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Abstract. Innovative and inclusive teaching strategies in higher education institutions are at the core of this essay. The paper reflects the results of an interdisciplinary research project in the University of Modena and Reggio Emilia (Unimore) located in Northern Italy that is also in the process of creating a faculty development system. The essay allows to reconstruct, by means of a wide survey (consistent with the AsdUni, Italian Association for the Promotion and Development of Didactics, Learning and Teaching in University) on the Unimore academic staff, the inclusive teaching strategies enacted by Unimore lecturers as well as their interpretation of the very concept of inclusion.
On the basis of the results of the initial survey that involved a statistically significant sample of academic staff, needs of support in teaching activities were collected that were further investigated through semi-structured interviews. These needs have been taken into account to design a series of training activities on inclusive and innovative strategies that have been implemented involving 151 participants, with some participants engaging in more than one seminar. The impact of the faculty development initiatives on the teaching staff was then evaluated by using Kirkpatrick's model. Findings revealed a strong appreciation of training among lecturers, as well as a high level of perceived utility of it. Pre-post analyses based on microdata on students who have attended courses experiment-ting inclusive strategies allows us to capture positive results in terms of sense of belonging, greater satisfaction with the activity and feelings of social inclusion.

Keywords: academia, innovative methods, inclusive teaching, faculty development, best practices.

1 Introduction

The focus of this work is to analyse innovative and inclusive teaching strategies in terms of their impact on gender and intersectional inequities and on the quality of learning and participation processes for students with disabilities, special learning disabilities, and other special education needs, and to then train higher education teachers in the most inclusive and effective approaches and strategies for all students. The paper reflects the results of an interdisciplinary research project in the University of Modena and Reggio Emilia (Unimore) located in Northern Italy.

The change of systems in an inclusive perspective is based on the development of culture by all actors (Booth, Ainscow, 2001). The majority of Italian universities, however, do not offer training courses on inclusion and effective didactics for university teaching staff, leaving them lacking the basic skills to foster real inclusion and accessibility to tertiary education.

Faculty Development initiatives offer a valuable opportunity to improve learning and participation processes, through the experimentation of innovative strategies and technologies that place students in an active and interactive position (Lotti and Lampugnani, 2020; Lotti et al. 2021).

A first phase of the project provides a systematic analysis of the recent literature in the Italian and English-speaking areas that led to the elaboration of an original and integrated model of an innovative and inclusive university and to the identification of coherent teaching strategies.

A survey was then conducted on a sample of almost 500 academic staff (from a total of about 1,400) consistent with the AsdUni (Italian Association for the Promotion and Development of Didactics, Learning and Teaching in University https://asduni.it/, Clerici and Paccagnella, 2020, Felisatti and Clerici, 2020) survey and also including specific questions on the use of inclusive teaching strategies, perception of discrimination and the very concept of inclusion. On the basis of the results of the initial survey that involved a statistically significant sample of academic staff, needs of support in teaching activities were collected that were further investigated through semi-structured interviews.

Eighteen lecturers and former lecturers from the same university, using non-frontal teaching, were recruited using snowball sampling and were subsequently interviewed between November 2022 and August 2023 to investigate further the data collected through the survey. These semi-structured interviews were processed through the Template Thematic Analysis by Boyatzis (1998), using the themes extracted through systematic literature analysis, as a template with the aim of assessing how academic staff apply innovative and inclusive didactics at the university. The interpretation of the survey and the semi-structured interviews led to the design of training modules for

teaching staff on inclusive approaches that have been offered in the same university, responding to the increasing needs of the participants for developing new skills and a community of practices, in order to achieve higher inclusivity in the teaching and learning process.

The cycle of seminars was designed with the involvement of the research project scientific committee and the University Faculty Development Group. These events were held from July 2022 till the end of the project and covered a wide range of topics in the field of education and inclusiveness. Table 1 provides a comprehensive overview of the seminars and workshops provided until the end of May 2023, which was the last tracking performed in time for this research, but the seminars are continuing also in this autumn 2023.

Several in-person workshops were organised, such as the "Workshop on Team-based Learning" and "In Your Shoes Beyond the Comfort Zone", each lasting about 4 hours. These sessions aimed to promote collaborative learning and personal growth. In addition, online workshops, such as "For an Inclusive University: Case Studies" and "Team Learning and Inclusion", each lasting 3 hours, were organised. These web-based sessions explored inclusive teaching methodologies and strategies. A major series of seminars on "Inclusion" addressed various aspects, including gender, intellectual, visual, and hearing disabilities, and the broader concept of inclusiveness in academia. These seminars, lasting between 2 and 3.5 hours, contributed to a comprehensive understanding of students' conditions and resources or educational practices that can minimise the barriers associated with their conditions. In addition, to increase engagement, mixed-mode seminars combining in-person and online elements, such as "Embedding Inclusivity in Academic Practice and Development" and "Gender and education in STEM fields", were organised. In total, 152 participants attended these events, collectively contributing 448 attendances, with some participants engaging in multiple sessions.

Table 1. Synoptic overview of events and attendance.

DATE	TITLE	N°	MODE	DURATION
07/07/2022	Workshop on team-based learning	23	In-person workshop	4h
15/07/2022	In your shoes beyond the comfort zone	22	In-person workshop	4h
20/07/2022	For an inclusive university: Case studies	15	Online workshop -	3h
25/07/2022	Team-Based Learning and Inclusion	27	Online workshop -	3h
28/07/2022	Integrating students with intellectual disabilities at the university	8	Online workshop	2h

14/09/2022	Course for newly hired staff	35		
15/09/2022	Course for newly hired staff	31		
19-26-27 sett 2022: Course on Team-Based Learning (TBL)				
19/09/2022	Designing the course from the end with backward planning	19	In-person workshop	4h
26/09/2022	Constructing situations-problems for Team- Application exercises	17	In-person workshop	4h
27/09/2022	Construct multiple-choice questions for the Readiness Assurance Process (I-RAT and T-RAT) and facilitate learning	12	In-person workshop	4h
17/10/2022	Introduction to Inclusion (ICF and Universal Design for Learning)	16	In-person seminar	3.5h
04/11/2022	How to make a lesson more participatory	28	In-person workshop	4h
28/11/2022	UNIMORE's services for inclusion (DSA and disabilities)	11	In-person seminar	2h
05/12/2022	Case-Based Learning (CBL) to facilitate learning in clinical cases	35	In-person workshop	3.5h
13/12/2022	Course for newly hired staff	22		
15/12/2022	How to make teaching inclusive with tools and robots	16	In-person workshop	3.5h
20/12/2022	How to make a lesson more participatory	27	In-person workshop	4h
10/03/2023	For a gendered approach to teaching	29	In-person seminar	3h
11/03/2023	Inclusive teaching for students with ASD: From neuropsychological profiling to compensatory tools and dispensatory measures in academia	2	In-person seminar	3h
18/04/2023	Inclusion and students with visual and hearing disabilities	3	In-person seminar	3h
05/05/2023	University and inclusion - Towards an inclusive educational ecosystem	4	In-person seminar	3h
11/05/2023	Inclusion and students with intellectual disabilities	3	In-person seminar	3h

17/05/2023	Embedding Inclusivity in Academic Practice and Development	16	Mixed-mode seminar	3h
23/05/2023	Gender and education in STEM fields.	27	Mixed-mode seminar	3h

Note: Total number of participants = 152; Total attendances = 448; some participants attended multiple events.

The impact of the faculty development initiatives on the teaching staff was then evaluated by using Kirkpatrick's model as done by Zhao *et al.* (2023) and Rouse (2011). Parallel to the impact of faculty development, the mapping of innovative and inclusive strategies already carried out by teaching staff or stimulated by the training courses and the birth of a community of practices was produced. Attention was also paid to the impact of new technological tools. Interactive electronic platforms were used to create polls and questionnaires in order to facilitate students' participation in classes, as well as learning platforms to improve online learning involving students with assignments, and monitoring their learning progress. Online forums were also used to increase communication with and between students. Finally, the impact of two types of active teaching strategies on students was measured, leading to the evidence of a positive impact on academic performance, sense of belonging and student's satisfaction with the activity, consistently with the literature (Espey, 2022; Good *et al.*, 2012; Parmelee, 2009).

2 Methods & Results

This section provides a presentation of our methods and results from the literature review, the survey involving about 500 academic staff, the semi-structured survey and the analysis of the impact of training activities on teachers.

The literature review was conducted according to the essential standards of a systematic literature review, through the identification of keywords, inclusion/exclusion criteria and topic selection. The selected texts (scientific articles or institutional documents) in the main database were analysed and included in an *ad hoc* form.

We analysed 25 papers on the topic of inclusive education and 25 papers on inclusion in higher education. A further 15 contributions need to be added to these with a specific focus on TBL and Gender/STEM.

The literature review showed the ambiguity and complexity of the concept of inclusion (and of "inclusive universities" in particular) and this was highlighted as a basic problem, as it occurs in the pedagogical literature of the sector.

A "general" interpretation of the inclusion construct as a "universal value" and universally recognised is confirmed, but with different formats, in terms of intentionality, priorities, manifestations and applications, such as, pedagogical and didactic. A variety of ideas and models of inclusion emerged, even in common disciplinary (pedagogical and didactic) fields and with similar epistemology (based on the Full Inclusion model). Furthermore, we noted that the idea of inclusion assumed oriented teaching policies and practices (inclusive strategies), which assume specific "technical" focuses (strategic, organisational and teaching choices) and implications at a macro level (university system and society); in general, there remains a "double track" that sees a dichotomous differentiation prevailing between essays focussing on "special" students (with disabilities and/or Special Educational Needs) and papers that embrace a universal approach aimed at everyone.

Descriptive statistics from the survey of about 500 academic staff members in the analysed university allowed us to have a first vision of the teaching strategies adopted and of the presence of innovative and inclusive practices together with their vision of the very definition of inclusion in higher education.

The methodologies of analysis in defining inclusive teaching are different, heterogeneous and complementary: the systematic literature review extracts relevant themes regarding the application of inclusive didactics in the teaching context; Template Thematic Analysis is used to gain an in-depth understanding of the innovative and inclusive practices that are applied within the analysed University and a descriptive analysis is performed on the data collected through the survey conducted among the teaching staff and the Kirkpatrick model. T-test and Anova correlations are also applied to preliminarily analyse data from the aforesaid model. More complex econometric analysis is structured with the pre-post setting conducted on student data.

For the semi-structured surveys, eighteen lecturers and former lecturers (ten females and eight males) were selected through a non-probabilistic snowball sampling. The department providing the highest number of respondents was Economics with seven; three work mainly in the Engineering department; three in Life Sciences; two in Biomedical Sciences; two in the Education department, and one in the Medicine department. Eight interviewees are classified as senior lecturers, four as lecturers, one as a contract lecturer, four as university researchers and one is a former lecturer at the university where the study was carried out. The vast majority (12 people) run courses as part of bachelor's degrees and master's degrees. Three interviewees work only in bachelor's degree courses, while three work only in master's degree courses.

The first 13 names of interviewees were provided by members of the research project based on their knowledge of colleagues applying non-frontal teaching methodologies, potentially more inclusive than frontal university teaching. At the end of each of the 13 initial interviews, the participant was asked by e-mail to indicate further names of colleagues applying non-frontal teaching. Several lecturers, among those notified, had already been interviewed: 5 new lecturers were recruited, 2 had problems with

participating in the interview forcing it to be cancelled, and 6 of them failed to answer the recruitment email. In the end, the final sample was composed of 18 interviewees.

The interviews were conducted and recorded using Microsoft Teams and lasted between 45 and 120 minutes. Afterwards, they were transcribed and analysed using Template Thematic Analysis by Boyatzis (1998).
The topic guide covered the description of the teaching methodology used by the interviewees, the aspects they considered to be the most inclusive and innovative of this methodology, the broader definition of the concept of inclusion and innovation declared by the lecturers, the experience and comparison with other teaching methodologies, the perceived effects of the methodologies employed on the lecturers and students, and any changes planned by the lecturers in relation to the methodologies employed.

To evaluate the impact of faculty development activities on participants, we made use of two quantitative surveys on a sample of participants in the organised seminars and/or workshops.

The eligibility criterion for inclusion in the sample was attendance at a minimum of one faculty development event. For this analysis, we made use of two types of satisfaction surveys:

1. An initial survey administered to participants immediately after the training event
2. A recap self-assessment survey sent later to all participants.

The first one proved useful in terms of reliability regarding the first level of Kirkpatrick's evaluation criteria (reaction) and detected the participants' very first (i.e. immediate) reaction, while the second one allowed us to assess the short/medium-term reaction on participants, as well as providing initial estimates for the subsequent Kirkpatrick's evaluation criteria (learning, behaviour and results). Moreover, in the second survey, further information was investigated, such as the changes in teaching methodologies.

On the basis of the questions in the questionnaire, single aggregated indicators were created by aggregating the responses to different questions, namely:

- Level 1. Kirkpatrick in the very short run (*Lev1_Short*). This indicator is built by exploiting information from survey (1) and measures the immediate reaction to training regarding the satisfaction about the event.
- Overall Kirkpatrick in the short/medium term *(Kirkpatrick)*. This indicator is based on sub-indices from survey (2) and can be further disaggregated into the following levels:
  - LEVEL 1 - Reaction (*Lev1*). It focuses on individuals' reactions to training. It measures participants' satisfaction, interest and involvement after the learning experience.
  - LEVEL 2 - Learning (*Lev2*). It assesses the degree to which participants acquired new knowledge, skills and abilities through the training.

- LEVEL 3 - Behaviour (*Lev3*). It covers the change in participants' behaviour after the training. It focuses on how learning is applied in the field and whether participants put what they have learned into practice.
- LEVEL 4 - Outcomes (*Lev4*). It covers the impact of the training on the organisation as a whole, measuring the results deriving from the application of the skills learned.

Before aggregating into our sub-indices, we computed a Cronbach's alpha (α) to measure internal consistency in each level, to assess the reliability of the constructed indicators. The results revealed a remarkably high level of internal validity, namely: $\alpha = 0.76$ for *Lev1_Short*; $\alpha = 0.90$ for *Kirkpatrick*; $\alpha = 0.91$ for *Lev1;* $\alpha = 0.72$ for *Lev2;* $\alpha = 0.72$ for *Lev3* and $\alpha = 0.80$ for *Lev4*: Since the level of Cronbach's alpha is in all cases greater than 0.7, the results indicate that our aggregated indicators consistently exhibit good to optimal levels of internal consistency and reliability.

Finally, to evaluate the impact of inclusive learning strategies on students, we collected data from students attending three undergraduate courses in Economics taught by lecturers involved in the semi-structured survey. Data collection was done through the administration of pre-post questionnaires measuring a set of outcomes from students' performance and in terms of satisfaction with the learning activities and sense of belonging.

2.1 Result

Considering the percentages according to role/status of the 500 members of the academic staff taking part in the survey, the sample represented 63% of senior lecturers, 53% of lecturers while researchers were underrepresented (12% of the actual researcher population was covered in the survey). Turning to the innovative strategies that teaching staff would like to introduce: 34% intend to apply strategies able to more actively involve students in the classrooms and 20% collaborative and interactive strategies. The survey provided information also on the academic staff's needs to improve teaching activities. As regards the most needed types of support, teachers require organisational support in terms of time management, spaces and equipment (22%), specific didatic training (17%), technical support and presence of tutors in classrooms (13%) as well as a community of practices to encourage collaboration between colleagues (13%). In terms of the definition of inclusion, two main interpretations of inclusive education in higher education emerged from the survey: inclusion in terms of integration of students with disabilities or SLDs and inclusion as ensuring equal rights for all students.

The analysis of the interviews indicates that promoting interaction among peers and between lecturers and students is highly valued. Most interviewees actively promote sharing expertise and dialogue between people from diverse backgrounds. Cooperative teaching is a widely applied method, and many courses also use peer tutoring and flipped classroom strategies to increase interaction and collaboration. Collaboration is encouraged not only among students, but also among other academic staff, external

parties, and local communities. This aspect allows a bridge to be created between the university and the employment world, through the inclusion of activities that allow students to gain practical experience and "dance with the ambiguity" of the real world, as one of the interviewees affirms.

Practical guidance, reciprocal teaching, and direct instruction are also widely cited as important aspects of teaching. Academic staff no longer see their role as simply passing information to students but rather as facilitating learning through a more symmetrical relationship with the student. Students become promoters of learning for the lecturer by asking questions and providing new ideas. Lecturers play the role of a guide in practical experience, rather than just delivering knowledge.

An emotionally welcoming classroom climate is increasingly emphasised, where students are not in awe of their lecturer. Activities are designed to cater to the different abilities of students and provide systematic and timely feedback so that students can learn from their mistakes in a natural and interactive way.

Technology is another salient aspect of teaching, with an open debate among interviewees. While six of them have applied a blended methodology in their courses, not all agree that technology is necessary to promote innovation. However, technology is often used to deliver educational content during the lesson. Applications like Wooclap and Mentimeter are used to promote engagement and attention. As attention spans become shorter, different media are used to convey information about complex topics. Using various forms of media, such as videos and pictures, promotes discussion among students and enhances their engagement with the material. This, in turn, makes learning more accessible and memorable. While lecturers prioritise structuring course content and having realistic expectations for student outcomes, the use of IT tools for accessibility is also important. According to the majority of interviewees, an experiential teaching approach that recognizes and promotes individual differences, as well as cooperation and interaction, is more effective in meeting the needs of diverse learners. However, many lecturers still struggle to adopt a fully inclusive teaching approach and are concerned about catering to specific groups such as women, disabled and SLD students, foreign students, and working students. Although some believe that a successful teaching approach does not require explicit consideration of inclusivity, others recognize the importance of implementing innovative strategies that cater to diverse learners. However, lecturers also face some challenges when implementing such approaches, including managing large numbers of students, relying on other mentors who may not always be available, unsuitable learning environments, and resistance from some students.

As regards the quantitative analysis of the impact of teacher training, Table 2 presents the results of Level 1 of Kirkpatrick's Model of Training Evaluation in the very short run (questionnaire (1) submitted to participants immediately after the seminars/workshop), clustered by event. It assesses the immediate reactions and perceptions of participants after attending training or events. The column of interest (A) indicates the mean score of participants' responses in relation to the quality of the event. These scores range from 0 to 4. On average, the events scored in the range of 3.15 to 3.87, suggesting a generally very positive perception of the events. The most

appreciated event was "*How to make a lesson more participatory*" which also had a high attendance (column B) and a high response rate (column D).

Table 2. Level 1 of Kirkpatrick in the very short run, representation clustered by event.

	(A)	(B)	(C)	(D)
Event	**Average Absolute Values**	**Presences**	**Respondents**	**Response rate = 1- [((B-C))/B]**
Workshop on team-based learning	3,59	23	16	70%
Team-Based Learning and Inclusion	3,63	27	14	52%
Newly hired course	3,53	35	27	77%
Course on Team-Based Learning (TBL)	3,15	19	16	84%
How to make a lesson more participatory	3,71	28	26	93%
UNIMORE's services for inclusion (SLD and disabilities)	3,8	11	5	45%
Newly hired course December	3,4	22	19	86%
How to make teaching inclusive with tools and robots	3,65	16	11	69%
How to make a lesson more participatory	3,87	27	25	93%
University and inclusion - Toward an inclusive educational ecosystem	3,23	4	3	75%
Embedding Inclusivity in Academic Practice and Development	3,76	16	8	50%

Gender and education in STEM fields.	3,45	27	12	44%

NOTES: (A) Report the means of the level 1 of Kirkpatrick computed on the absolute values. **The maximum score is 4 = completely agree.**
1= Strongly disagree;2= Disagree; 3==Agree; 4=Strongly Agree.
Percentages (D) are computed on the total number of participants (C): The response rate is computed as 1 minus the ratio of non-respondents to the total number of participants = 1- [((B-C))/B].
Data on some events are NA.
Source: survey (1) on seminar participants

Table 3 provides a comprehensive overview of participant-based and attendance-based ratings across different levels of Kirkpatrick's evaluation criteria. The difference between columns A and columns B is that the former averages the single opinion of each participant, meanwhile the latter weighs each assessment by the number of attendances of the participant. The table is divided into three panels: Panel A for the overall sample, Panel B for academic staff, and Panel C for other participants, such as PhD students, postdocs, Technical and Administrative Staff and Secondary School teachers. The first panel reveals that the scores are generally positive and show a slight decrease in the higher Kirkpatrick's levels. This trend is expected and aligns with the timing of the survey: while initial levels capture the most immediate reactions, the subsequent levels are a further step that require changes in teaching behaviours that are not so easy to implement in the short/medium run.

When we adjust the scores for attendance rate, the overall evaluations remain relatively stable. However, it is interesting to note that when we correct for attendance, the scores for the higher Kirkpatrick's evaluation levels are greater than the unadjusted ones. This indicates that those who participated more frequently also noticed tangible changes in their behaviour and saw higher results in their classes. It's important to emphasise, though, that we cannot definitively separate the causal effects.

When we split by job position, we notice that, despite similar satisfaction levels (Level 1), the early career scholars (panel C) exhibited higher scores in the subsequent levels. This trend is especially noticeable for Levels 3 and 4, where senior lecturers and lecturers give lower scores (panel B). In fact, the t-test reveals no difference by position in the first level ($Pr_{(|T| > |t|)} = 0.310$), or the second level ($Pr_{(|T| > |t|)} = 0.101$), but very significative differences in the third ($Pr_{(|T| > |t|)} = 0.002$) and the fourth ones ($Pr_{(|T| > |t|)} = 0.002$). In Levels 3 and 4, as regards lecturers, we also observe the maximum gap after adjusting for the attendance rate. In fact, the corrected mean values here show an increase of approximately 10%.

Table 3. Kirkpatrick in the medium-term

PANEL A – Overall Sample:

(A)	**(B)**

	Participants-Based Rating			Attendance-Based Rating		
	Mean	**SD**	**N**	**Mean**	**SD**	**N**
Kirkpatrick	3.72	.58	77	3.73	0.59	206
Level 1	4.35	.72	77	4.18	0.97	206
Level 2	3.75	.66	77	3.77	0.74	206
Level 3	3.31	.80	77	3.40	0.70	206
Level 4	3.28	.81	77	3.45	0.68	206

PANEL B – Academic professors (experienced faculty):

	(A) Participants-Based Rating			(B) Attendance-Based Rating		
	Mean	**SD**	**N**	**Mean**	**SD**	**N**
Kirkpatrick	3.45	0.66	23	3.62	0.58	64
Level 1	4.21	0.84	23	4.25	0.84	64
Level 2	3.56	0.83	23	3.76	0.75	64
Level 3	2.88	0.79	23	3.19	0.70	64
Level 4	2.84	0.90	23	3.09	0.66	64

PANEL B – Others (Early Career Scholars)

	(A) Participants-Based Rating			(B) Attendance-Based Rating		
	Mean	**SD**	**N**	**Mean**	**SD**	**N**
Kirkpatrick	3.84	0.50	54	3.78	0.58	142
Level 1	4.40	0.66	54	4.15	1.03	142
Level 2	3.83	0.56	54	3.77	0.74	142
Level 3	3.49	0.74	54	3.49	0.70	142
Level 4	3.46	0.70	54	3.62	0.64	142

Notes: **The maximum score is 5 = completely agree.**
1= Strongly disagree;2= Disagree; 3= Mixed Opinion; 4= Agree; 5=Strongly Agree
Source: survey (2) on seminar participants.

Finally, Table 4, on the other hand, shows the changes in the teaching strategies employed by the faculty at the University of Modena and Reggio Emilia, highlighting the strategies that have shown improvement through participation in seminars. Each cell can have a value from 1 to 100 for the possibility of lecturers choosing more than one teaching strategy (as indicated by the note on the non-exclusivity of responses). It is interesting to note that, despite being innovative and inclusive in nature, the seminars were also able to enhance traditional and diffused practices such as “frontal teaching” and the use of “lecture recordings”. This suggests that professional development programs not only promote new ideas but also strengthen existing methodologies, increasing their effectiveness. Regarding innovation, the teaching strategies that have been most enhanced by seminars are, in order of importance: “working in small groups”, “the use of survey systems”, “case studies”, and “Team-Based Learning”. These are enhanced by 51%, 40%, 30% and 29% of participants, respectively.

Table 4. What teaching strategies where improved through seminar attendances

	WHAT TEACHING STRATEGY HAVE YOU IMPROVED THROUGH SEMINARS? [a]
A. Frontal lecture	47%
B. Frontal lecture with survey systems	40%
C. Flipped classroom	10%
D. Case study	39%
E. Roleplay	7%
F. Simulation	10%
G. Debate or regulated debate	13%
H. Cooperative learning	11%
I. Work in small groups	51%
J. Peer learning	13%
K. Team-Based Learning	29%
L. Problem Based Learning	17%
M. Project-based learning	9%
N. Challenge-based learning	6%
O. Concept Maps-Mind Maps	17%
P. Making available the recording of lectures	30%
Q. Podcasts	6%
R. Other	0%

Notes: Respondents could choose multiple answer choices from those below, so they are not mutually exclusive, but each percentage can range from zero to 100.

[a] Survey (2) on seminar participants (subset of questionnaire respondents + additional focus on individuals with teaching responsibilities n=77)

3 Conclusion

The analysis of innovative and inclusive teaching strategies and the surveys on the academic staff involved in the teaching experience (both on a representative sample of teachers and on 13 academic staff members' semi-structured interviews) allowed us to detect training needs and design a cycle of seminars and workshops.

The impact of the training activities by means of the analysis of lecturers' satisfaction with training was analysed according to the four-levels in Kirkpatrick's evaluation model (reaction, learning, behaviour, results). Our findings revealed a strong appreciation of training among lecturers, as well as a high level of perceived utility of it. Moreover, when we examine the data by job position, we find that younger academics tend to rate the training more positively than lecturers in the higher Kirkpatrick's evaluation levels (level 3 and 4: behaviour and results). Notably, at Levels 3 and 4, lecturers give lower scores but, after accounting for the attendance rate to training events, senior lecturers exhibit the most significant increase in their ratings. However, we have some difficulty in deciphering whether this is due to a stronger impact of the training with the increase of the attendance rate or if both (results and attendance rate) have a spurious correlation with other dimensions such as motivation. Moreover, it should be taken into account that while initial levels of Kirkpatrick's evaluation criteria capture the most immediate reactions to training, the subsequent levels are a further step that require changes in teaching behaviours and strategies that are usually not so easy to implement in the short/medium run.

Pre-post analyses based on microdata on students who have attended courses experimenting inclusive strategies allows us to capture an increase in their sense of belonging to the subject field, greater satisfaction with the activity, especially in indicators such as workload share, and respect and feelings of social inclusion. These factors, beyond positive performance assessment that have also been documented, can be regarded as excellent outcomes in terms of promoting inclusion.

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