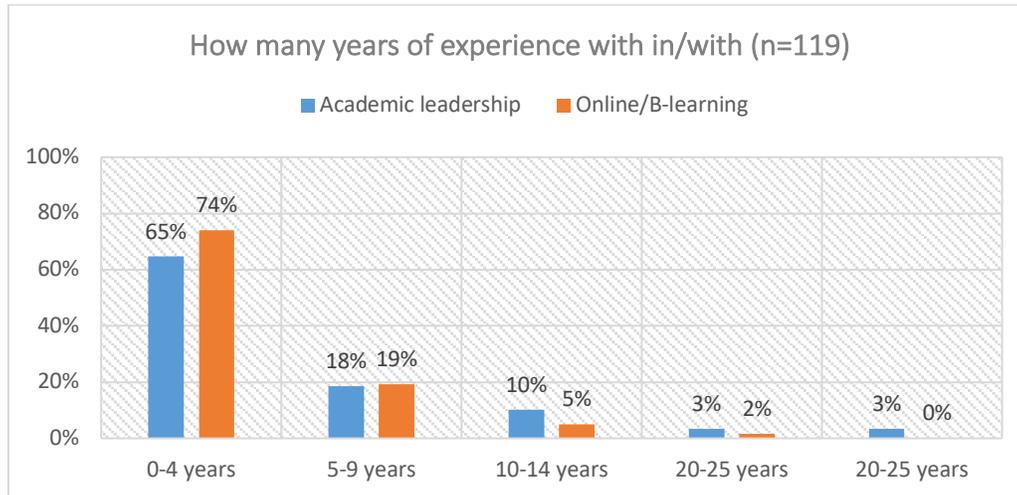
Figure 6. Years of experience in academic leadership and with online or blended learning

Table 2. shows some measures of central tendency and one measure of dispersion regarding the years of experience in academic leadership and with online or blended learning that participants have. In particular, the minimum year of experience in academic leadership and with online or blended learning is 0 while the maximum is 12 and 19 respectively. The average years of experience in academic leadership and with online or blended learning is 3. However, the most common years of experience 0. The standard deviation (SD) is 3 and 4, indicating that the dispersion of the data around the average years of experience are 3 and 4 percentage points for academic leadership and online or blended learning respectively.

Table 2. Measures of central tendency and dispersion regarding the years of experience in academic leadership and with online or blended learning

Years of experience in/with	Min	Max	Mean	Mode	SD
Academic leadership	0	12	3	0	3
Online/B-learning	0	19	3	0	4

2.2. Close-ended questions

Below are presented the results of the close-ended questions in terms of motivation for taking the course, learning progress, perceived usefulness of MOOCs on leadership development, perceived effectiveness of the LEAD2 MOOC, challenges in completion of the LEAD2 MOOC, and suggestions to enhance course quality.

2.2.1. Motivation for taking the course

Figure 7. summarizes participant' motivations for enrolling in the LEAD2 MOOC (data obtained from the LEAD2 survey). Practical enhancement, and more precisely, learning experiences from different institutions and countries (different contexts) (55% strongly agree) and to adapt to new academic leadership styles in the future (51% strongly agree) are the strongest reason for participants enrolling the LEAD2 MOOC. Personal interest such as enhancing self-growth in university governance and academic leadership (51% strongly agree) and satisfying my enquiring mind (46% strongly agree) is another important reason for enrolling in the course. Occupational promotion such as preparing for their career/job (45% strongly agree). Social contact such as

exchanging ideas about academic leadership (39% strongly agree) and pragmatic reasons such as time for learning being flexible are other reasons (46%).
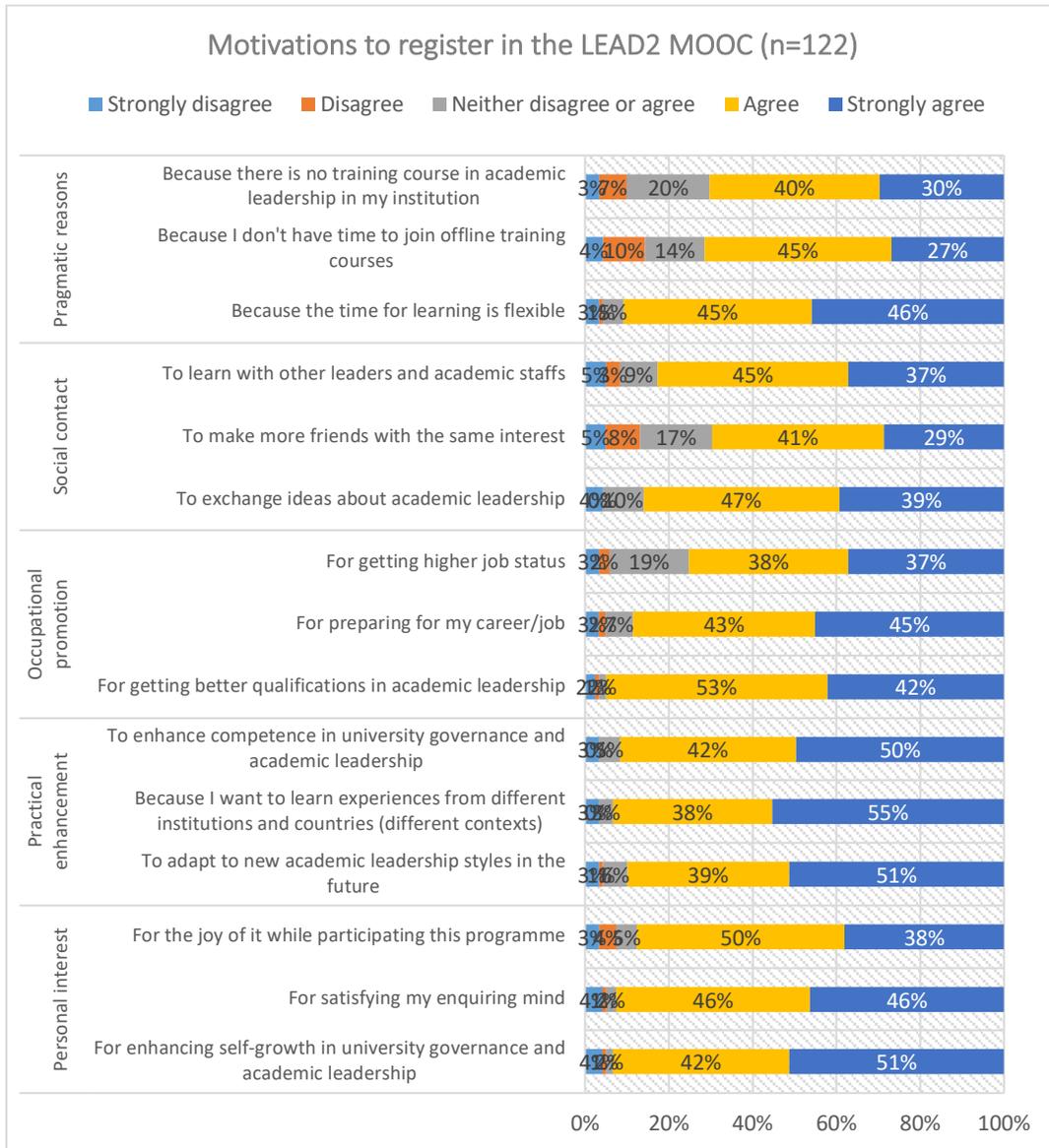
Figure 7. Participants' motivations for enrolling in the LEAD2 MOOC

2.2.2. Learning progress

Learning progress is presented in terms of the learning analytics (data retrieved from Canvas analytics) and the learning progress perceived by learners (data retrieved from Canvas survey).

2.2.2.1. Learning analytics

This section of the report presents the information generated from the Learning Tools Interoperability (LTI) setting "New Analytics" of the LMS Canvas Network®. Firsts, it presents the MOOC participants' weekly online activity. Second, it presents the MOOC participants' activity in the module sections. Third, it presents the MOOC participants' average grades in module activities. Fourth, it presents the total hours of MOOC participants' activity.

2.2.2.1.1. MOOC participants' weekly online activity

Figure 8. depicts the MOOC participants' weekly online activity by average page views and average participation over the weeks that the course was open for MOOC participants (20 for the English version and 22 for the Chinese version). Both, the page views and participation over the weeks, present similar behavior. The activity increases as the weeks go by to reach the maximum level between weeks 8 and 11 (between April 2t to May 11). Then, the activity starts to decrease proportionally until the end of the course but with an increment in weeks 13 and 15 (May 25 and June 8 respectively).
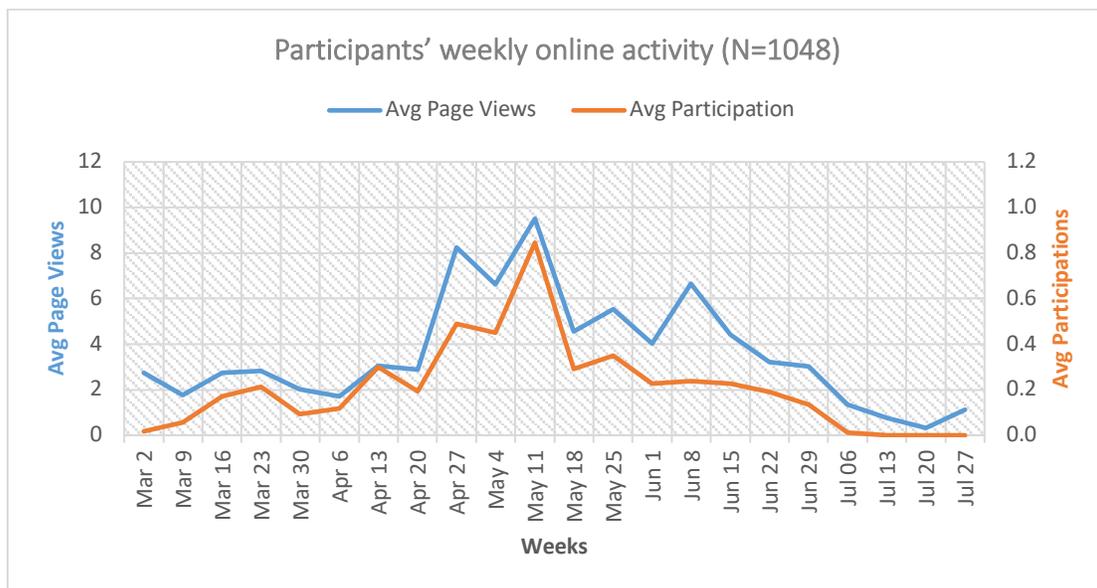
Figure 8. Participants' weekly online activity by the average page views and participation

2.2.2.1.2. MOOC participants' activity in the module sections

Figure 9. shows the MOOC participants' activity in the module sections by the number of participants and the number of page views. As in the participants' weekly online activity, the activity in the module sections decreases from module 1 to module 4. The sections in module 1 have considerably more activity, in terms of the number of participants and the number of page views, compared to the remaining modules. While sections in module 1 have on average 378 participants and 1906-page views, sections in module 2 have on average 171 participants and 4832-page views. Then sections in module 3 have on average 152 participants and 350-page views. Finally, sections in module 4 have on average 142 participants and 309-page views.

Participants' activity in the module sections

■ # Participants   ■ # Page Views

 # Page Views

| Section	# Page Views	# Participants
Sections Module 4		
4.2.1. Management and Communication	324	140
4.2. Profiles of Academic Leaders	276	138
4.1.4. Academic Conservatism	263	138
4.1.3. Leadership and Management of Academic Teams	296	141
4.1.2. Change Management	312	142
4.1.1. Towards Institutional Academic Leadership	330	146
4.1. Academic Leadership Skills	362	155
Sections Module 3		
3.2. Academic Leadership and Managing EU-China Cooperation	350	148
3.1. Academic Leadership for Internationalisation	349	155
Sections Module 2		
2.6. International Cooperation in R&D and Technology Transfer	503	166
2.5. Innovation & Entrepreneurship	370	164
2.4.3. Interuniversity Seed fund	365	165
2.4.2. Technology transfer from University to Industry	318	163
2.4.1. Integrating entrepreneurship in academic curricula and Tech Transfer activities	361	165
2.4. Innovation and Valorisation	430	169
2.3.1. Research: Dedicated support in applying for EU funding	459	169
2.3. Research	503	173
2.2.1. Education, research, industry and internationalisation: a case study	484	177
2.2. The global picture on RIV	490	181
2.1. Positioning of RIV in the university's governance structure	549	196
Sections Module 1		
1.2. Reform of University Governance Systems in China	817	312
1.1.2. Institutional Governance in the Context of Portugal	958	352
1.1.1 University Strategic Planning	1128	386
1.1. University Governance Structures	1480	460

 # Students

Figure 9. Participants' activity in the module sections

2.2.2.1.3. MOOC participants' average grades in module activities

Figure 10. shows the MOOC participants' average grades in module activities. It is important to mention that these averages come from the participants' grades who completed the activities. In other words, the absence of a grade or a grade of zero (0) was not considered to calculate these averages. In general, participants achieve grades above 70% in forums and assignments in all modules (except for module 2 where the grade in the forum is 45% and in the assignment is 50%). Grades in quizzes range from 50% to 69%.
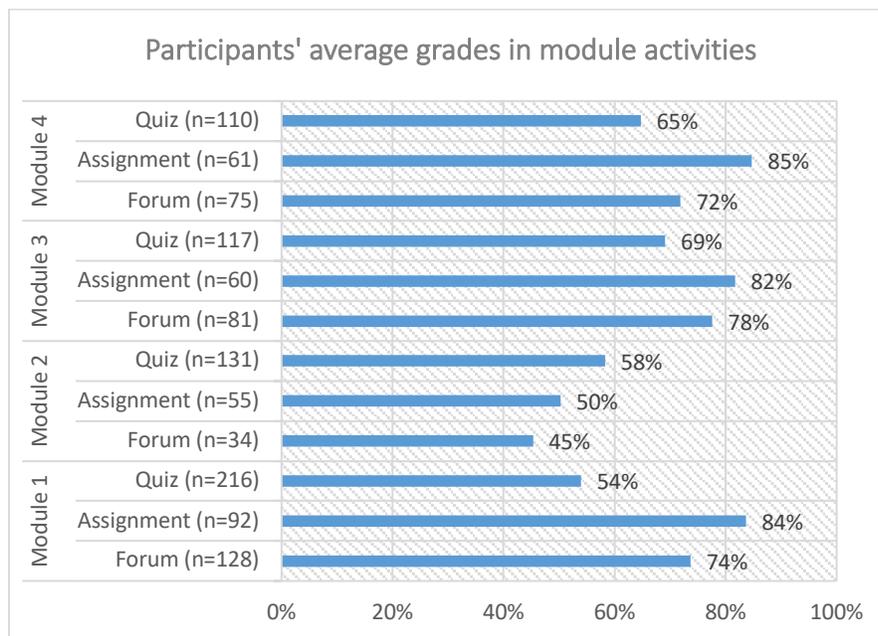

Figure 10. Participants' average grades in modules activities

2.2.2.1.4. Total hours of MOOC participants' activity

Table 3. shows some measures of central tendency and one measure of dispersion about the total hours of participants' activity. The minimum number of hours of participants' activity is 1 while the maximum is 284 hours. The average is 17 hours. However, most commonly 20 hours. The standard deviation (SD) is 22, indicating that the dispersion of the data around the average of hours is 22 percentage points. Figure 11. shows the total hours of MOOC participants' activity over the course period. 89% of the participants invested up to 41 hours in the course, 10% between 41 and 82 hours. This number of hours is around what is expected (2 hours per week during the 20 weeks in the English version and 22 weeks in the Chinese version). The remaining 1% of people invested between 81 and 284 hours.

Table 3. Measures of central tendency and dispersion on total hours of MOOC participants' activity

| Min	Max	Mean	Mode	SD
1	284	17	20	22
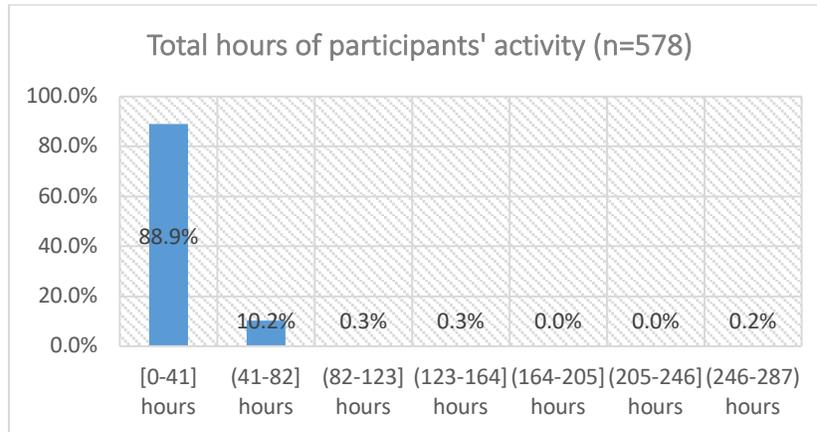
Figure 11. Total hours of MOOC participants' activity

2.2.2.2. Learning progress perceived by learners

This subsection presents the participants' learning progress retrieved from Canvas user experience survey in terms of the number of hours a week they spent on the course, how long do they take to complete the course, and the number of activities and content covered.

2.2.2.2.1. Number of hours a week spent by participants

Figure 12. shows the number of hours a week that participants report they spend over the weeks. Most participants (29%) report that they spend 2 to 4 hours a week. Followed by 24% of participants who report spending between 4 and 6 hours, 17% between 1 and 2 hours, 16% between 6 and 8, and 10% more than 8.
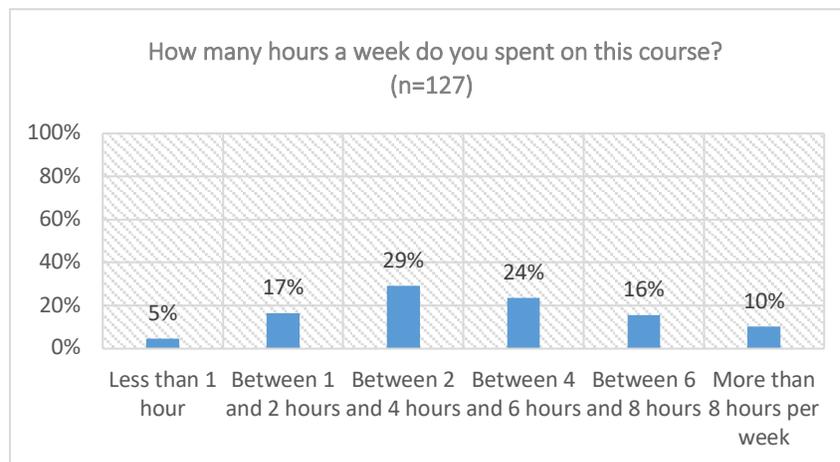

Figure 12. Number of hours a week spent by participants

2.2.2.2.2. Time to complete the course

Participants were asked how long it took them to complete the course. Figure 13. shows that most of the participants (39%) reporting to complete the course towards the end. 22% of participants report finishing the course in a few weeks, 21% towards the middle and 17% in a few days.
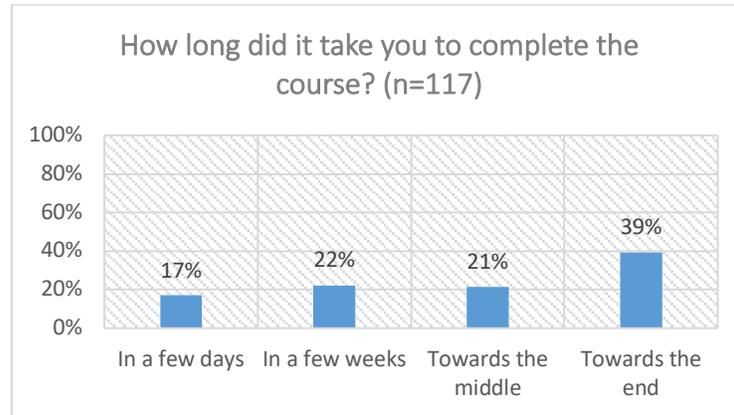
Figure 13. Time to complete the course

2.2.2.2.3. Number of activities and content covered

On the one hand, regarding the exercises/assignments, 31% of participants reported that they completed them almost all and 30% of participants reported that they completed them all. On the other hand, regarding the content, 43% of the participants reported they have watched/read almost all and 25% of the participants reported they have watched/read all.
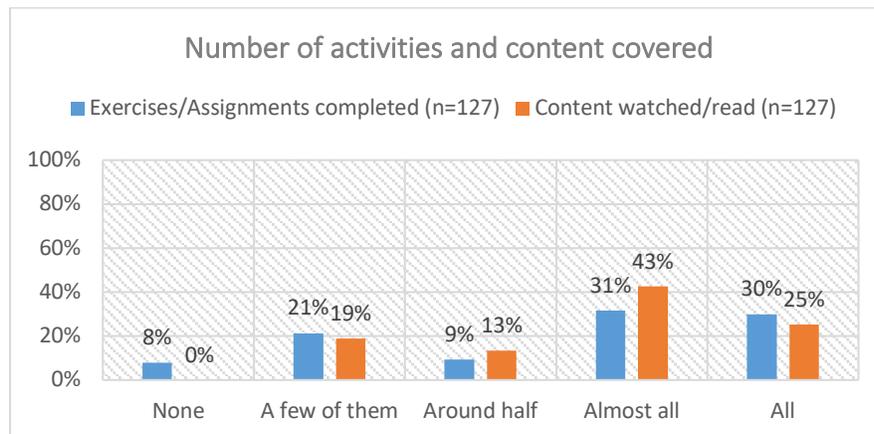
Figure 14. Number of activities and content that participants report they covered

2.2.3. Perceived usefulness of MOOCs on leadership development

This subsection presents the perceived impact of MOOCs on leadership development in terms of the perceptions about the use of MOOCs and perception about the usefulness and ease of use in MOOCs on leadership development (data obtained from the LEAD2 survey).

2.2.3.1. Perception about the use of MOOCs

Figure 15. shows the perception of the use of MOOCs. In general, there is a good perception about the use of MOOCs. Most people agree or strongly agree MOOCs are positive tools for education (on average 47%) and about participating in a MOOC (47%), a MOOC is worthy of using (on average 46%), and Implementation of a MOOC is a wise idea (46%). Then, people agree or strongly agree that using MOOC would enable them to have

a more favorable course experience (44%) and they are willing to use MOOC in place of (instead of) a traditional course (41%).
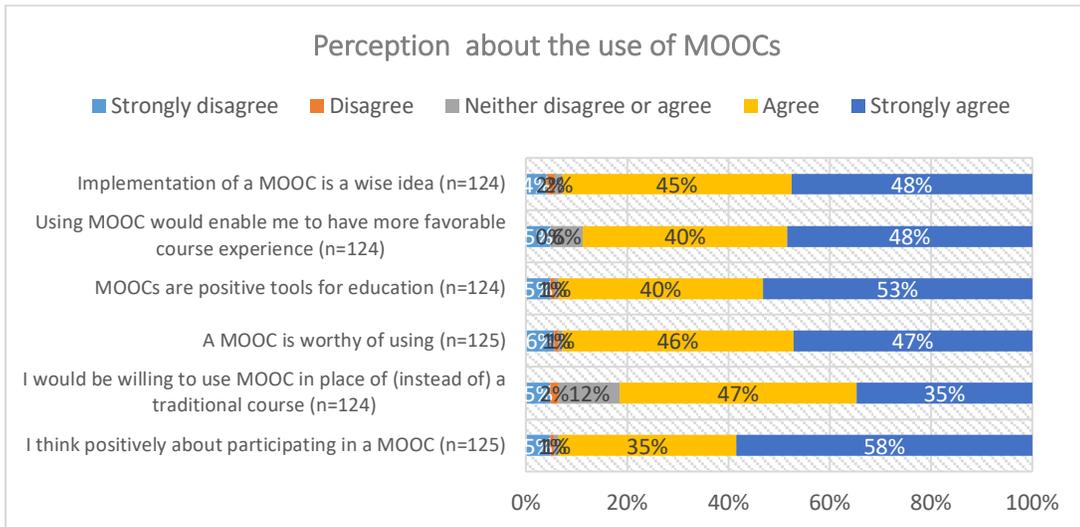
Figure 15. Perception about the use of MOOCs

2.2.3.2. Perception about the usefulness and ease of use in MOOCs on leadership development

Figure 16. shows the perception about the usefulness and ease of use in MOOCs on leadership development. In general terms, most of the participants agree or strongly agree on the usefulness and ease of use in MOOCs. Particularly, it is slightly higher the perceived usefulness (on average 47%) than ease of use (on average 45%). It is important to notice that 8% of the participants neither disagree or agree and 5% 5trongly disagree on the ease to use participation features such as learning activities, discussion, and quiz.
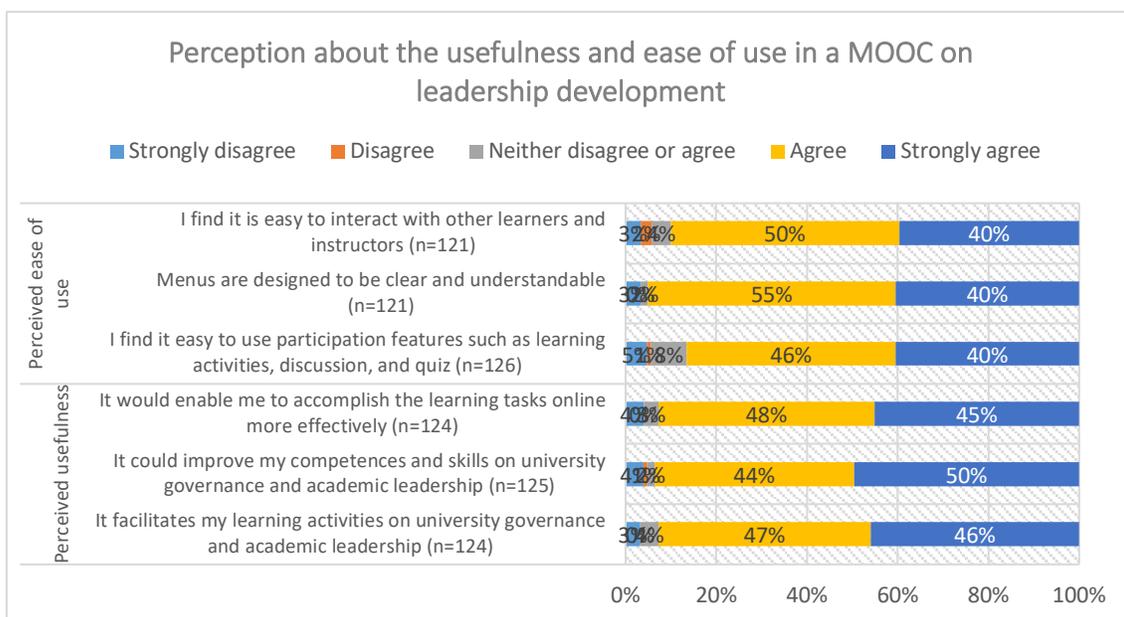
*Figure 16. Perception about the usefulness and ease of use in a MOOC on leadership development*

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2.2.4. Perceived effectiveness of the LEAD2 MOOC

This section of the report presents the information regarding the perceived effectiveness of the LEAD2 MOOC. First, it presents the general satisfaction of the participants in terms of the overall rating of the course, likelihood to recommend Canvas Network, and the level of agreement about the quality of the MOOC. Second, it presents the participants' learning progress in terms of the number of hours a week they spend on the course, how long do they take to complete the course, and the number of activities and content covered. Third, it presents the perceived **effectiveness** of the course content. Fourth, it presents the perceived usefulness of the course design. Fifth, it presents the perceived usefulness of the course material and activities. Sixth, it presents the perceived usefulness of the course in addressing the challenges of academic leaders (data obtained from the Canvas survey for these subsections). Seventh, it presents the perceived usefulness of online interactivity (data obtained from the LEAD2 suervey for this subsection).

2.2.4.1. General satisfaction of the participants

Below is presented the general satisfaction of the participants in terms of the overall rating of the course, likelihood to recommend Canvas Network, and Level of agreement about the quality of the MOOC. Additionally, to assess if there are differences among participants' characteristics, a mean comparison analysis between the groups of the sociodemographic variables (age, gender, and academic position) is carried out on these satisfaction variables.

2.2.4.1.1. Overall rating of the course

Figure 17. shows the overall rating of the course by the participants. 59% of the participants rate the course with 5 stars, 33% of the participant rate the course with 4 stars, 7% with 3 starts, and the remaining 2% with 2 stars.
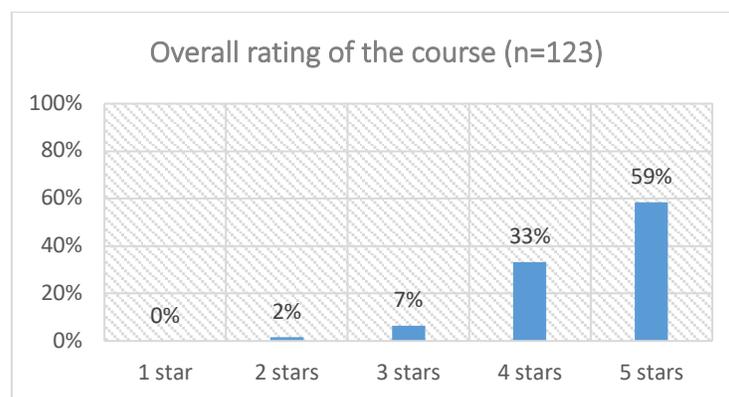
Figure 17. Overall rating of the course by the participants

A one-way ANOVA was conducted to assess whether the overall rating of the course differed depending on participants' age (<30, 30-40, >40). The analysis showed that there were no significant differences between age groups (F(2)= 0.095; p > .05). Similarly. An independent t-test was conducted to assess whether the overall rating of the course differed depending on participants' gender (female and male) and holding an academic

position (yes and no). The analysis showed that there were no significant differences between genders (t(86)= 1.499; p > .05) and holding an academic position (t(87)= 0.597; p > .05).

2.2.4.1.2. Likelihood to recommend Canvas Network

Participants were asked how likely it is for them to recommend a course on Canvas Network to a friend. Figure 18. Shows that 46% of the participants are extremely likely to recommend it.
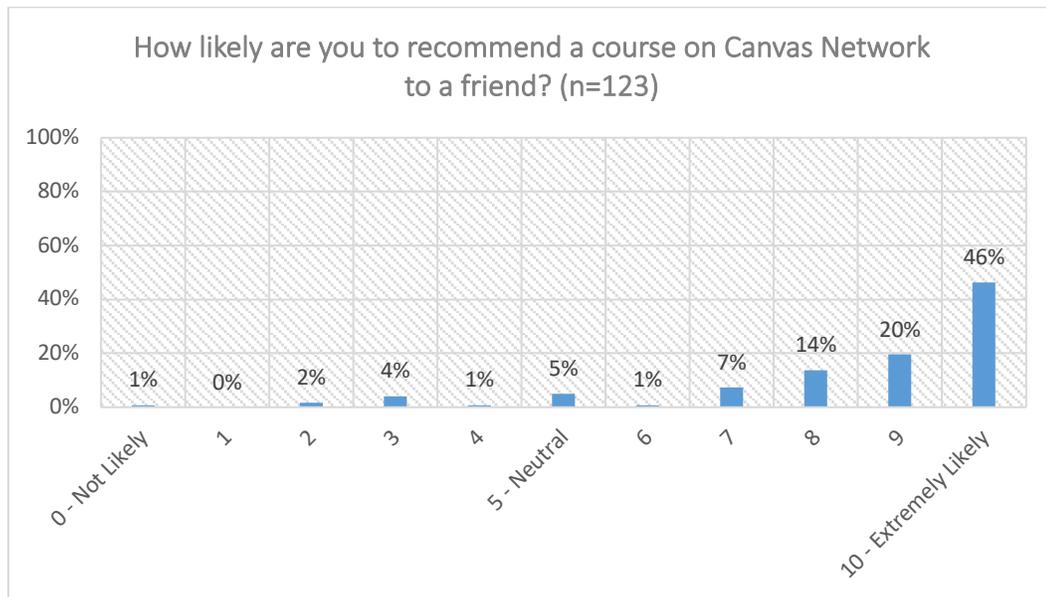

Figure 18. Likelihood to recommend Canvas Network

A one-way ANOVA was conducted to assess whether the likelihood to recommend the Canvas Network course differed depending on participants' age (<30, 30-40, >40). The analysis showed that there were no significant differences between age groups (F(2)= 0.401; p > .05). Similarly. An independent t-test was conducted to assess whether the likelihood to recommend the Canvas Network course differed depending on participants' gender (female and male) and holding an academic position (yes and no). The analysis showed that there were no significant differences between genders (t(85)= 0.131; p > .05) and holding an academic position (t(87)= 0.322; p > .05).

2.2.4.1.3. Level of agreement about the quality of the MOOC

Figure 19. shows the level of consensus among participants about the quality of the MOOC. It is important to notice that the sum of the level "agree" and "strongly agree" range between 83% and 91% of agreement in all the items. For instance, 91% agreed on the MOOC content was relevant for them and the experts were competent in their fields. 89% agreed on the MOOC design was good and the access to the teaching material was convenient. 88% agreed on the teaching materials were engaging. 85% agreed on the feedback and support provided were enough and the discussion forums were fruitful. 83% agreed on the workload was manageable.
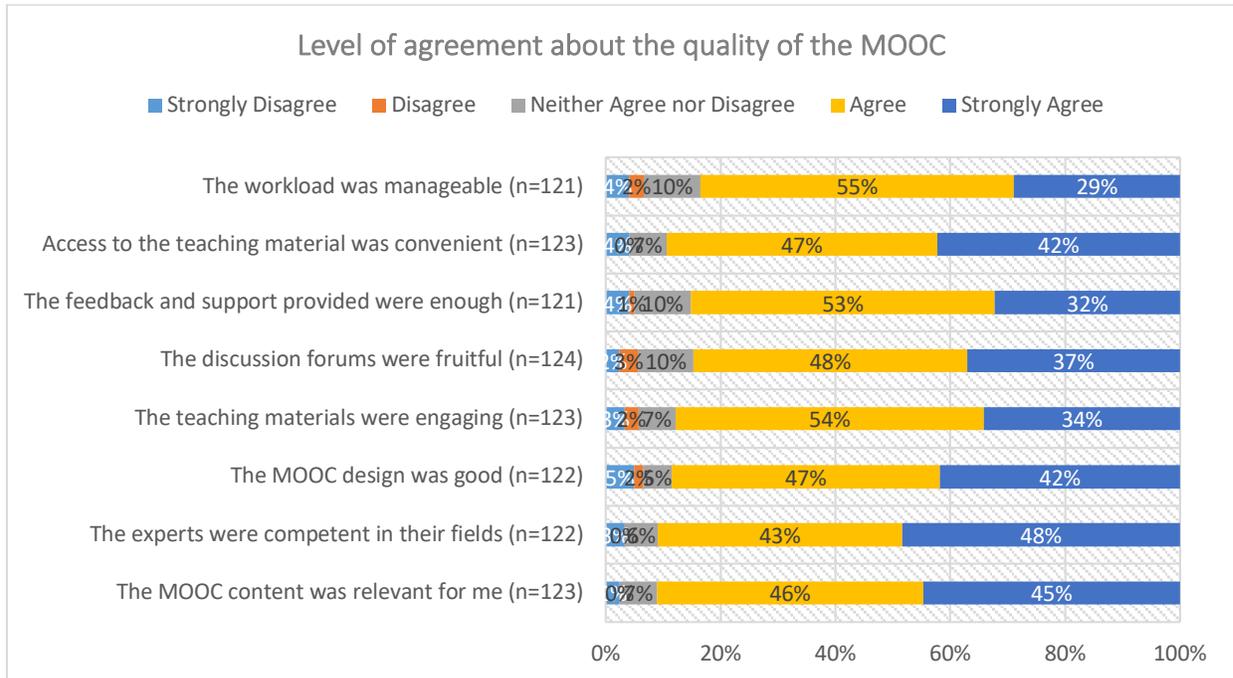
Figure 19. Level of agreement among participants about the quality of the MOOC

A one-way ANOVA was conducted to assess whether the overall level of agreement among participants about the quality of the MOOC differed depending on participants' age (<30, 30-40, >40). The analysis showed that there were no significant differences ($F_{(2)}$= 0.074; $p > .05$). Similarly. An independent t-test was conducted to assess whether the likelihood to recommend the Canvas Network course differed depending on participants' gender (female and male) and holding an academic position (yes and no). The analysis showed that there were no significant differences between genders ($t_{(86)}$= 4.303; $p > .05$) and holding an academic position ($t_{(87)}$= 2.448; $p > .05$).

2.2.4.2. Perceived learning

Below is presented the perceived learning including knowledge and potential skills obtained after taking the course. In general, a majority of participants (strongly) agreed that the course was useful in enhancing knowledge and skills.

2.2.4.2.1. Perceived MOOC's usefulness for improving knowledge and skills on topics of academic leadership

Figure 20. shows the perceived MOOC's usefulness for improving knowledge and skills on topics of academic leadership. In this sense, it is important to highlight that the sum of the level "agree" and "strongly agree" range between 82% and 89%. For instance, 89% agreed on understanding about different leadership approaches in university governance. 88% agreed on academic leadership skills, understanding of challenges for higher education, and knowledge about university governance structures. 82% agreed on the grasp of university governance structures in Europe and/or China.
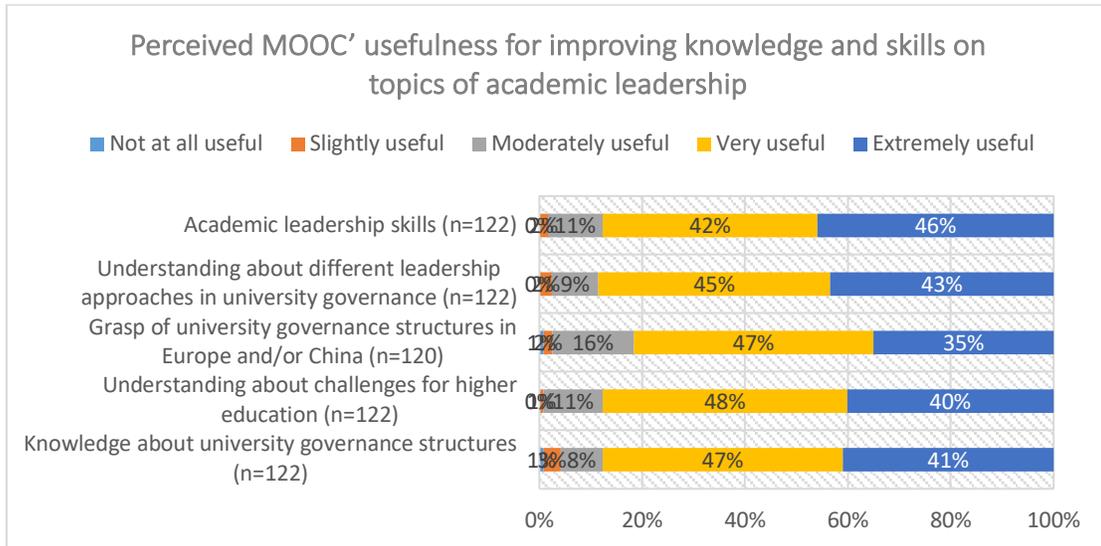
Figure 20. Perceived MOOC' usefulness for improving knowledge and skills

2.2.4.2.2. Perceived knowledge and skills developed

Figure 21. shows the perception of knowledge and skills developed. Overall, more than 53% of the participants agree that the course helped them develop knowledge and skills in academic leadership and university governance.
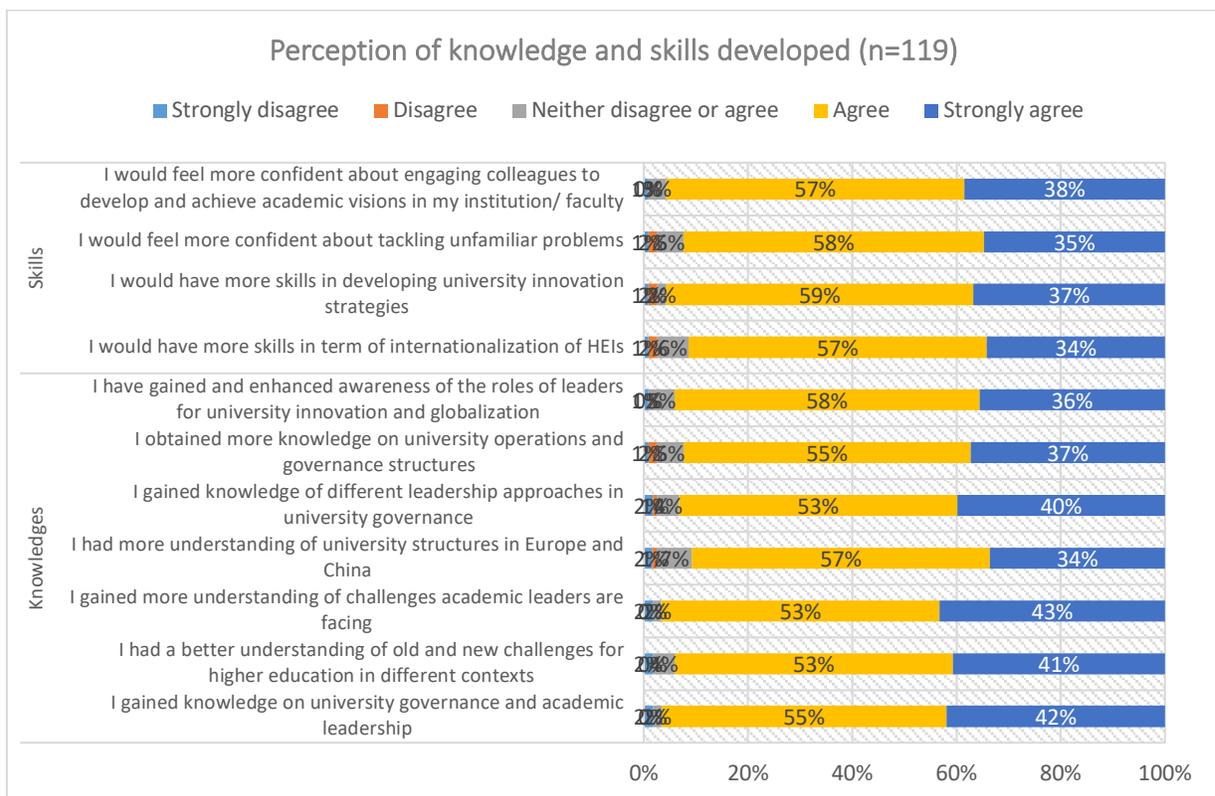
Figure 21. Perception of knowledge and skills developed

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2.2.4.3. Perceived effectiveness of the course content

Figure 22. shows an overview of the perceived effectiveness of the course content. It is important to notice that the sum of the level "agree" and "strongly agree" range between 88% and 96% of agreement in all the items. For instance, 96% agreed on the course was up to date with developments in the field. 95% agreed on to recommend the course to friends/colleagues. 90% agreed on they have enjoyed taking the course and the course effectively challenged them to think. 89% agreed on they have learned a lot in the course. 88% agreed on the course assignments were interesting and stimulating.
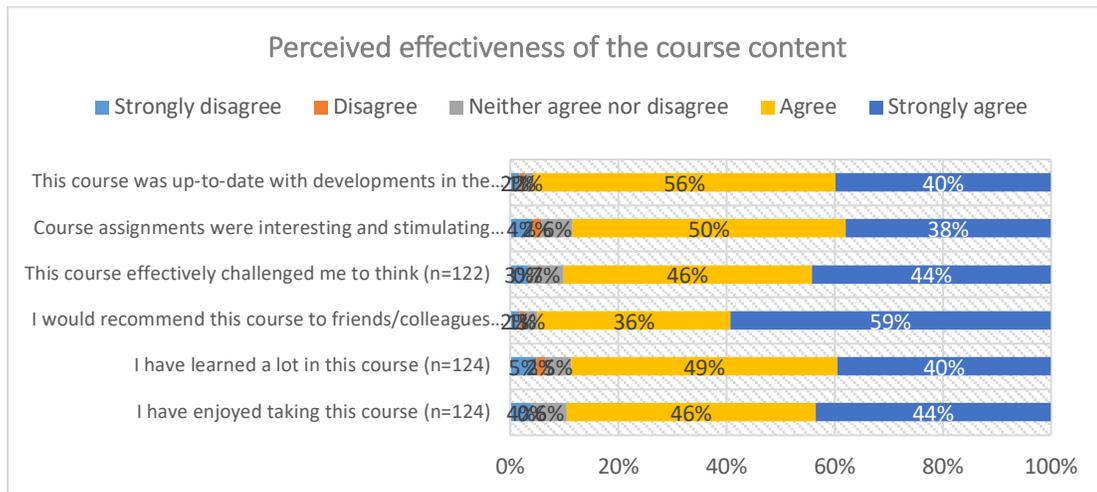
Figure 22. Perceived effectiveness of the course content

2.2.4.4. Perceived usefulness of the course design

Figure 23. shows the level of perceived usefulness of MOOC design elements. It can be highlighted that, the sum of the levels "agree" and "strongly agree" range between 79% and 87%. For instance, 87% agreed on reading materials, 85% videos, 80% assignments, 79% experience sharing, and 76% discussion forums.
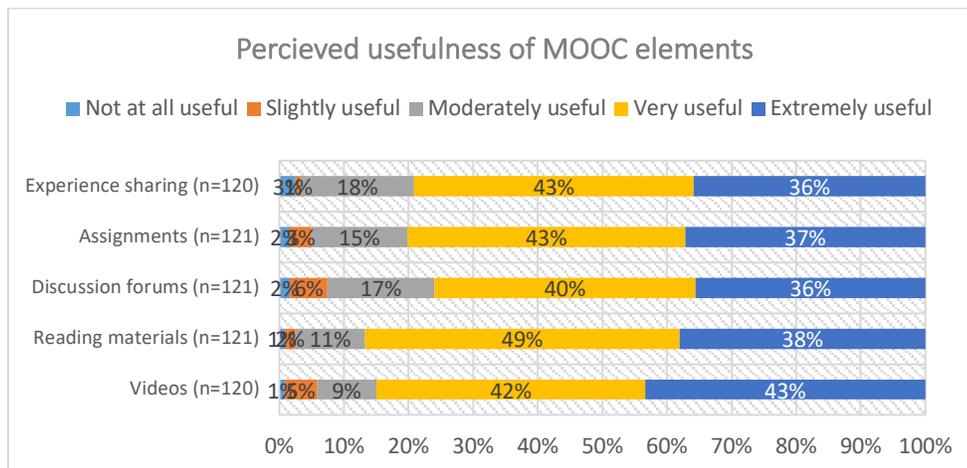
Figure 23. Perceived usefulness of MOOC elements

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2.2.4.5. Perceived usefulness of the course material and activities

Figure 24. shows the level of agreement about the positive impact of the course materials and activities on the learning experience. In general terms, it can be observed that most of the participants agree or strongly agree that the materials and activities of the course have a positive impact on the learning experience.
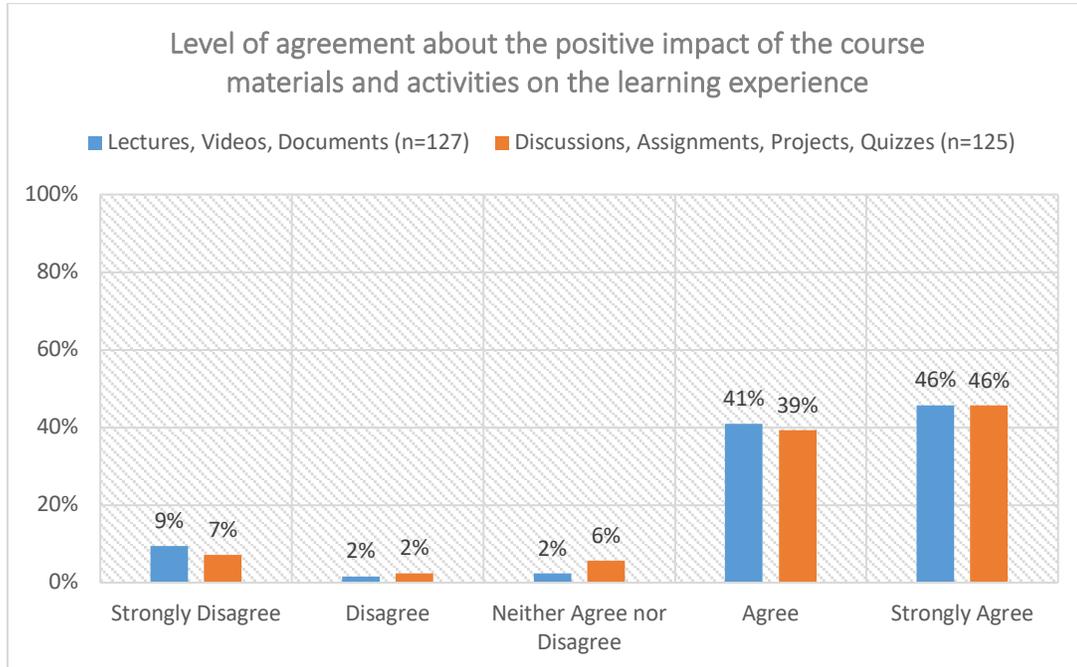
Figure 24. Level of agreement about the positive impact of the course materials and activities on the learning experience

2.2.4.6. Perceived usefulness of the course in addressing the challenges of academic leaders

Figure 25. shows the perceived MOOC modules' usefulness level to address the challenges of academic leadership. In this regard, it is important to highlight that the sum of the level "very useful" and "extremely useful" range between 85% and 95%. 95% of perceived usefulness of Module 4 on academic leadership and university internationalization. 87% of perceived usefulness of module 3 on comprehensive academic leadership from institutional to personal skills and module 2 on university governance for research, innovation, and valorization. 86% of perceived usefulness of module 5 on reflections, lessons learned, good practices shared, and 85% of perceived usefulness on module 1: University governance structures.
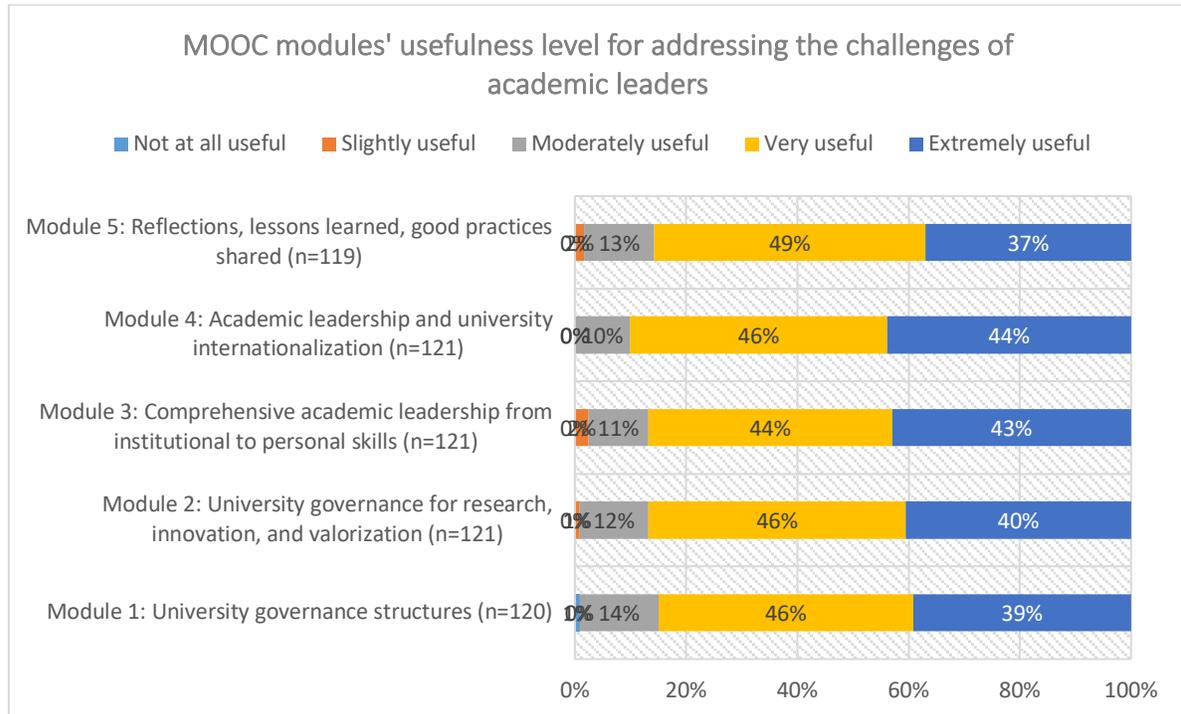
Figure 25. MOOC modules' usefulness level for addressing the challenges of academic leaders

2.2.4.7. Perceived usefulness of online interactivity

This subsection presents the 3 different types of interaction: learner to learner interaction, instructor/facilitator to learner interaction, and instructor/facilitator support. Figure 26 consolidates these interactions. Participants perceive learner to learner interaction, mostly, because it is an important learning component of this course (51% agree). Participants also perceive Instructor/facilitator to learner interaction important because they feel free to express and explain my own views throughout this course (53% agree), and the Instructor/facilitator support because the instructor/facilitator was responsive to student concerns (47% agree).
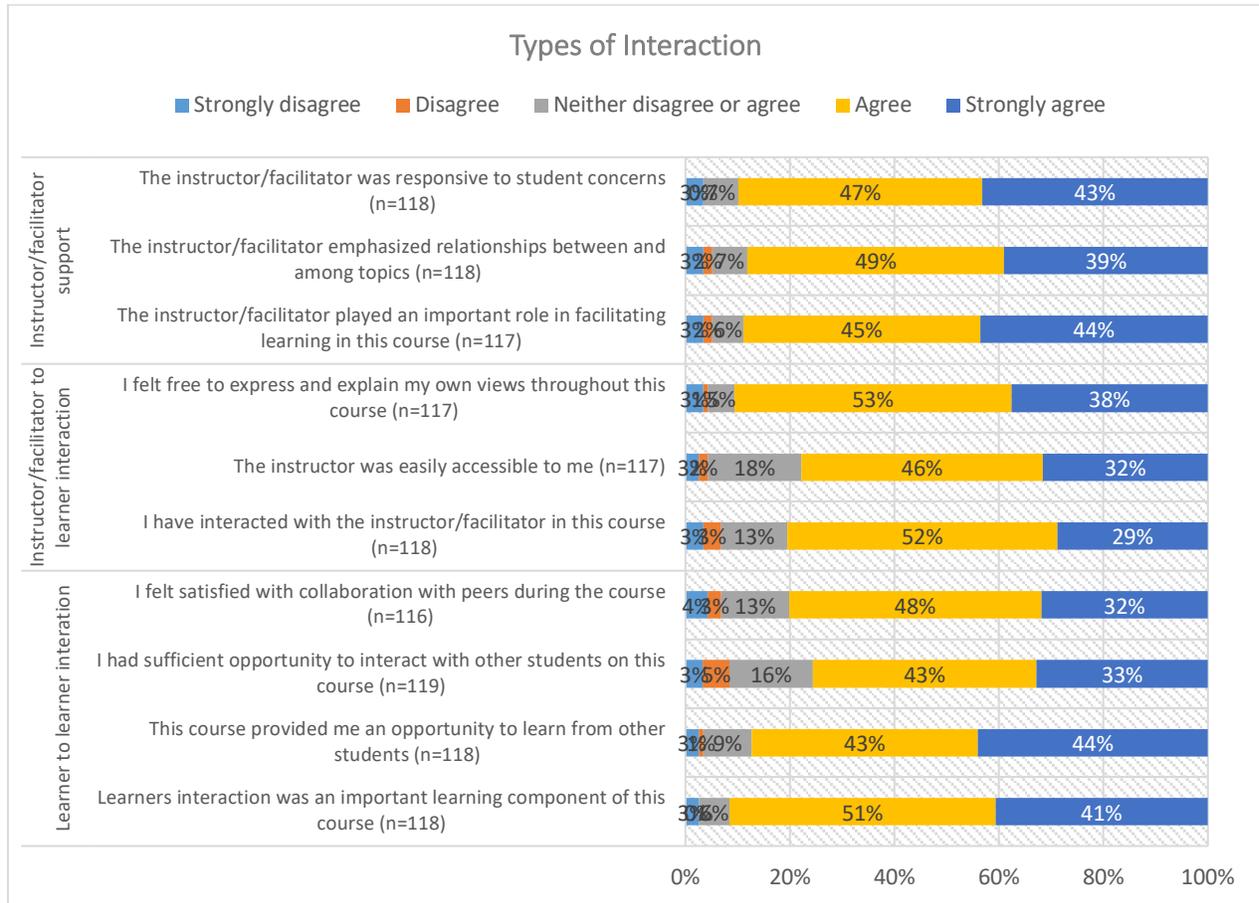
Figure 26. Types of interaction

2.2.5. Challenges in completion of the LEAD2 MOOC

Figure 27. depicts a set of challenges that participants could have in the completion of the LEAD2 MOOC. Lack of time (50% agree) is the greatest challenge for participants. 33% of participants disagree on a lack of self-confidence as a challenge in the completion of the course. 32% of the participants neither disagree nor agree on less not self-directed and disagree on the language barrier as challenges in the completion of the course. Finally, 31% agree on Imbalance between work and personal life as challenges in the completion of the course.

Challenges in the completion of the LEAD2 MOOC

- Strongly disagree
- Disagree
- Neither disagree or agree
- Agree
- Strongly agree

	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree
Language barrier (n=118)	20%	32%	17%	23%	8%
Imbalance between work and personal life (n=118)	6%	26%	25%	31%	12%
Lack of self-confidence (n=118)	14%	33%	22%	22%	9%
Less or not self-directed (n=118)	10%	24%	32%	23%	11%
Lack of time (n=117)	3%	12%	21%	50%	14%

Figure 27. Challenges in the completion of the LEAD2 MOOC

2.2.6. Suggestions to enhance course quality

This subsection presents suggestions in terms of instructor involvement in online learning experiences and the Ideal length of the Canvas Network course (data obtained from the Canvas survey for these subsections).

2.2.6.1. Instructor involvement in online learning

Participants were asked how much instructor involvement they like to have in their online learning experiences. Figure 28. shows in this regard that more than half of the participants like variety (53%). Then, 22% like to learn on their own, 12% prefer peer-to-peer interactions with their classmates (social learning), 10% prefer to communicate only with the instructor, and 2% did not interact with their instructor.

How much instructor involvement do you like to have in your online learning experiences? n=124

|	Percentage
I do not interact with my instructor	2%
I prefer to communicate only with the instructor	10%
I prefer peer-to-peer interactions with my classmates (social learning)	12%
I like to learn on my own	22%
I like variety	53%
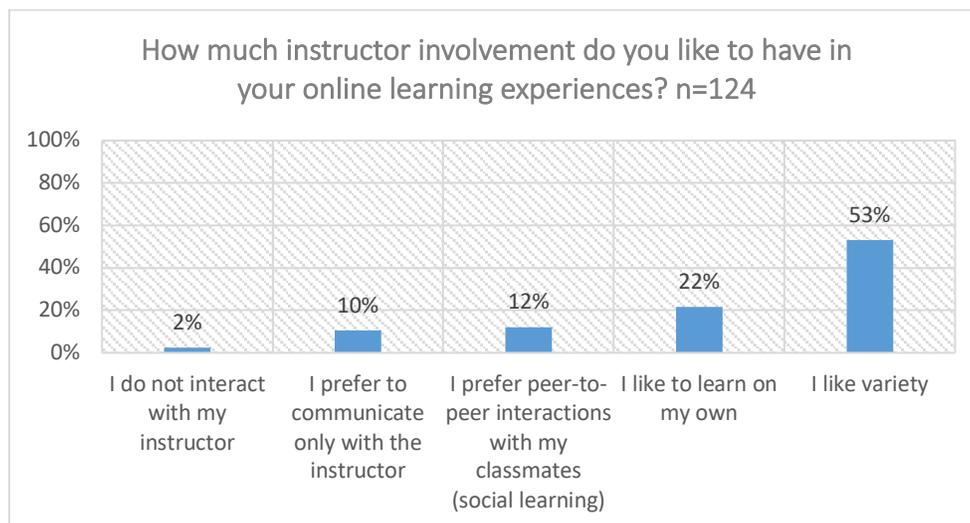
Figure 28. Instructor involvement in online learning

2.2.6.2. Ideal length of the Canvas Network course

Participants were also asked how long the Canvas Network Course should last. Figure 29. shows in this regard that 28% of the participants think that a course should last between 4 and 6 weeks, 24% between 2 and 4 weeks, 23% 8 or more weeks, 19% between 6 and 8 weeks, and 7% around 2 weeks.
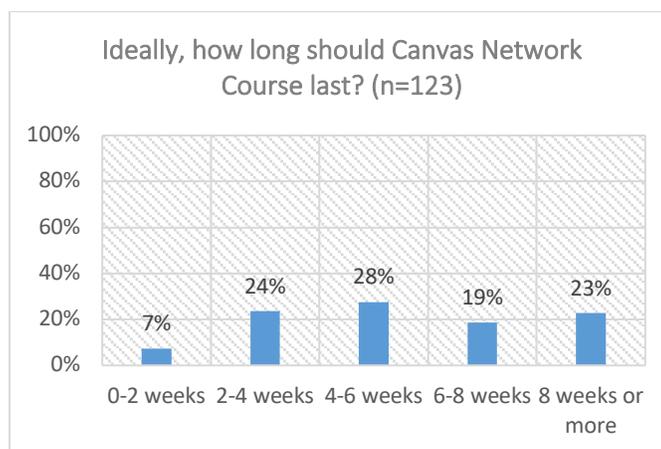

Figure 29. Ideal length of the Canvas Network Course

2.3. Open-ended questions

To gain deeper insights into the learners' perceptions on the course, five open-ended questions were asked. First, ways the course helped to meet personal or professional goals. Second, barriers and challenges in the completion of the MOOC. Third, general feedback on the course. Fourth, alternative topics about university governance and academic leadership. Fifth, other learning activities and materials are needed for further development. Below these questions are developed.

2.3.1. Effectiveness of the course in addressing/achieving personal or professional goals

Participants were asked in what ways has this course helped them to meet their personal or professional goals (data obtained from the Canvas survey). Answers were variate; However, three main themes were identified. First, the development of leadership and management skills. Second, the development of transversal skills. Third, future practical applications of the course content. Below the responses grouped by each theme are presented.

2.3.1.1. Development of leadership and management skills

Some participants indicated that 'development of leadership and management skills' was one way that the course helped them to meet their personal or professional goals. For example:

> *"This course helped me to know more about the different methods for university management. Also gave me an opportunity to intensive my information about my university management. Besides, I took a lot of information about leadership principals and how to be a good leader."*

"The course has imparted to me academic leadership skills, how to position research, innovation, and valorization in university structure, skills on strategic planning, and modern way of managing changes in universities."

"(...) knowledge about university management gave me a lot of useful ideas related to university performance, its role in society, and how various partnerships are created at different levels."

2.3.1.2. Development of transversal skills

Some participants indicated that 'development of transversal skills' was another way that the course helped them to meet their personal or professional goals. For example:

"Personally, it helped me to critically evaluate my surroundings while professionally it helped me to make people understand the underlying meanings and guide them to form an unbiased opinion."

"Personally, it opened my life to a new perspective on leadership. It sharpened me to think critically and apply my learnings at its best. It made me patient, clever, and persevere about what I am doing."

"It helped me to be vigilant and creative to change my way of being a leader, person, and use it in my profession (...). Most importantly the course made me a holistic person, a critical thinker, a fighter, and always crave and get thirsty for new possible learnings."

2.3.1.3. Future practical applications of the course content

Some participants indicated that 'Future practical applications of the course content' was another way that the course helped them to meet their personal or professional goals

"(...) In my professional aspect, it will (help) a lot on my career as a reference in future endeavors. I gain a lot of helping tips and opinions that I will indeed sure to share in a possible situation."

"(...) The course will be much helping in running my college and applying for university positions in the time to come."

"In addition, there are many ideas that will help me in the future to fill the gap between the university and the market demands."

"This course educates me about the sensitivities and the structures of the governance, which help me in achieving my goal to be a university administrator (...)."

2.3.2. Barriers and challenges in the completion of the MOOC

Participants were also asked to share barriers and challenges in the completion of the MOOC (data obtained from both Canvas and LEAD2 surveys). Answers were variate; However, three main barriers and challenges

were identified. Lack of time, internet connection, and number of activities. Below some responses that illustrate these barriers and challenges.

Some participants indicated that 'Lack of time' was a barrier. For example:

"Time is the barrier for me in completion of this course."

"I was wishing to be given more time to better grasp the materials and further readings."

"Tight schedules with work and other curricular activities."

A few participants indicated that 'Internet connection' was a challenge. For example:

"Irregular internet connection due to the network problem in the area I am located."

"The poor internet connection (was a challenge)."

Some participants indicated that the 'Number of activities' was a challenge. For example:

"(I think) Too much assignment is not considerable (…)." "(there were) Too many essay activities."

2.3.3. General feedback on the course

Participants were also asked to provide any general feedback on the course (data obtained from the Canvas survey). Most of the responses were acknowledgments and a few others on specific aspects of the course activities.

On the one hand, thanks were mainly for providing training opportunities and the usefulness of the course content. Some answers that illustrate this perspective are shown below.

"Generally, the course was well planned and carried out. I want to take the opportunity to thank ALL the administrators."

"The course was awesome, ¡thank you!"

"Thank you very much for the wonderful opportunity that you have given to me in participating in this course."

"Thank you very much, MOOC for this opportunity to learn Leadership."

"Thank you for giving us a very useful and informative knowledge."

"The course was so useful thanks for this wonderful opportunity."

On the other hand, participants provided feedback on specific aspects of the course activities such as forums and assignments. Particularly, they ask for more time to complete these activities. Some answers that illustrate this perspective are shown below.

"(…) Assignments and academic forum should not be closed; participants should have a bit freer to complete it before the closing of complete course."

"(…) The discussion in the forum is quite lengthy, so it must be concise so we may absorb from the experience of the fellow participants."

"(…) I hope you give me more time to submit my assignments. I really want to finish this course. God blesses!"

2.3.4. Alternative topics about university governance and academic leadership

Participants were asked to suggest alternative topics about university governance and academic leadership to be included in the MOOC in the future (data obtained from the Canvas survey). In this regard, four main categories were created based on the topics suggested by the participants. Table 4 summarizes these categories and topics.

Table 4. Alternative topics about university governance and academic leadership.

Category	Topics
ICT applications	- Computer/ICT Skills - E-governance - Smart universities - Distance learning - E-learning - Digital generation - Digital communication - Distance education
Global perspectives	- Perspectives from more European countries - Cross-cultural research partnerships - Latin American approach - The UK educational system - US educational system - Asian Leadership discussion
Student support	- Mentoring - Student conflict resolution - Teacher student relation - Emotional guidance for students - Involving youth in leadership - Student affairs

Educational policy and curriculum development	- Educational policy and university administration - Role of universities in improving educational systems - Curriculum planning and implementation - Curriculum design - Curriculum development & instructional design - Foreign policies

2.3.5. Other learning activities and materials needed for further development

Participants were asked to share their comments about other learning activities and materials needed for further development (data obtained from the Canvas survey). Table 5 summarizes these activities and materials.

Table 5. Other learning activities and materials needed for further development

Activities	Materials
- Simplified modules	- Books
- Flexible deadlines	- E-books
- Assignment explanations	- Readings (more)
- Open forums	- Online library
- Less requirements	- Papers (more)
- Practical assignments	- Case Studies

III. Discussions and conclusion

The combination of different sources of information to evaluate the participants' experience in the course suggests some conclusions.

On the one hand, the use of the "New Analytics" setting provides information on the participants' activity that can be compared with their self-report. For instance, Canvas analytics showed that the activity in the module sections decreases from module 1 to module 4. Sections in module 1 have considerably more activity, in terms of the number of participants and the number of page views, compared to the remaining modules. However, the analysis of the perceived MOOC modules' usefulness level showed the opposite behavior. Perceived usefulness decreases from module 4 to module 1. This cast doubts on the potential assumption in which more activity in the module sections implies a more perceived impact of the course. In this sense, it would be interesting to explore more associations between what Canvas Analytics collects and what participants express in terms of their activity and participation in the MOOC.

On the other hand, the combination of information on the usefulness of the MOOC on leadership development suggests that the content of the course has a positive impact on specific aspects. For example, on the perception about the use of MOOCs, the usefulness and ease of use in MOOCs on leadership development, and the perception of knowledge and skills developed. These results suggest that the course content is perceived to be an important source to foster the development of skills and knowledge around the issues and challenges in academic leadership and leadership development. Similarly, results analysis suggests

that there was a positive experience in the participants. Although there are aspects to improve such as participation in course activities, different sources showed that participants agree that the materials and activities of the course have a positive impact on their learning experience. The course helped the students to meet their personal or professional goals in terms of the development of leadership and management skills, transversal skills, and practical applications of the course content. Moreover, they feel tankful with the course for providing training opportunities and useful course materials.

Finally, general suggestions for the next edition can be considered in three ways. First, new topics about university governance and academic leadership can include ICT applications, perspectives from different nations, how to support students, and educational policy and curriculum development. Second, although the course content is open until the end of the course, the lack of time for the completion of the activities is a big demand from the participants. Third, based on the participants' feedback, it worth considering simplifying modules, flexibilities deadlines, provide the assignment explanations, leave the forums open, flexibilities the requirements, and develop more practical assignments.