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Regular Article

Massive open online learning for democracy in political science: Learners' reactions to connectivist elements

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ABSTRACT

Massive Open Online Courses (MOOCs), praised for their global scale and open-access elements, are commonly associated with several challenges. These include unequal access, limited interactivity, or insufficient learner background and skills. This article aims to understand how introducing online and offline connectivist elements influences MOOC learners' engagement and motivation and self-perceived benefits from undertaking MOOCs. To do so, we present descriptive statistics and analyse results from focus groups of regionally and disciplinarily diverse learners of the Federica Web Learning – International Political Science Association (IPSA) MOOCs, who were introduced to connectivist elements in the IPSAMOOCs. We find that limited connectivist elements added to the IPSAMOOCs did not notably affect learner engagement and motivation. However, the IPSAMOOCs have considerable potential to impact engagement and motivation, if combined with offline activities. The findings contribute to studying the prospects of MOOCs as a potential avenue for accessible, global digital Political Science education, advancing the appreciation of democracy.

1. Introduction

Digitalisation has transformed education, stimulated new methodologies, and advanced data collection—including in Political Science (e.g. Glazier, 2020; Kneuer & Milner, 2019, pp. 9–10). Despite massively albeit unequally accelerated during the COVID-19 pandemic (Moon et al., 2024; Williamson et al., 2021), it remains unclear whether and how digitalisation enhances and diversifies access to knowledge and advances education for democracy as the aspirational contemporary ideal (e.g. Brown, 2010). An understudied dimension of digitalisation of Political Science education (see Hamann et al., 2009) concerns the expansion of Massive Open Online Courses (MOOCs). MOOCs are among the most puzzling formats for enhancing knowledge access (Cleveland-Innes & Ostashewski, 2019, p. 4). MOOCs in humanities and the social sciences may be particularly suited to fulfil a 'civic mission' (Yeomans et al., 2018, p. 553) to deepen democratic values. MOOCs may employ democratic approaches to education, including encouraging interaction and feedback. Even more traditional MOOCs that build on the instructors' authority may incorporate connectivist elements into an otherwise less democratic educational setting.

Against this backdrop, we examine whether the introduction of such elements to a set of MOOCs employing otherwise less democratic approaches influences the learners' self-perceived benefits gained from the MOOCs. In the spirit of democratic education, we consider learners' perceptions as key for evaluating MOOCs' success, potential, and limitations, as opposed to merely top-down indicators (e.g. course completion). To further scrutinise the learners' experiences with MOOCs with emphasis on their democratising potential, we juxtapose the connectivist elements (venues for interaction, feedback, and networked learning) with elements based on the concept of extrinsic motivation (such as reimbursement of certificate fees). If the perceived value from extrinsic motivators dominates over the value from connectivist elements, questions arise about the latter's significance for the learners' experience.

We focus on the IPSAMOOCs, a key initiative to provide comprehensive introductory Political Science MOOCs emphasising democracy. Of seven IPSAMOOCs,[1] five comprise a series that enables learners to gain a certificate titled "Introduction to Political Science". Three focus

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[1] https://www.ipsa.org/resources/ipsamooc. All hyperlinks were accessible as of 1 March 2024.

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on substantive questions (democracy and autocracy, world politics, and comparative political systems), while two are primarily methodological (concept building and comparative research design and methods). We scrutinise the five IPSAMOOCs in the "Introduction to Political Science" program.[2] Instead of being tied to a single university, an international university centre (Federica Web Learning) runs these MOOCs in collaboration with the International Political Science Association (IPSA) (Carannante et al., 2021, pp. 2375–76). Our study introduced connectivist elements to the IPSAMOOC experience of a diverse learner group. Firstly, a "virtual class" was brought together with learners in conversations mutually and with the researchers before, during, and after they had undertaken the IPSAMOOCs. Secondly, selected "graduates" of this class and other learners participated in an in-person summer school on key political concepts, building on the respective IPSAMOOC. Therefore, learners amassed perceptions of connectivist elements both online and offline.

We proceed in four steps. Firstly, we conceptualise the gap in existing research on the various types of MOOCs concerning the presence or absence of connectivist elements as a proxy for MOOCs' democratising potential and discuss why it is particularly suitable to study Political Science MOOCs in this respect. Secondly, we present how focus groups, combined with descriptive statistics, help study the existing challenges in MOOCs and the self-perceived benefits of introducing connectivist elements instead of extrinsic motivators with a diverse group of MOOC learners. Thirdly, we present the limited but illustrative results showing the potential of connectivist elements for learner benefits: the MOOC learners express a desire for these more democratic approaches, even though they are also prone to appreciate extrinsic motivators, and so the *combination* of the two appears significant for self-perceived benefits. Finally, we outline the implications of the findings for further research.

2. Situating the IPSAMOOCs

'It serves no purpose, except to irritate and demoralize the student, for me to talk of democracy and freedom and at the same time act with the arrogance of a know-all' (Freire, 2000, p. 61).

MOOCs were initially hailed as having a 'disruptive' and 'revolutionary' potential (Bryant, 2015) due to combining Open Educational Resources (Toven-Lindsey et al., 2015) and Technology Enhanced Learning (Hamann et al., 2009), enabling broad access (Baturay, 2015). MOOCs can attain large scales, cover broad topics, and allow association with recognised universities or academic associations without the often-expensive physical presence (Adamopoulos, 2013; see also Musella & Reda, 2019, pp. 169–174).

Ever since their debut in 2008 (Shapiro et al., 2017) and popularisation in 2012 (Pappano, 2012), MOOCs have become a typical feature of higher education (Baudewyns et al., 2018). Some MOOCs follow a 'connectivist model' (cMOOCs) that emphasises peer- and social learning, while others are 'cognitivist-behaviourist' (xMOOCs) (Veletsianos & Shepherdson, 2016, p. 200 and references therein), resembling traditional frontal teaching (Baturay, 2015). According to Toven-Lindsey et al. (2015), cMOOCs have more learning potential, and they are closer to democratic ideals as they reduce the hierarchy between instructors and learners and encourage interaction between participants (De Caro-Barek, 2019, pp. 1–6).

Even methodology-focused Political Science courses can help learners understand the relationship between democracy and other vital political concepts frequently used in the public discourse or by training them to scrutinise relationships between political phenomena by, e.g., explaining their necessary and sufficient conditions. Indeed, *a democratic approach* to education can also help build democratic consciousness (Rowland, 2003; Meier, 2011; Soltis, 1993). Increasing access to education via MOOCs has democratising potential (Littlejohn & Hood, 2018, pp. 28–30). However, course structure and design may be more conducive to disseminating democratic practices via a learner-centred approach. In this conception, the self-assessed benefits from the MOOCs are vital for assessing their success.

While xMOOCs can also allow flexibility and may be made more globally accessible thanks to lower implementation demands, cMOOCs entail interaction as an essential feature of democracy. In this sense, xMOOCs are less conducive to a democratic course design. A step towards the democratisation of xMOOCs, and thus also towards enhancing their potential to entrench democratic practices, may be the introduction of connectivist elements. Nevertheless, existing attempts are limited, particularly in Political Science MOOCs. Our article addresses this gap by examining the relevance of introducing connectivist elements to learners' self-reported benefits from the course. We look at whether establishing interactions between a selected group of IPSAMOOC learners prompts them to perceive additional benefits in the IPSAMOOCs.

The introduction of these elements (described below) generates, in addition to learner interaction, sources of extrinsic motivation. These are primarily the reception of a certificate (reimbursement of the fees otherwise associated with obtaining a certificate) and an invitation to participate in an in-person event. While the latter also fosters (offline) connectivist elements, if learners praise the possibility to participate in the event for reasons other than enhancing the interaction with the community, this activity is primarily an extrinsic motivator; it is not to be seen as a democratising milestone.

An understudied avenue is whether connectivist elements introduced to xMOOCs, such as the IPSAMOOCs, can increase engagement and motivation. Our study explores this question concerning online and offline community-building and a set of additional incentives introduced into the xMOOC model (covering the certificate fees or the possibility of participating in an offline event). This question is crucial against three challenges for MOOCs that apply to the IPSAMOOCs.

2.1. The challenges of MOOCs and Political Science

MOOCs face several global challenges. Firstly, learners might experience the 'social identity threat' (Kizilcec et al., 2017, p. 251; see also Castaño-Muñoz et al., 2017; Meaney, 2021) when comparing themselves to their more affluent peers. Learner communities mitigate but do not eliminate the threat of individualised learner environment failing to develop social norms of communication, interaction, and collaboration (Tilak & Glassman, 2020; Waks, 2016, pp. 64–65, see also Gunes et al., 2024). They may even exacerbate the divides due to the differences in self-perceived qualification (Hamann et al., 2009; Toven-Lindsey et al., 2015).

Learner engagement in MOOCs can be cognitive, behavioural, social, and emotional (Deng, 2020). XMOOCs primarily rely on the former two: MOOC learners' intellectual and actual (the latter more easily traceable) involvement with the activities and learning material (see Deng, 2020, p. 4). Interaction with other humans is determinative for social and emotional engagement, with the instructor playing a particularly central role (Jung & Lee, 2018). Emotional engagement that is, 'the general affective reaction learners have about their learning experiences, such as interest, enthusiasm, enjoyment, vitality, frustration, or boredom, and their social connection with others', has been found positively associated with learners' confidence in having the necessary internet skills (Kuo et al., 2021, p. 3).

The second challenge is *motivational*. It denotes a need for progress in an informal learning environment without deadlines (Littlejohn et al., 2016). A verified certificate as a measurable achievement is often costly and so not affordable for the learners who need it the most (cf. Despujol et al., 2017). Thirdly, communities alone cannot alleviate the *technical challenge* linked to electricity and the Internet. This 'digital divide' was

[2] https://www.edx.org/xseries/federicax-introduction-to-political-science. Since 2023, the courses are also available on the Coursera platform. https://www.ipsa.org/na/news/ipsamoocs-now-available-coursera.

demonstrated even in some high-income countries such as the United States (Hansen & Justin, 2015, p. 1245; see also Castaño-Muñoz et al., 2017; Moura et al., 2017). Similarly, communities can do little to alleviate the lack of digital literacy (cf. Christensen, 2016). All in all, 'lack of time, lack of learners' motivation, feelings of isolation and the lack of interactivity in MOOCs, insufficient background and skills, and finally hidden costs' tend to reduce learner benefits (see Khalil & Ebner, 2014).

The implementation of MOOCs in specific fields (Zhu et al., 2018), let alone Political Science, has been less studied. Social science and humanities MOOCs tend to have more dropouts (Adamopoulos, 2013; Xu & Jaggars, 2014). Nevertheless, such MOOCs can disseminate insights about society and politics to a greater audience, potentially contributing to informed electoral choices and political participation. Garson's (1998) was one of the first attempts to describe Political Science web-based teaching. His findings remain relevant today: self-motivation, independent learning and writing skills, and sound equipment remain essential for computer-based learning.[3]

These early studies focus more generally on online learning. More recent similar studies showed how active learning is beneficial during online learning (Hamann et al., 2009) or compared learning through face-to-face and online discussions on a closed university platform (Bliuc et al., 2010). In short, research still needs to catch up with experience and technological development (Hamann et al., 2017). Even the perhaps most sophisticated study of a Political Science MOOC to date examines an introductory course transformed into a MOOC (Baudewyns et al., 2018). A lower dropout rate relates to a cohesive pedagogical team, a "pilot team" that provided feedback along the course, and reward-based evaluation. However, attendants of this MOOC had relatively homogeneous profiles.

2.2. *"Connectivising" the (IPSA)MOOCs?*

Baudewyns et al. (2018) highlighted the contribution of Political Science MOOCs in using Political Science methods and concepts to interpret the ever-changing world. However, research on MOOCs outside Political Science suggests that some incorporation of connectivist elements to xMOOCs (i.e., a hybrid design) is necessary to facilitate diverse learner engagement and motivation (Anders, 2015, pp. 51–54; see also Blanco et al., 2016). The most successful MOOCs focused on alleviating educational inequalities and injustice emphasise 'learner support', including online tutorials and discussions (Lambert, 2020, p. 3). These features contribute to a 'MOOCocracy' – 'a democratic global social learning culture developing in social science MOOCs with predominantly adult learner participants' (Loizzo & Ertmer, 2016, p. 1026). Nevertheless, such elements significantly increase the costs of MOOCs, especially with heterogeneous learner groups.

Therefore, it is essential to understand whether connectivist elements introduced to the IPSAMOOCs affect learner engagement and motivation and how additional incentives (such as the reimbursement of the verified certificate) could fruitfully interact with such elements or even make a significant difference alone. Our article does that by studying the benefits perceived from introducing such elements to selected learners.

3. Methodology and data

Our article seeks to understand learners' self-perceived benefits in response to introducing online and offline connectivist elements into a MOOC series. For this, the IPSAMOOCs are a suitable case given that their topics are of general interest and relevance to all individuals who participate in political processes. Our article combines descriptive statistics from the edX platform and qualitative primary data from focus groups and interviews with IPSAMOOC learners (see Appendix A for the list). Descriptive statistics demonstrate the diversity of the IPSAMOOC student body, which reflects the cohort selection, and show engagement behaviour and student preferences. While the focus groups these students joined were specific in that they comprised a smaller group of previously interconnected individuals, they still present novel results on the benefits and limits of the "connectivisation" of xMOOCs.

Focus groups allow the expression of ideas freely, making it possible to learn from participants' perspectives mutually. Compared to interviews, their interaction slightly increases the prospects for original data highlighting significant features of everyday experiences (cf. Cyr, 2016). Focus groups help identify participants' thoughts, enabling inferences about the characteristics and decisions that could define a larger population and reconstruct an event (Tansey, 2007). This article uses online focus groups (see Lobe et al., 2020) due to the geographical distribution of the participants that made in-person focus groups infeasible (see also Jones et al., 2022). The study utilises this focus group variant for research on Political Science education, thus beyond typical disciplinary uses (cf. Stanley, 2016 for the dominant use of focus groups in political marketing and political behaviour). We conducted six focus groups and two interviews[4] divided into two sets. The first set consists of four focus groups, conducted in March–April 2019, with ten students in total from different backgrounds, nationalities, genders, and ages who enrolled in one or more IPSAMOOCs as part of the virtual class coordinated by the International Association for Political Science Students ("IAPSS Class") (see Figs. 1 and 2).[5] Skype meetings were conducted with these students using a specific list of questions related to their experiences with the IPSAMOOCs.

Members of the "IAPSS Class" were selected through an application process promoted by IAPSS worldwide. The participants benefitted from program fee reimbursement upon successful completion, as well as the award of certificates, in addition to being invited to a concluding event

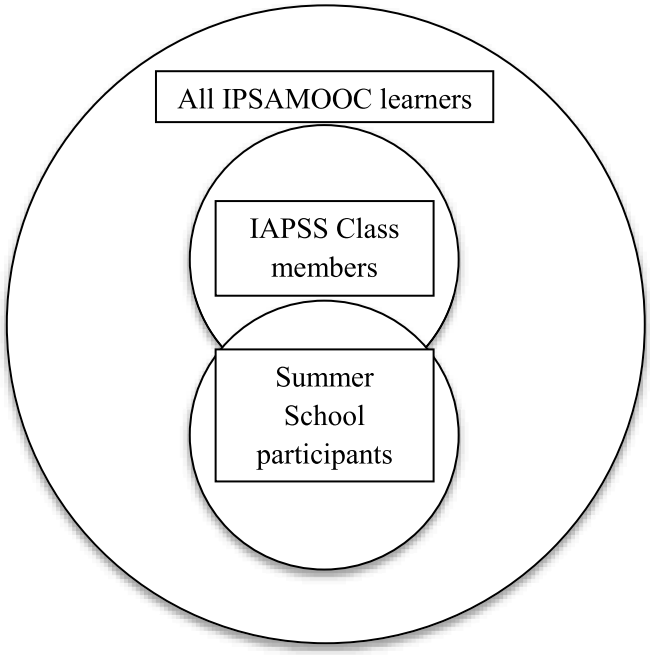

Fig. 1. The three groups of participants.
Source: authors.

[3] Carr et al. (2007) analysed wikis for collaborative online learning in Political Science but focused more on the transition to the online environment.

[4] Two students were not able to participate in the focus groups. Interviews with the same questions enabled us to account for their insights.

[5] For more information about IAPSS, see https://iapss.org/.

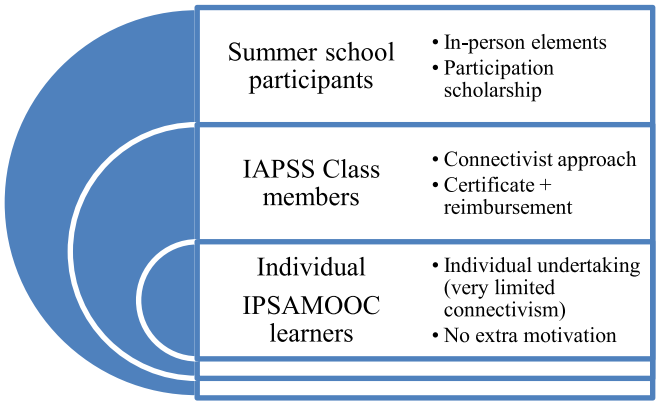

Fig. 2. Key characteristics of the connectivist elements in comparison to the individual IPSAMOOC learners.
Source: authors, applied from reviewing studies on connectivisation in xMOOCs (see "Situating the IPSAMOOCs").

featuring a discussion on their experiences with the IPSAMOOCs upon their "graduation" from the program (a roundtable at the "IAPSS World Congress 2019"). Those who could not afford the payment of the program fee, even with the prospect of being reimbursed upon completion, received the coverage of the program fee upon completion of any three of the five courses in an audit mode (two respondents utilised this approach). The distribution of the membership in the IAPSS Class is diverse, which allows us to compare the potential influence of different sociodemographic and other individual characteristics on the perception of the courses. After the selection, the IAPSS Class consisted of ten participants[6] from nine different countries,[7] including undergraduate students (2) and graduate (1), Master's student (1) and graduate (1), PhD students (2) and graduate (1), and Lecturers/PhD graduates (2).

Moreover, we conducted a second set of two Skype focus groups and two interviews in November–December 2019. The six participants hailed from Greece, Indonesia, Germany, Ukraine, Poland, and Romania. The aim was to assess the interaction of online and onsite education in Political Science when combined, the latter based on participants' experience with the IPSA-Federica Summer School[8] "Concept Analysis in the Web Environment" in Italy in September 2019. The summer school focused on the theoretical framework and analytical tools for developing political science concepts, focusing on the *Hyperpolitics* methodology (Calise & Lowi, 2003, 2010).

The first part of the program consisted of the "Political Concepts" IPSAMOOC, undertaken as self-paced before the summer school. Learners then proposed a concept they intended to develop during the summer school. Before the summer school, participants could also schedule a Skype meeting for questions on the course and their proposal. Students developed their ideas into their conceptual matrix during the five-day residential summer school.

We conducted focus groups to collect data on the IAPSS Class and the IPSA-Federica Summer School participants' experiences within the IPSAMOOCs. We used this data in order to (1) assess students' evaluations of IPSAMOOCs and (2) understand how to overcome identified challenges by analysing the self-perceived benefits from the introduction of connectivist elements.

4. Findings

Does introducing online and offline connectivist elements to MOOCs potentially improve learner engagement and motivation? The following section first provides descriptive data on IPSAMOOC learners. Secondly, we analyse the two sets of online focus groups.

4.1. The IPSAMOOC learners: who they are and how they engage

Descriptive statistics[9] addressing 16 weeks between November 2018–February 2019 helps (1) understand who the IPSAMOOC learners are in terms of selected sociodemographic characteristics (age, gender, education, and geographic distribution); (2) assess their self-reported engagement. Firstly, we demonstrate the IPSAMOOC learner diversity and its overlap with the sociodemographic characteristics of the participants selected for the connectivist activities. Second, we showcase trends concerning access and activity completion during the studied period for those accessing the course platform and the proportion of those using specific features of the IPSAMOOC platform.

Overall, the IPSAMOOC learners, based on the limited period under study, are (1) primarily under 35 years, (2) with a minor gender gap in favour of male learners, (3) usually with some university background, and (4) dispersed around the world, with a concentration on the "Global South" and the "West". Over 60 % of the learners are between 21 and 35, with the age range of 21–29 representing 45 %. The "Comparative Research Design and Methods" IPSAMOOC tends to attract slightly older learners, while the "World Politics" IPSAMOOC appeals to slightly younger learners (Fig. 3). 55.3 % of all learners who indicated their gender (less than two-thirds of all learners) are male. Those with some university education (regardless of specialisation) comprise a slight majority (60 %). However, the presence of learners with secondary education (27 %) showcases the potential of the IPSAMOOCs to attract learners who have either not started their university studies yet or do not plan university education but are interested in understanding politics (Fig. 3).

The IPSAMOOCs are no "Western-only" endeavour. Although North America and the European Union represent 44 % of all learners, the data indicate IPSAMOOCs' reach in the "Global South"; Asia is the region with the highest single proportion of learners (almost 30 %), and one-fifth of learners hail from Latin America and the Caribbean or Africa (Fig. 4). This distribution indicates that the IPSAMOOCs have the potential to become a global platform and that connectivist initiatives should embrace and foster this diversity.

Engagement-wise, learners are not constantly active on the platform, and interest might decrease over time, for example, due to volatile access to the IPSAMOOCs. Fig. 5 displays the number of *accesses to the IPSAMOOC platform* in the given week (for various engagement patterns, see also Saqr & López-Pernas, 2021, p. 3). This approach to engagement is "minimalist" because the accesses might not entail substantive activity. Therefore, more targeted statistics of concrete activities in the IPSAMOOCs follow the overall number of accesses. So understood, the "World Politics" IPSAMOOC had the highest number of accesses, almost doubling the second, "Political Concepts" IPSAMOOC. The course subject and the pre-enrolment dates might matter, as the "World Politics" IPSAMOOC was just opened for enrolment during the studied interval.

Moreover, most learners did not use the available features of the IPSAMOOC platform (videos, problem-based exercises, discussion forums). Videos were preferred. Nonetheless, learners watched only an average of 200 videos per week. The "World Politics" IPSAMOOC again

[6] The IAPSS Class originally consisted of eleven learners. However, one dropped out.

[7] Australia, Italy, Indonesia, Finland, the United States, Nigeria, Mexico, the United Kingdom, and Poland.

[8] For more information on the IPSA-Federica Summer School, see http://ipsasummerschool.federica.eu/.

[9] The data source is edX Insights.

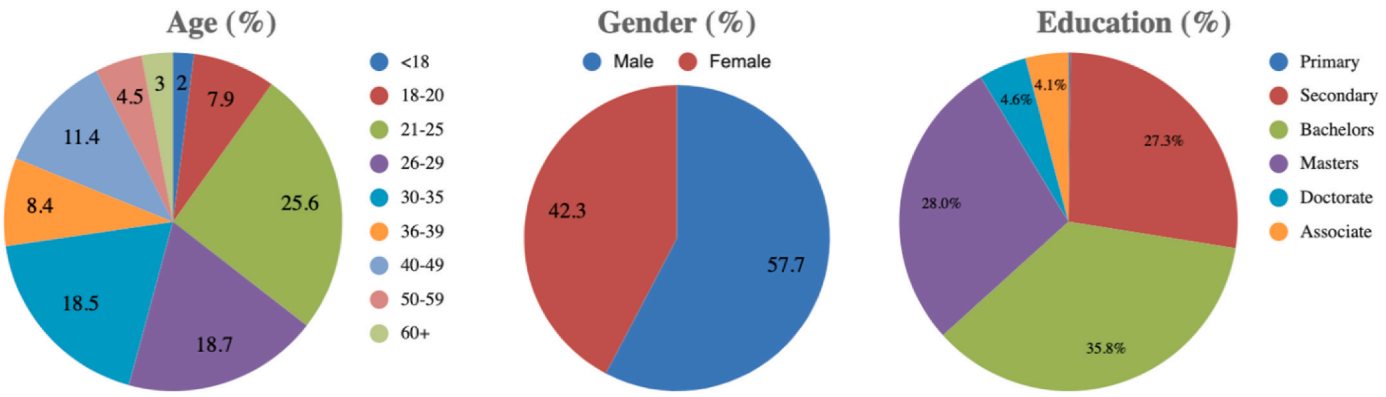

Fig. 3. Age, gender, and educational level of the enrolled students (all IPSAMOOCs).
Source: Elaborated by the authors, based on data from Federica Web Learning (11/2018–02/2019).

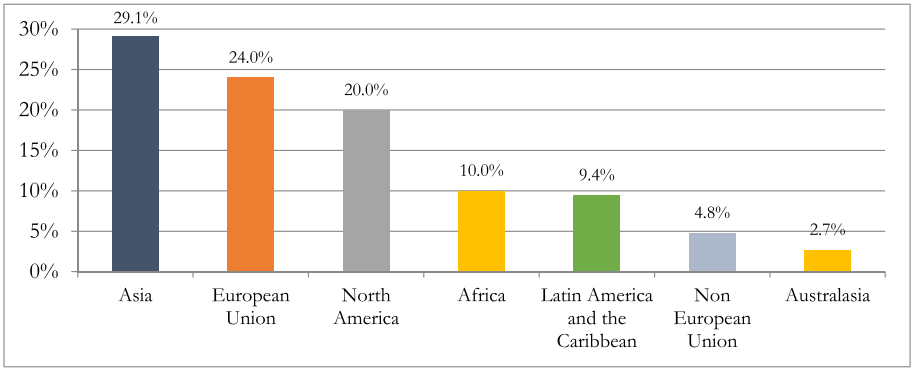

Fig. 4. Enrolled students by region (all IPSAMOOCs).
Source: Elaborated by the authors, based on data from Federica Web Learning (11/2018–02/2019).

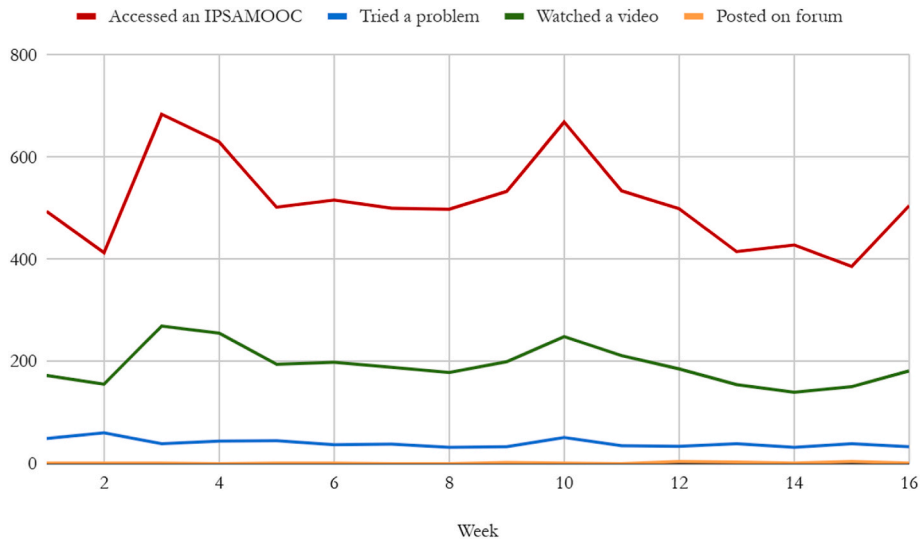

Fig. 5. Engagement over 16 weeks (the vertical axis shows the total numbers of performance of the particular activity in all courses cumulatively).
Source: Elaborated by the authors, based on data from Federica Web Learning from November 2018 to February 2019.

had the highest number of videos watched (1.220 over the whole period compared to less than 500 in the other courses). Learners engaged less with trying a problem, although the "Comparative Political Systems" IPSAMOOC displayed the highest numbers of problems tried (225) and "World Politics" the lowest (12). Finally, barely anyone engaged with the connectivist forum feature (only between one and four forum submissions per week). These findings indicate that on a self-paced basis, most students are less engaged, especially with the more connectivist features on the platform, raising questions on the reasons and avenues of improving connectivist elements within a broadly xMOOC-based design.

4.2. *The potential of connectivist elements in the IPSAMOOCs*

We study two connectivist initiatives: the IAPSS Class and the IPSA-

Federica Summer School. Focus group data summarise the participants' impressions of the IPSAMOOCs and the benefits each participant group valued the most. Table 1 provides an overview of the results. Firstly, it shows the participants' experience with the IPSAMOOCs, where we aggregated the most relevant issues raised as some responses overlapped between both groups. Secondly, based on the reported benefits, we evaluated whether and how the connectivist elements changed their experience and helped overcome the identified challenges.

4.2.1. The IAPSS Class

The IPSAMOOC connectivist activities attracted diverse participants. Some were enrolled in or graduated from Political Science, and others hailed from different social scientific disciplines. However, both perceived the IPSAMOOCs as an opportunity to complement their university education—even if the latter contained an online component. Motivation-wise, those not initially from Political Science thought particularly highly of the IPSAMOOCs as introductory material. The IPSAMOOCs appealed to those who were enrolled or thought of enrolling in a PhD in Political Science or a closely related field, as it motivated them to think more thoroughly about research design and methodology in particular. For instance, some participants were interested in learning new methods that are not widely used in their field (a participant with a background in Journalism) or country (a participant from Mexico). This diversity indicates the capacity of the IPSAMOOCs to act as a hub for global Political Science education, connecting not only students in the discipline but also adjacent fields. In addition, several participants found the prestige of Federica Web Learning and IPSA helpful in guaranteeing the IPSAMOOCs' credibility. Those from disadvantaged environments in terms of funding for education particularly appreciated the IPSAMOOC brand. In line with the descriptive statistics, the participants enjoyed watching the videos. One participant praised the platform's convenience, saying it enabled 'sometimes to get the audio from them and listen to them like podcasts when commuting or when doing some exercises' (Focus Group 2, Participant 2).

However, a participant from Nigeria faced technical challenges with stable internet access, which was needed to consult the videos, and others struggled with the motivation to complete the course without delays. However, none of these perceptions about the IPSAMOOCs are particular to the connectivist elements. Motivation-wise, interaction was mentioned as conducive to engagement and motivation, with one participant suggesting a moderated platform. The "default" IPSAMOOC discussion fora were received less enthusiastically: '[d]iscussion boards were quite empty, so it is also something that is my fault because I didn't contribute' (Focus Group 2, Participant 2). 'I'm not aware of the existence of a discussion group, so I haven't joined one. […] I want to know more about the discussion group because I really think that discussion is really important for me, and I would love interacting with other participants so that I can […] through that learn more' (Focus Group 2, Participant 3). These observations indicate some reasons for the low use of the discussion forum.

Some participants mentioned that the IAPSS Class membership motivated them by feeling of group belonging: 'Apart from my own commitment […] reminders […] or Skype conferences […] were an important factor to schedule my time. Without that kind of motivation, maybe I would have given up at some moment […]' (Focus Group 2, Participant 2). Moreover, learners enjoyed and valued the 2019 IAPSS World Congress roundtable to meet and share their experiences. However, the prime motivation appeared to be result-oriented: earning a certificate without the certificate fee. While participants considered the fee as too high to be affordable and stimulating, surprisingly, not everybody advocated eliminating it. Some participants perceived a lower fee for the certificate track as ideal, as it would combine the reward and recognition of the certificate upon completing the course and the feeling of financial investment that they would lose if they do not complete the course. Despite the recognition of the program making the certificates valuable, the primary role of a paid certificate appears motivational: to avoid the loss of funds invested and as a form of recognition of the completion. The agreement about the motivational role of a fee adds up to a recurrently mentioned need for a broader range of more challenging and rigorous evaluation methods than multiple-choice tests, which could reinforce learning. This combination corroborates the already observed need for tangible motivation for online learning (Littlejohn et al., 2016).

While most participants appreciated the IPSAMOOC experience, we observed a divide between the ranking of the university program of the respondent and previous background in Political Science with the degree of IPSAMOOC satisfaction. On average, respondents from specialised Political Science programs from higher-ranked universities (based on global rankings) were more critical than respondents from different disciplines or universities. That matches their perceptions on the methods of assessment. Most of them advocated for the increased difficulty of the exams, especially in the "content-based'" IPSAMOOCs, while some deemed it appropriate. However, for other IPSAMOOCs, learners found it more challenging to identify practical applications. Therefore, increased exam difficulty might have discouraged some participants from completing the IPSAMOOCs.[10]

4.2.2. IPSA-Federica Summer School

The potential and challenges of the online connectivist experience might not transfer to the offline environment. When responding to the same questions, the focus groups and interviewed participants of the IPSA-Federica Summer School indicate the unique capacity of offline activities to develop long-term engagement with the course content.

The summer school participants were similar to the IAPSS Class members in their evaluation of the "Political Concepts" IPSAMOOC. They have, however, observed that while the IPSAMOOC helped gain the theoretical knowledge on the *Hyperpolitics* methodology (see above) and the case studies solidified that knowledge, it was not sufficient for them to be confident in applying the methodology – likewise observed among IAPSS Class participants. This gap between theoretical knowledge and application might have affected their motivation to complete the IPSAMOOC had the summer school not taken place. Two participants advocated adding more empirical exercises already to the online course.

The main benefits mentioned by all participants of the onsite summer school were related to interaction and feedback. Learners valued the Skype sessions before the summer school in this respect. The "human component" was essential, as students valued the contact with the

Table 1
Main findings from the focus groups for the two initiatives (IAPSS Class, IPSA-Federica Summer School). Source: authors.

IPSAMOOCs evaluation (both groups)		IAPSS Class	Summer School
+	–	Benefits from connectivist elements	
Flexible study Videos Contact with Political Science Prestige of IPSAMOOCs Learn methods not widely used in one's own country or field	Forum tool Application of concepts Difficulty Motivation and technical issues to complete courses Cost of certificate	Membership in the group Access to free certificate Participation in IPSA event IAPSS class partially helping to overcome lonely learning experience	Interaction with others Instructors' guidance Feedback Extra material Format Space for questions Empirical component Contact with IPSA

[10] One member of the IAPSS Class did not complete one of the five courses due to failing the exam (including the retake option offered by edX).

instructors and peer learners. Similarly, the existence of some guidance along with the possibility to ask questions, receive feedback on what they were working on, and exchange ideas with instructors and colleagues were the main reasons mentioned for the importance of interaction: '[i]t was very relaxed, but in a good sense that we had the chance to express a lot about ourselves, to discuss a lot about each other [conceptual] matrix and I really enjoyed how it went' (Focus Group 6, Participant 3). Although this aspect is challenging to replicate on a large scale, respondents indicated that the possibility of a space for feedback, questions, and interactions along their progress on learning brought the IPSAMOOC content closer to its empirical application:

'I had these main ideas from the online course in my head, but when I actually started putting it all together, I realised that it was a bit different […] this is about, like, experience about making your own matrix and getting feedback […] because when I started doing that I comprehended completely in another way than […] during the online course. […] After the summer school, it changed, and it gained the shape that I really had intention at the beginning, but was not able to choose the right concept from the very first time by myself' (Focus Group 6, Participant 3).

'During the online course I found I don't really understand some parts, like I couldn't really like apply it to anything, but when I came to the summer school, I really understood better the *Hyperpolitics* [methodology] and how I can apply to my own research […]. I think that's the main benefit I [gained] from going to the summer school' (Focus Group 5, Participant 3).

Similarly to the insights gained from the focus groups with the IAPSS Class members, summer school participants enjoyed watching the videos, downloading and watching them offline with a fast-forward function. Likewise, organising the summer school by a scholarly association and a university centre raised the learners' eagerness to get more academically involved with Political Science. However, unlike the online participants, the summer school appears to have been more successful with respect to the long-term implementation of the insights gained. Participants learned about the International Political Science Association (IPSA) and, based on the concept they started developing at the summer school, half of them submitted an abstract for the IPSA World Congress 2020 (then, however, postponed to an online format in 2021 due to the COVID-19 pandemic). Not all latter were engaged with Political Science, thus enhancing interdisciplinarity.

5. Discussion: improving motivation and engagement in MOOCs

With the COVID-19 pandemic having made online education, including MOOCs, even more prominent (Tlili et al., 2022), the question of how MOOCs can amplify their potential grows significantly. Our findings corroborate that MOOCs cannot fully replace in-person interaction (see also Sharma et al., 2022). Further research is needed on innovating from the individualised feature of online learning (Waks, 2016) and, at the same time, decreasing the reasons for dropout (Khalil & Ebner, 2014) by reaching a more connectivist experience (Anders, 2015, pp. 51–54; Blanco et al., 2016).

Our study has several limitations. Firstly, the single, albeit diverse group of learners for a particular MOOC program over a designated period provides informative insights into the effects of particular online and offline connectivist elements, but factors unrecognised during the focus group discussions may cause the effects of the same activities to differ with a different group of learners. Secondly, our data pertain to the period before the COVID-19 pandemic, thereby offering a window into the self-perception of learners using distance educational tools before their rapid spread due to the pandemic, but cannot capture developments after the pandemic. Thirdly, we could not interview IPSAMOOC learners who have not engaged in connectivist activities. Further research could adopt an experimental approach to compare groups of learners who did and did not pursue connectivist initiatives.

Despite these limitations, the study contributes to how to improve motivation and engagement in MOOCs. It signals the potential for MOOCs to bring newcomers to Political Science and bridge theory and methods. However, challenges abound with effectively teaching the application of concepts and methods, finding ways to engage the students and motivate them to course completion, overcoming technical or access barriers (especially in specific social contexts), and making the courses appealing and accessible (both in financial and content-level terms). Overall, connectivist elements can help solve problems regarding motivation and engagement. Online tools and features that match learner needs and interests are needed; for instance, videos seem more popular because of the possibility of downloading and watching them offline, including fast-forward. In contrast, the forum seems to work if there is a critical minority of engaged students and instructors, possibly with instructor moderation. Such best practices could increase engagement and create a sense of togetherness by belonging to a community of learners, thereby enhancing motivation.

6. Conclusion

Despite various criticisms, MOOCs continue to thrive as a globally more accessible means of education. Even with the pandemic making online education more prominent, pre-existent challenges still need to be addressed, which retains the relevance of data collected before the COVID-19 outbreak. The IPSAMOOCs are a flagship initiative for a comprehensive set of Political Science MOOCs and thus need the attention of scholars both in Political Science and Education. This article has offered introductory insights into the operation of the IPSAMOOCs by examining how the introduction of online (a virtual class with a common goal and rewards for completion) and offline (an onsite summer school following the undertaking of an IPSAMOOC) connectivist elements affects learners' engagement and motivation—the decision to enrol in the MOOCs, the motivation to complete them and the self-perceived benefits from doing so. Firstly, we have examined the diversity of the IPSAMOOC learners, indicating the potential of the (IPSA) MOOCs to appeal to Political Science enthusiasts with or without previous disciplinary background, disseminate key disciplinary insights, and increase inspiration beyond any particular discipline.

Secondly, via creating a similarly diverse digital class from among the IPSAMOOC learners and subsequently studying the interactions between a group of learners who also attended an in-person summer school upon undertaking one of the IPSAMOOCs, we found that merely a limited addition of connectivist elements is unlikely to significantly affect learner decision to engage with the courses or alter the perceived usefulness of the course. The possibility of recognition (such as via a certificate of achievement/completion) and the perceived usefulness of the subject matter appear more salient. Moreover, learners demand feedback and the possibility to test the application of the theoretical, conceptual, or methodological insights on their ideas. Online discussion forums and peer-to-peer interactions might help, but targeted instructor feedback remains crucial.

Thirdly, there is considerable potential in combining the IPSAMOOCs with offsite initiatives. As the IPSA-Federica Summer School participants have demonstrated, the IPSAMOOCs provide a valuable first contact with new information. However, the capacity to apply the material to one's ideas needs additional guidance. Close group interaction over several days makes a difference. However, the positive assessment of the opportunity for the summer school participants to schedule an advance online meeting indicates the potential of online connectivist tools. Ultimately, advancing interactions and joint learning on concepts and tools fundamental to democracy could become essential to democratic renewal, pointing to the global potential of (the IPSA) MOOCs.

Ethical statement

The authors were involved in collaboration with some of the organizations mentioned in the article. Neither of these organizations

interfered with the methods, findings and presentation of the research results in any way.

CRediT authorship contribution statement

Andressa Liegi Vieira Costa: Writing – review & editing, Writing – original draft, Visualization, Methodology, Data curation, Conceptualization. **Ana Magdalena Figueroa:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Data curation, Conceptualization. **Max Steuer:** Writing – review & editing, Writing – original draft, Visualization, Methodology, Data curation, Conceptualization.

Declaration of competing interest

The authors were involved in collaboration with some of the organizations mentioned in the article. Neither of these organizations interfered with the methods, findings and presentation of the research results in any way.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssaho.2024.101113.

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