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TOWARDS THE CREATION OF A RANKING SYSTEM FOR ONLINE UNIVERSITIES: QUALI-QUANTITATIVE ANALYSIS OF A PARTICIPATORY WORKSHOP

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Introduction

University ranking systems are being implemented by different organizations in an attempt to evaluate and compare Higher Education Institutions (HEIs) at a global level (Brasher, Holmes, & Whitelock, 2017). Such systems are strongly criticized for their social and economic implications, as well as for their technical implementation (Amsler & Bolsmann, 2012; Lynch, 2015; Bougnol & Dula, 2015). Nevertheless, they are unlikely to disappear, at least in the near future (Tofallis, 2011). Thus, along with finding out their weaknesses, further research should be conducted in an effort to improve them and overcome their existing limitations.

At present, a widely recognised limitation of ranking systems is that they do not consider the specific characteristics of online universities (Brasher et al., 2017; King, 2012). Therefore, online universities risk that their position in most rankings misrepresents their actual quality compared to that of traditional universities. At the same time, the several benchmarking tools tailored to evaluate the quality of online programmes or courses – such as, for instance, Quality Matters (2014) – are not designed with the aim of ranking, and cannot be used to compare online HEIs. Thus, building a ranking system able to reflect the specific nature of online universities, in such a way that they are not evaluated through unsuitable indicators devised for traditional universities, is definitely a need that deserves to be addressed to protect quality in the online world (Kurre et al., 2012). However, there is a number of challenging aspects to consider in order to develop a ranking tool specifically designed for online universities. These mainly include, but are not limited to, the need to identify the most adequate criteria and indicators to reflect and measure the specificities of online universities.

Moving from these premises, the CODUR project aims to address this need. In particular, within the project we started focusing on the definition of the main criteria (and sub-criteria) to be considered when assessing and ranking online universities. As part of this work, we identified a list of criteria and observable indicators, with their relative weight. To this end, we took a participatory approach, involving several stakeholders and informants in an attempt to reach the broader HEIs community. This participatory approach was implemented through a first phase where the researchers involved in CODUR collaboratively elaborated a preliminary set of criteria for online HEIs (Table 1), and a second phase where a two-round Delphi Study

and a national participatory workshop were run to refine, enrich and evaluate the initial set of criteria (Pozzi, Manganello, Passarelli, & Persico, 2017).

In this paper, we present the approach adopted and the findings of the participatory workshop designed to collect feedback, comments and new ideas about our preliminary set of criteria, with the aim of informing their revision and, more in general, promoting debate and exchange about the evaluation of the online dimension within the university ranking systems. It is worth mentioning that, since the Delphi Study round one and the participatory workshop were based the same list of criteria, it was possible for us to compare the results of the two activities, involving different participants and adopting different methodologies (Pozzi et al., 2017).The paper has a twofold aim: on one hand, to explore how powerful participatory approaches can be in addressing problems whose best solution is not univocally defined, by gathering benefits from contributions of the main actors involved, and on the other hand, to open up the discussion concerning suitable criteria and indicators for the ranking of HEIs.

Method

As already mentioned, in this paper we report on the experience and present findings from the participatory workshop run within the CODUR project to involve Italian stakeholders in the definition of the criteria and indicators for the evaluation of online HEIS. Our preliminary list of criteria, with their explanation, is presented in Table 1. In the following, we describe the workshop setting, the participants and the method adopted.

Table 1: List of criteria and their explanations, used as input for the Delphi Study (round one) and during the workshop

Criteria	Explanation
Quality of teaching	The ability of the online HEI to recruit experienced teachers trained in delivering online teaching, provide them with standards for teaching, etc.
Quality of the learning experience	The ability of the online HEI to offer effective learning experiences, in terms of sound design, delivery, adopted methods, learning materials, assessment means, etc.
Quality of student support	The ability of the online HEI to provide support to learners in different areas (learning, orientation, socializing with peers, organisational issues, use of technology, etc.)
Quality of teacher support	The ability of the online HEI to provide support to teachers and lectures in terms of training provision, organisational issues, use of technology, etc.
Reputation/Impact	Impact on job market, institutional image, communication strategies, etc.
Quality of research	The ability of the online HEI to carry out research initiatives and innovation projects
Quality of organization	Availability of service's structures, efficiency of bureaucracy, etc.
Sustainability of the Institution	Sustainability includes aspects such as the size of the institution, resources, availability of standardised procedures and strategic plans, etc.

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Quality of the technological infrastructure	The ability of the online HEI to offer a sound technological platform, in terms of usability, accessibility, flexibility, types of features offered, etc.

Setting

The workshop took place in Bolzano, Italy on August, 31 2018, in the context of the "EMEMITALIA 2017", an Italian conference organized yearly by the Italian e-Learning Association (SIe-L). This venue attracts the most relevant stakeholders and academics working in the field of e-learning, especially as far as Higher Education (HE) is concerned. The title of the workshop was: "Towards the recognition of the e-learning dimension in the university ranking systems". The workshop was a one-day event, including two sessions: a morning session devoted to a round-table discussion, and an afternoon session consisting of a group work discussion-based activity. Within the workshop, three main topics were considered and discussed (Table 2). The round-table discussion took place in the morning and lasted around 1h 50m, with 6 invited experts and 1 moderator, with an audience of 38 participants. The following group work discussion-based activity took place in the afternoon and participation was free, involving both the experts and part of the morning audience. Participants were split into two groups. Each group worked synchronously, with designed facilitators, for a total duration of 1h 50m.

Table 2: Key topics explored during the workshop

Topics
1. What is your position with regard to university rankings?
2. Do you think e-learning should be considered in university ranking systems?
3. What are your reflections/considerations regarding CODUR's suggested criteria?

Participants

Generally speaking, participants to the workshop came from a diverse range of stakeholders from the national HE community (professors, researchers, students, Ph.Ds., etc.) who had an interest and/or experience in the debate around the quality of online teaching and learning within the University context. The workshop was attended by a total of 38 individuals. Among these, 6 were experts invited as contributors to the round-table. They were all very well-known policy makers in the Italian e-learning context, as they are all members of SIe-L Steering Committee. As far as the other participants are concerned, these included 31 academics (professors, researchers, students, faculty members, …) from 16 different Italian Universities, 4 representatives from Public Agencies operating in the sector of education at various stages, 2 from private organizations, and 1 educator.

Data collection and handling

In order to launch the round-table, prior to the workshop, we sent a message to the 6 experts invited to the round-table explaining them the overall aims of the workshop. They were also provided with the list of criteria (Table 1) along with the list of the three main topics (Table 2)

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and were asked to comment on them during their speech. The round-table took place during the morning session. After an introductory presentation, held by the workshop's coordinator and aimed to introduce the main topic of the workshop, along with the CODUR project and the proposed list of criteria, the floor was left to the 6 invited experts. The round-table was allocated a moderator, who led the discussion allowing two rounds of opinions for each expert. The discussion, involving the audience, turned out to be quite lively, thus demonstrating that the proposed topic is topical within the Italian University context.

The afternoon session was devoted to the collaborative activity. Participants (including the experts and part of the audience) were divided in two groups. Both groups were allocated a facilitator, and a moderator managed the plenary sessions that preceded and followed the group-based activity. At the beginning of this session, a plenary discussion among all the participants emerged very naturally, as a follow up of the morning round-table. After this, the group-based activity was launched as planned. Each group was equipped with a set of paper-forms: a number of individual forms (one for each group member) to provide an individual ranking of the proposed criteria, and one collective form for the group to provide a negotiated ranking of the proposed criteria. At the outset of the activity, each participant was asked to individually rank the proposed criteria (from 1 to 9, assigning 1 to the criterion they deemed most important and 9 to the least important). Then, the group was asked to discuss the individual rankings and achieve an agreement on a common ranking, to be reported in the collective form. During the final plenary session, a rapporteur for each group presented the results of the group ranking activity and the overall group's discussion points.

The round-table discussion was video-recorded and transcribed. In addition, during both sessions, researchers' field notes were collected.

Data analysis

In order to explore the data collected during the workshop, a process of analysis was carried out. As far as the round-table discussion is concerned, transcribed data and researchers' field notes were analysed following a thematic analysis approach (Braun & Clarke, 2006). In particular, the video-recorded session of the round-table was repeatedly watched and analysed to identify pre-determined topic areas, as well as emerging themes and patterns. Pre-determined topic areas were chosen based on the other main tasks of the CODUR project, while other significant themes emerged during the analysis of the video (Table 3). With regard to the group work discussion-based activity, the two criteria rankings generated by the groups were statistically treated and then interpreted on the basis of researchers' field notes relating to perceived dynamics and interactions between participants during the different stages of the activity.

Results

Drawing on data from both sessions, our complete dataset comprised 1 video-recording of the round table lasting ~1h 40m, 2 filled forms presenting the groups' lists of ranked criteria, 10

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filled forms of individual participants' lists of ranked criteria, and 6 pages of field notes. Overall, we collected significant feedback in reference to the CODUR list of criteria and indicators during both sessions. Through the discussion among the 6 experts participating in the round-table, some interesting themes and sub-themes emerged with regard to the proposed topics. In the afternoon, participants actively contributed to the discussion providing additional opinions and comments, and the group-based decision-making activity allowed us to collect feedback in a more structured fashion. In the following, we present a detail of the main outputs emerging from the workshop.

Round-table (morning session)

Through the analysis of transcribed data and field notes from the morning session, we identified meaningful themes and sub-themes (Table 3).

Table 3: Themes and sub-themes emerging from the round-table data

Themes	Sub-themes	Memorable quotes
Epistemological aspects (definitions, peculiarities, field of applications)	The experts underlined the relationship between ranking systems, quality assurance measures, and accreditation systems, in most cases by identifying their different aims	"Ranking systems tend to overlap evaluation systems, but the logic of the two is actually different."
Rankings design (approaches)	While most existing rankings tend to assume a "one size fits all approach", what is needed is a ranking system capable of catering for the needs of different audiences	"(University rankings) have overcome the initial and prior goal that was to offer a quick consultation tool to guide students and families to choose the university."
Levels of (quality) review	There is need to consider quality at all levels: from the micro-level (the course) to the meso-level (the Department) and the macro-level (the Institution). These are different but interdependent.	"Quality comes from the single course, and then builds on to the other."
Data source	Relevant data can be elicited from many sources, but care should be taken in assessing data reliability and accuracy to reflect all the facets of such a complex phenomenon.	"Government and Institutional sources are not always able to capture the complexity of the university system."
Indicators and parameters (methodology)	Rankings indicators should be statistically robust, clearly defined (transparent) and as objective as possible.	"Rankings shows a result, but it is often unclear how such result was achieved."

Collaborative activity (afternoon session)

As mentioned above, individual participants were asked to rank the nine criteria (Table 1) from most important (1) to least important (9). They were asked to focus only on online universities and to consider such criteria as intended to address an online HEI as a whole, rather than at

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course or program level. Since participants worked with pen and paper, choosing the place in ranking for each criterion, ties were theoretically possible. In practice, only a single participant tied two criteria, ranking both reputation and sustainability as ninth by order of importance, so that no criterion occupied the eighth place. This tie was broken randomly (sustainability took the eighth spot). As one group was not able to produce a unique ranking, we only used individual forms filled in by participants from both groups to make our calculations (N=10). The criteria rankings thus obtained were analysed using Thurstone Case V scaling (Thurstone, 1927). This kind of analysis allowed us to obtain estimates of importance on an arbitrary scale (relative importance), complete with 95% confidence intervals (Figure 1).

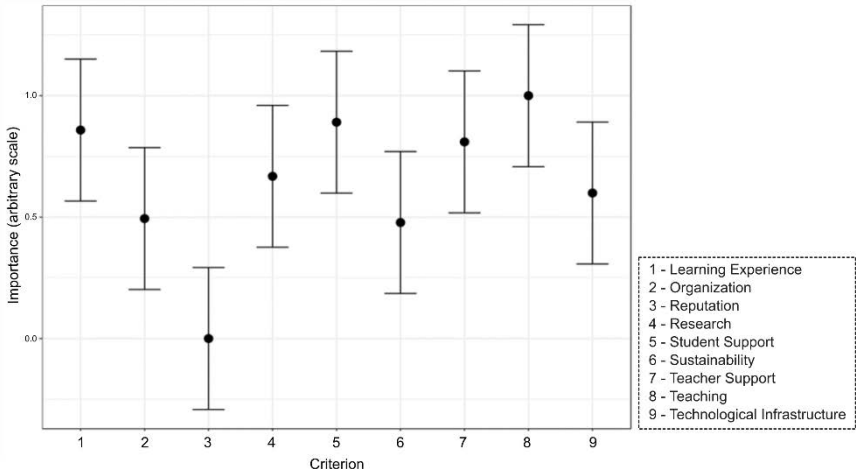

Figure 1. Relative importance of the evaluation criteria as estimated by workshop participants

From the analysis of the narratives emerged during the afternoon session, further reflections could be highlighted. As general consideration, participants agreed on the difficulty of keeping some of the proposed criteria separate – in fact, both groups suggested that some criteria could be aggregated into main categories. They also agreed that the terms used to define the proposed criteria and parameters are in most of the cases subjectively interpretable, with a very wide range, and that some criteria should be added in order to consider specific system figures. A more detailed summary of the different issues emerged is reported in the following (Table 4).

Table 4: Criteria and related issues emerging from the afternoon session

Criteria	Issues
- Student support - Learning experience	Both are considered overlapping but very important.
- Teacher support - Technology infrastructure	Both should consider aspects related to teachers' training as indicator(s).
- Learning experience - Teaching	Both should be developed on students' performances measurements as well as their actual experiences.
- Sustainability of the institution - Reputation	Both are considered less important, but meaningful in terms of external image of the Institution (in this sense, they both might be somehow a result of all the other criteria). "Reputation" should be meant as the impact on the labour market. "Sustainability of the institution" could be interpreted as an appendix of "Reputation".

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- Technology infrastructure - Organization	Both are considered important and the backbone of everything, without which any online Institution could exist.
- Technology infrastructure	It is a fundamental prerequisite, not only in terms of classical e-learning platforms, but as anything guaranteeing the workability of the online structure from the technological point of view.
- Teaching - Teacher support	Both refer to pedagogical aspects and are considered related: if quality of teaching is guaranteed, then it means that behind there is a level of support for them (also in terms of training).
- Research	It is very much oriented to publications, rather than reflection, monitoring of results, attention to innovation, ability to promote innovative projects, …
- Student support - Teacher support - Learning experience - Teaching	They all are related to pedagogical aspects and could be grouped into one meaningful comprehensive category.

Discussion

Thanks to the workshop, we got together national stakeholders with different backgrounds to discuss some relevant aspects related to the evaluation ranking systems for online universities, and identified possible strategies to refine, enrich and evaluate our preliminary list of criteria. Key findings are in terms of general considerations and recommendations informing, nurturing and enhancing our work at a methodological level. When examining the body of literature surrounding university ranking systems in general, evaluation, accreditation and ranking are considered as very critical aspects within the HE community. As it was also highlighted during the workshop, it is important not to mix these terms up, as they point to different actions, each one with different aims. Another aspect that has clearly emerged from the workshop, is that existing ranking systems are controversial (Amsler & Bolsmann, 2012; Barron, 2017; Çakır et al., 2015) and many of them are being criticized for not being solid enough, especially as far as validity of indicators, methodological correctness, transparency of sources of information and algorithms, etc. (Billaut et al., 2009). On the other hand, developing criteria able to adequately measure the quality of universities is still perceived as fundamental. In particular, the lack of specific criteria and indicators for measuring the quality of online learning is definitely felt as an urgent gap to be filled in by the HE community.

Our findings resonate with this body of work, and we have decided to focus on the ranking area by tackling a real need, i.e., to define specific criteria for the online dimension of HEIs. Defining criteria for the online dimension of HEIs is something extremely delicate and one should choose the exact focus of the work. In fact, when we use the term *online dimension* within the HE context, we can point to many different situations, ranging from "completely online institutions" (as the Open Universities), to traditional Universities running only a few courses or entire programmes through the Internet. In our work, and during the workshop in particular, we have chosen to focus on the evaluation of online HEIs, rather than on traditional universities with an online component or individual online courses or programmes. On the other hand, it

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has been very useful to gather opinions from experts with a solid background in traditional universities, but at the same time highly competent on the topics of online education. In Table 5, we summarize useful feedback on the proposed list of criteria in terms of operational actions for fine-tuning it.

Table 5: Operational actions for fine-tuning our criteria and indicators

Methodology (criteria)	A statistical correlation would help merging some of the criteria. According to our results so far, "Quality of student support" and "Quality of learning experience" are probably very much related; the same can be said for "Quality of teacher support" and "Quality of teaching". "Quality of learning experience" and "Quality of teaching" (even if very much related) should be merged and considered the most important criteria.
Methodology (indicators)	Indicators should be operationalizable (straightforwardly measurable) and coherent (same level of detail). Whether developing qualitative or quantitative indicators, or a mix of them, this should be clearly chosen and stated.
Focus/context (indicators)	Indicators should be focused specifically on the online dimension. Whether the final output of our work will be integrated within one existing ranking system or it will stay as a stand-alone set of indicators, this should avoid using indicators referring to the institution as a whole (independently on the online dimension).

Conclusions

Building a ranking tool specifically designed for online universities is crucial to enable stakeholders' reflection on HEIs' peculiar nature. It is essential that online universities are not ranked according to the same criteria and indicators used for traditional universities, in order to represent their actual quality, and allow fair comparison between the two types of institutions. We have begun to develop, test and refine representative performance online quality education indicators based on common criteria. Overall, the actions put in place so far have turned out to be quite effective in terms of feedback collected. In particular, by comparing the results of the workshop with the ones of the Delphi Study round one, we observed remarkable agreement. Additionally, the face-to-face participatory approach adopted in the workshop provided us with valuable insights and qualitative data, despite the relatively low number of participants. Among the main conclusions of this work, the importance of teaching, student support and student experience turned out to be higher than any other criteria, organization, teacher support, research, sustainability and technological infrastructure are middle ground criteria, while reputation was deemed the least important criteria.

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