

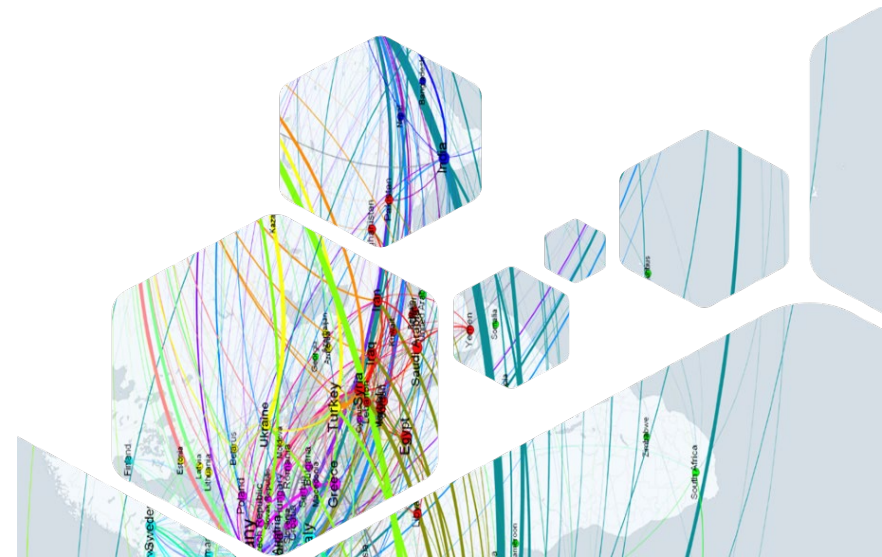


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# Do watercooler conversations with instructors in FutureLearn MOOCs help learning?

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1.16

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## The waterless washing machine

In this case study we look at a radical innovation, the waterless washing machine.

Developed from research at the University of Leeds this washing machine uses polymer beads to absorb stains and clean clothes.

This environmentally friendly innovation has the potential to become disruptive; with an increasing awareness of sustainability challenges, innovations that help preserve natural resources are attracting growing public interest.

If you have time take a look at the next case study. This provides

### COMMENTS

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### Learner 1

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A great example of a fantastic innovation, but unfortunately, like many great innovations, this product will require a high level of marketing to make it 'the norm' and gain a market share. Consumers need to be shown how the product works. The best example of this type of marketing is Dyson. Their tv adverts are basically a tutorial on how their product works. This is what the washing machine needs.

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### instructor

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Some good points Keri, interesting example of Dyson, I wonder if other colleagues on the course can think of any others?

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### Learner 2

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Great points Ken, I also wonder if people have the time and energy to go through the trouble of getting rid of a perfectly fine washing machine and get a new one just because it saves the environment. We all want to save the environment but why pay more to get a new one when the old one is working fine? For example students or landlords would not want to pay this extra money. Buying a washing machine is an investment household usually needs to do once every 4-5 years or until the machine breaks down. How to make the consumers pay this money when the old one is still working fine? I would say there needs to be ways to get consumers to change old habits and wanting to pay and get a new one. Ways such as discount coupons or, buy this get 200 dollars off etc. A friend of mine from Thailand told me that the government in Thailand wanted to get rid of old cars in the city of Bangkok, therefore sold new amazing cars for really low prices, as a result most of the people in Bangkok bought new cars ridiculously cheap.

So in this case, not only is innovation and demonstration enough but also how to make people buy a product they already have in their house that works fine.

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### Learner 3

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One good video to explain is enough: <https://m.youtube.com/watch?v=AA7c-MnITvU> YouTube can do the rest. People often find out how to use new products, or even learn anything new from YouTube.

Been hearing about these automatic vacuum cleaners from friends and saw my neighbor using this!

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### Learner 3

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Ah! Bloomberg has done it for Xeros: [https://m.youtube.com/watch?v=LYp8R\\_CuMl0](https://m.youtube.com/watch?v=LYp8R_CuMl0)

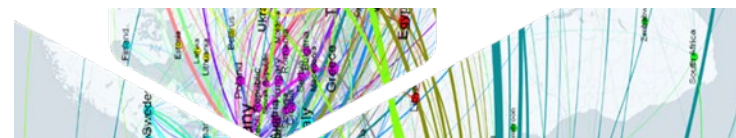
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## What do instructors do in MOOC discussion areas and how do learners react to them?

1. How are instructors' contributions to discussions in Massive Open Online courses characterised based on the Community of Inquiry framework ?
  - a. To what extent and in what ways do instructors contribute to MOOC discussions?**
  - b. How do the level and type of their contributions change during a MOOC?
2. To what extent, and in what ways, do learners engage with instructors' contributions?
3. What roles do instructors' contributions play in learning?



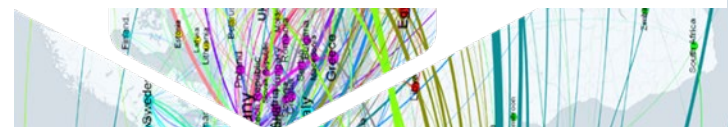


## Research design

Examined learner-instructor conversations (n=818)

**Level (to what extent):** Frequency of instructors' contributions (comments)

**Type (in what ways):** content analysis of conversations based on the Community of Inquiry Framework (CoI)



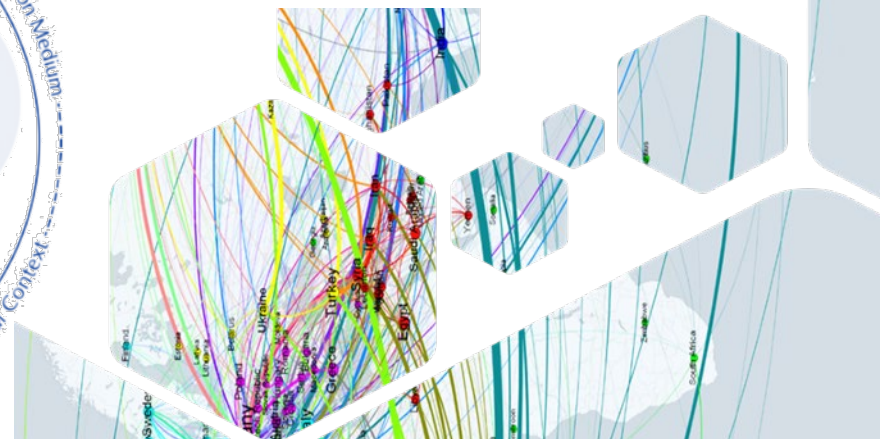
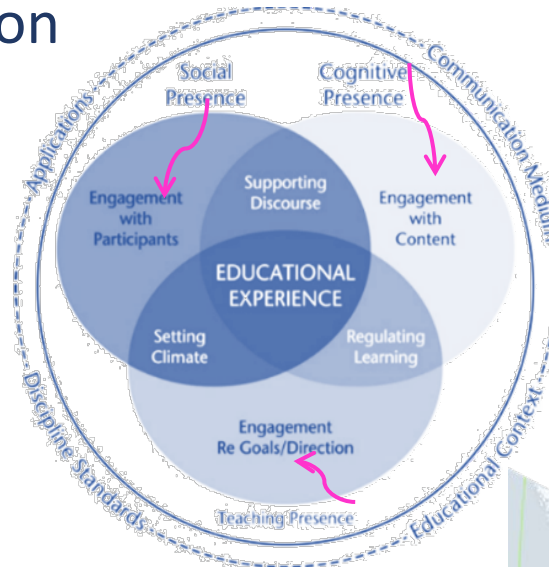


## Community of Inquiry framework

Describes learning and teaching through three interdependent elements:

### Cognitive presence:

- focuses on the learning process and learners' development of higher-order thinking through communications
- 4 stages: triggering event, exploration, integration and resolution





## Social presence:

- plays a mediating role between cognitive and teaching presences
- creates conditions for free and open communication, and allows personal relationships to be developed over time
- while it is socio-emotionally focused, it must be directed towards a shared academic goal

Category	Indicator
Personal Communication (AF) [Affective]	Expression of Emotions
	Use of Humour
	Self-disclosure
Open Communication (I) [Interactive]	Asking questions
	Quoting from others' comments/ referencing explicitly to others' comments
	Expressing agreement/disagreement
	Complimenting and expressing appreciation
	Support for communications*
Group Cohesion (CO) [Cohesive]	Phatic, salutations, greetings and welcoming
	Vocatives
	Group reference
	Course reflection



## Teaching presence:

- focuses on the design of educational experience before, and facilitation of learning during the course and represents the leadership aspect of it
- has 3 constructs: *Design and organisation*, *facilitating discourse* and *direct instruction*

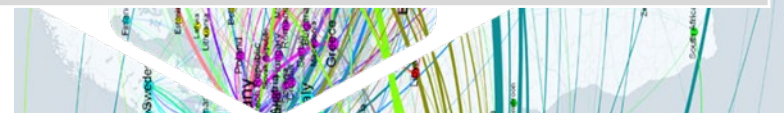






## Teaching presence

<b>Design and Organisation (DO)</b>	Setting curriculum and communicating assessment methods
	Designing methods
	Establishing time parameter
	Utilising medium/technology effectively
	Establishing netiquette
	Making macro-level comments about course content
<b>Facilitating Discourse (FD)</b>	Marketing the course and institution*
	Identifying Areas of agreement/disagreement
	Seeking to reach consensus/ understanding
	Encouraging, acknowledging or reinforcing student contributions
	Setting climate for learning
	Drawing in participants, prompting discussion, presenting follow up topic for discussion
<b>Direct Instruction (DI)</b>	Assessing the efficacy of the process
	Presenting questions
	Focusing ( re-focusing) discussion on specific issues
	Summarising the discussion
	Confirming understanding through assessment and explanatory feedback
	Diagnosing misconceptions
	Supplying clarifying information
	Supplying additional information and content *
	Making explicit reference to outside material



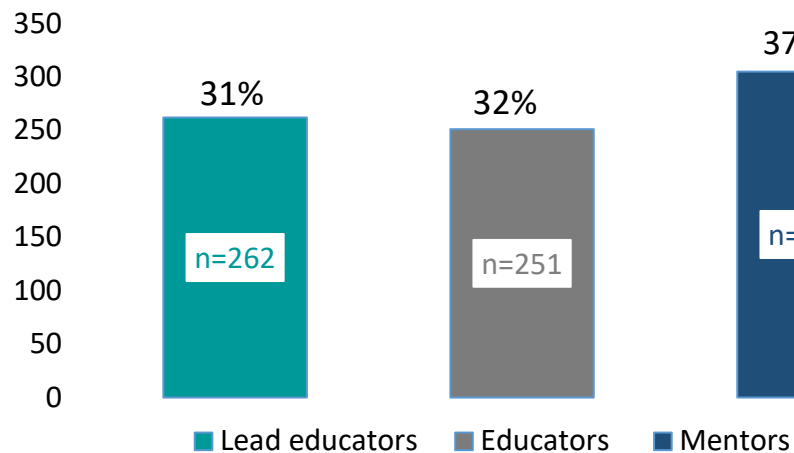




## Data overview

MOOCs	Course length	Instructors*	participants	instructor-learner conversations
History	3 weeks	LEd, 4xEd, 2xM	12,340	666
Business	3 weeks	LEd, 3xEd, 7xM	13,618	1,482
Performing Arts	3 weeks	Led, 5xM	3,830	684

\*LEd: Lead educator; Ed: Educator; M:Mentor



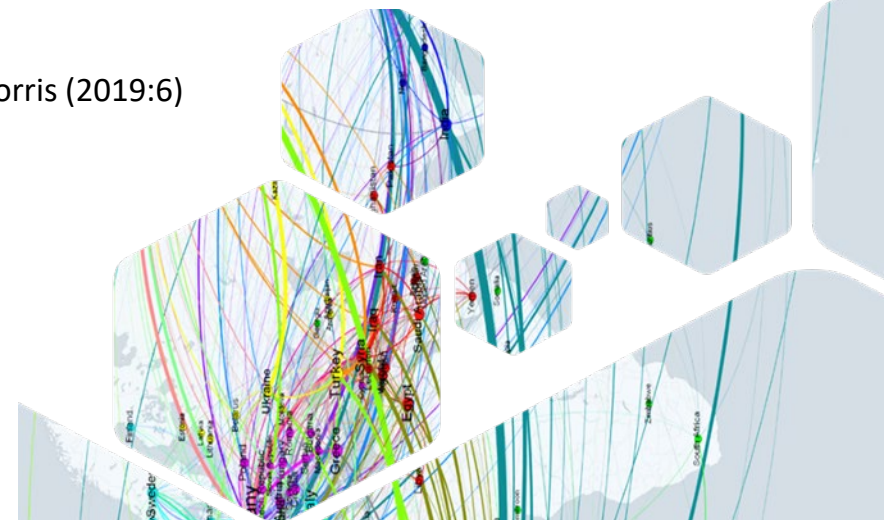


## An overview of instructors' contributions

Instructor	Short* conversations		Medium* conversations		Long * Conversations		Total	
	N	%	N	%	N	%	N	%
Lead educators (n=3)	236	94%	11	4%	4	2%	251	31%
Educators (n=7)	236	90%	23	9%	3	1%	262	32%
Mentors (n=12)	289	95%	13	4%	3	1%	305	37%
<b>Total</b>	761	<b>93%</b>	47	6%	10	1%		

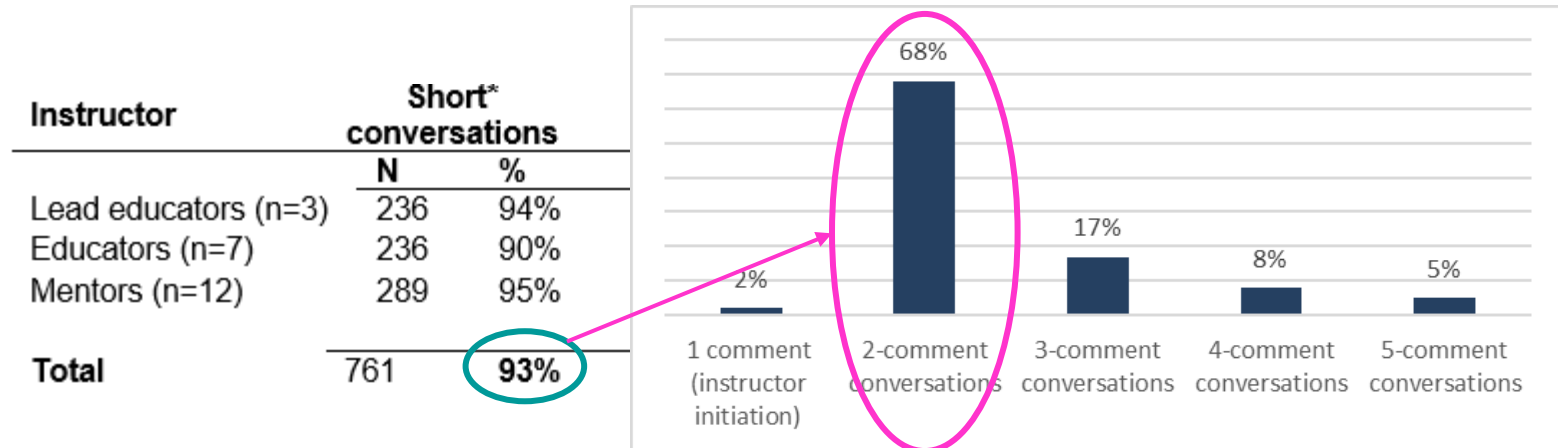
\* 1-5 comment, 6-10 comment and 11-16 comment exchanges represent short, medium and long conversations respectively.

Goshtasbpour, Swinnerton and Morris (2019:6)





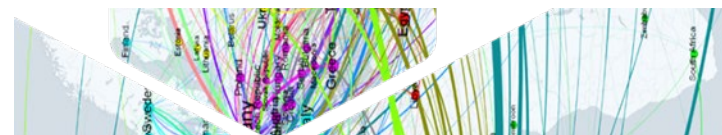
## An overview of instructors' contributions



\* 1-5 comment, 6-10 comment and 11-16 comment exchanges represent short, medium and long conversations respectively.



Most learner-instructor conversations are short and instructor's contribution tends to end conversations in most cases ➡ Instructors' contributions reduce the potential for turn-taking and collaborative activities.





## Instructors' type of contributions

Instructor	Social* Presence		Teaching Presence		Cognitive Presence	
	N	%	N	%	N	%
Lead educators	451	34%	319	34%	32	32%
Educators	300	23%	351	37%	39	38%
Mentors	575	43%	268	29%	30	30%
Total	1326	56%	938	40%	101	4%

Goshtasbpour, Swinnerton and Morris (2019:7)

- Not a balanced level of social and teaching contributions (i.e. lower teaching presence)
  - lack of enough academic support to get learners through the phases of cognitive presence
  - the social but not content-related needs of learners are mostly met
  - a shift in instructors' roles from academic and leadership responsibilities to social facilitation in FL MOOCs



# Teaching contributions

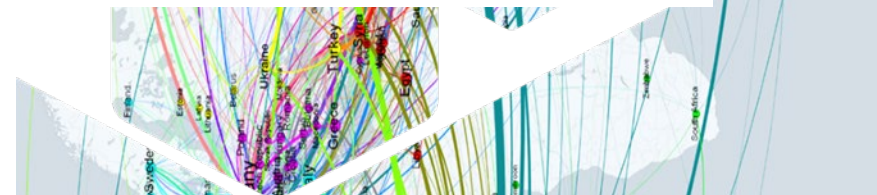
Teaching Presence	Lead educators		Educators		Mentors		Total	
	N	%	N	%	N	%	N	%
<b>Design and Organisation</b>	<b>71</b>	<b>22</b>	<b>59</b>	<b>17</b>	<b>46</b>	<b>17</b>	<b>176</b>	<b>19</b>
Setting curriculum	32	10	30	1	10	4	72	8
Design methods	21	7	6	2	17	6	44	5
Establishing time parameter	10	3	13	4	8	3	31	3
Utilising technology effectively	5	2	2	<1	4	1.5	11	1
Establishing netiquette	0	0	0	0	0	0	0	0
Making macro-level comments about the course	3	1	5	1	2	1	10	1
Marketing the course or institution*	0	0	3	1	5	.2	8	1
<b>Facilitating Discourse</b>	<b>131</b>	<b>41</b>	<b>125</b>	<b>36</b>	<b>154</b>	<b>58</b>	<b>409</b>	<b>43</b>
Identifying areas of dis/agreement	0	0	0	0	2	1	2	<1
Seeking to reach consensus/understanding	4	1	13	4	8	3	25	3
Acknowledging, encouraging or reinforcing learners' contributions	111	35	78	22	86	32	275	29
Setting climate for learning	10	3	10	3	15	6	34	4
Drawing in participants, prompting discussions, presenting follow-up topics	6	2	24	7	43	16	73	8
Assessing the efficacy of the process	0	0	0	0	0	0	0	0
<b>Direct Instruction</b>	<b>117</b>	<b>36</b>	<b>168</b>	<b>48</b>	<b>68</b>	<b>26</b>	<b>353</b>	<b>38</b>
Presenting content-question	5	2	24	7	33	12	62	7
Focusing (refocusing) discussions	0	0	0	0	0	0	0	0
Summarising discussions	1	<1	2	<1	1	<1	4	<1
Confirming understanding through explanatory feedback	21	7	16	5	5	2	42	5
Diagnosing misconceptions	0	0	0	0	0	0	0	0
Supplying clarifying information	40	12	48	14	5	2	93	10
Supplying additional information*	32	10	51	15	12	5	95	10
Making explicit reference to outside material	18	7	27	8	12	5	57	6
<b>TOTAL</b>	<b>319</b>	<b>34</b>	<b>351</b>	<b>37</b>	<b>268</b>	<b>29</b>	<b>938</b>	

Goshtasbpour, Swinnerton and Morris (2019:9)



## Teaching contributions

- Teaching contributions mainly focus on facilitation rather than direct instruction
  - learners' thinking is mostly supported, but not challenged and as a result, learners do not move beyond exploration of ideas and reaching higher levels of cognitive presence, i.e. integration and resolution.
- Instructors mainly *acknowledge* learners' contributions or *give* information. They *demand* much less!





## Teaching contributions

- Main teaching strategies for facilitating cognitive presence, i.e. *focusing discussions, challenging ideas, identifying areas of agreement and disagreement and creating a summary*, appear very weak in instructors' contributions.



learners are not provided with enough opportunities to construct meaning collaboratively and confirm a shared understanding.

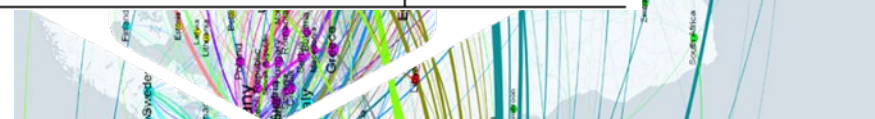






## Social contributions

Social Presence	Lead educators		Educators		Mentors		Total	
	N	%	N	%	N	%	N	%
<b>Personal Communication (Affective)</b>	<b>18</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>3</b>	<b>&lt;1</b>	<b>33</b>	<b>2.5</b>
Expression of Emotions	3	<1	4	1	0	0	7	<1
Use of Humour	5	1	2	<1	0	0	7	<1
Self-disclosure	10	2	6	2	3	<1	19	1
<b>Open Communication (Interactive)</b>	<b>53</b>	<b>12</b>	<b>33</b>	<b>11</b>	<b>33</b>	<b>6</b>	<b>119</b>	<b>9</b>
Asking questions (non-task)	4	1	4	1	3	<1	11	1
Quoting from others' messages	2	<1	2	<1	5	1	9	<1
Expressing agree/disagreement	11	2	4	1	3	<1	18	1
Complimenting and expressing appreciation	34	7	20	7	21	4	75	6
Support for communication*	2	<1	3	1	1	<1	6	<1
<b>Group Cohesion (Cohesive)</b>	<b>380</b>	<b>84</b>	<b>255</b>	<b>85</b>	<b>538</b>	<b>94</b>	<b>1174</b>	<b>88.5</b>
Phatic and Greetings	148	33	105	35	249	43	502	38
Vocative	207	46	136	45	283	49	626	47
Group reference	25	5	14	5	7	1	46	3
Course reflection	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>451</b>	<b>34</b>	<b>300</b>	<b>23</b>	<b>575</b>	<b>43</b>		



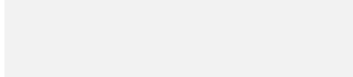


## Social contributions

- High cohesive communications but at an individual rather than a group level
  - weakens the potential for community formation
  - Potentially leads to learners' disengagement with social contributions

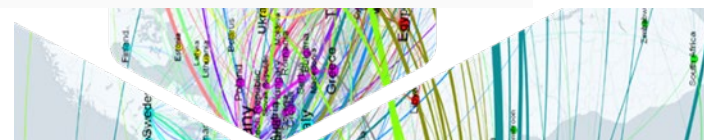
Hello I am Samantha and work for a large Biotech, currently working on a PhD researching innovation in the BioPharma sector

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 (Educator)      **Following** 03 OCT

Hi Samantha welcome to the course. With your work experience and current studies you will have a lot to add to the discussions

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## Summary

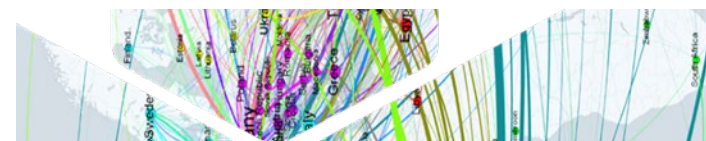
- In the majority of cases, an instructor contribution ends the conversation and reduces the likelihood of turn-taking and collaborative activities in discussions.
- Instructors' teaching and social activities in discussions have a stronger focus on social aspects of learning. This suggests social and academic needs of learners are not met equally.





## Summary

- Instructors' teaching contributions are mainly facilitative. However online teaching is effective when instructors' activities are partly facilitative and partly directive (Zhao and Sullivan, 2017). Therefore, it is suggested that MOOC instructors consider this balance to be able to contribute to learning, or as Joksimović et al. (2015) state, learners will not engage deeply with the course.





## References

**Goshtasbpour, F., Swinnerton, B. and Morris, N.** (2019). See who's talking: exploring instructor contributions to Massive Open Online Course. *British Journal of Educational Technology*. DOI:10.1111/bjet.12787

**Joksimović, S., Gasevic, D., Kovanović, V., Riecke, B. E., & Hatala, M.** (2015). Social presence in online discussions as a process predictor of academic performance. *Journal of Computer Assisted Learning*, 31, 638-54. doi:10.1111/jcal.12107

**Zhao, H., & Sullivan, K.** (2017). Teaching presence in computer conferencing learning environments: effects on interaction, cognition and learning uptake. *British Journal of Educational Technology*, 48(2), 538-51. doi:10.1111/bjet.12383



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Thank you!



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