



Strengthening critical thinking skills through online learning

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Executive summary

In the first half of 2020, during the early months of the COVID-19 pandemic, INASP launched two adaptations of our online critical thinking course. Originally developed for higher-education students, the online critical thinking course was adapted for use by researchers, especially early-career researchers.

We launched two versions – a self-paced tutorial and a light-touch facilitated course. This paper discusses and compares the response to and engagement with the two versions.

The initial analysis of the feedback surveys shows that both the self-paced tutorial as well as the light-touch facilitated course were well accepted by a diversity of participants from the Global South. The level of difficulty seems to be adequate for a broad audience.

Pros and cons of the facilitated version and the tutorial were revealed. Participants appreciated the flexibility of the self-paced tutorial to enable them to do it completely at their own pace. However, a larger number of people completed the facilitated course in a shorter amount of time. In addition, there was greater satisfaction with the level of support in the light-touch facilitated course. It was interesting to see that even with light-touch facilitation (where engagement by INASP was limited to addressing technical issues and ensuring there was no inappropriate content) the discussion forum was lively and active, with some participants taking on informal roles in helping conversations to flow.

The COVID-19 situation motivated some people to join and complete the course, by, for example, freeing up time previously used for travel. However, some participants also faced challenges and barriers of learning, especially, for example, as a result of childcare commitments.

Introduction

INASP's African partner universities share our vision of research and knowledge at the heart of development and have expressed the need for practical support in improving teaching practice around critical thinking skills and how to handle information based on evidence.

In response, in 2017 we designed and developed a set of six online units for higher-education students to learn about critical thinking and improve their skills in questioning, reading, argumentation and information evaluation independently. The course is meant to be complemented by lecturer support so that the students learn to apply their skills in their subject. This course is currently being used in an adapted form with university students in Sierra Leone within the FCDO-funded AQHEd-SL project.¹

The course was initially developed for university students. However, the need for developing critical thinking skills and handling evidence appropriately goes far beyond just

WHAT IS IN THE CRITICAL THINKING COURSE?

INASP's online tutorial and course 'Questioning as we learn - An introduction to critical thinking', both consist of four units:

1. Thinking, questioning and reading
2. Arguments and reasoning
3. Analysis of information – think critically!
4. Perspectives and biases

Both the self-paced tutorial and the facilitated course aim to support the development of skills in assessing information. They help participants to learn how to analyse and evaluate argumentative text and speech. This will help with conducting research and, more broadly with more informed understanding of situations in everyday life.

¹ Assuring Quality Higher Education in Sierra Leone (AQHEd-SL). www.inasp.info/project/aqhed-sl

undergraduates. During discussions with lecturers, researchers and PhD students, for example at the 2018 e-Learning Africa conference, we became aware that such an online course could be also relevant for early-career researchers who may not have had the opportunity to develop their critical thinking and information handling skills during their university education sufficiently. Desk research supported this view.

Therefore, we decided in 2019 to adapt the contents of the original course for the target group of early-career researchers. When the COVID-19 pandemic hit the world in 2020, the importance of critical thinking skills as well as the desire for online learning opportunities became even more prominent and so we accelerated the re-design and re-editing of the course. In May 2020 we launched a version as a **self-study tutorial** that allowed the participants to work independently at their own pace.

Our experience with other online learning opportunities, as well as feedback we have received from the critical thinking tutorial and from other online courses indicated that running such a course in a **facilitated version** while offering a discussion forum and setting due dates for accomplishing course tasks could add to the learning experience. This version was offered in June/July 2020. With limited staff capacity for online facilitation, we decided to go for light-touch facilitation. This meant that we mainly supported the participants through announcements about their expected learning progress once or twice a week and answering technical questions about the learning platform through a dedicated technical discussion forum.

Furthermore, the learners were encouraged at reflection points in the course to share their ideas and questions in a content-related discussion forum with their fellow participants. The moderation was restricted to keeping an eye on the posts to make sure that the “netiquette” was kept (ensuring that discussions were respectful and relevant; no violations were detected). However, we offered no further facilitation through content experts as we regularly do in other courses.

SUMMARY OF SOME OF INASP’S ONLINE COURSE APPROACHES

Self-paced tutorial

- Participants register and then work through the material entirely at their own pace. There is no discussion forum or facilitation provided with the course. However, some organisations may choose to coordinate participation in a tutorial at the same time and encourage interaction via a WhatsApp group or similar. Whenever participants finish the tutorial they receive a certificate of completion.

Light-touch facilitation course

- The course takes place over a certain period, with dates for starting and finishing each unit. Participants are encouraged to interact with each other in discussion forums. The role of facilitators is limited to sending out reminders of key tasks and dates, responding to technical problems and removing any inappropriate content from discussions. At the end of the period of the course, course completers receive a certificate of completion and the course closes.

Full-facilitated course

- The course has all the elements of the light-touch facilitation but, in addition, facilitators are actively engaged in the discussions. Facilitators respond to and sometimes initiate discussions and may also participate in additional engagement, for example in web-based panel discussions about aspects of the course content.

What could we learn about the audience?

Our assumption was that it is worth adjusting the original course for undergraduates to researchers since a good number of early-career researchers would appreciate an introductory course to critical thinking too. So, what could we learn about the audience and how they accepted the course level?

From the launch in May until 23 September 2020, we awarded 166 completion certificates to participants who completed the self-study tutorial. In addition, 295 participants completed the four-week facilitated course in June/July. To understand more about the users, in the feedback survey we asked participants to tick all their main job roles. The majority of respondents in both the tutorial (57%) and the facilitated course (60%) said one of their main job roles is researcher. In addition, 42% of tutorial participants and 46% in the facilitated course described themselves as lecturers, and 42% (tutorial), 41% (facilitated course) said they are students. There were also other job roles mentioned such as librarian, medical doctor, civil servant, economist, social policy specialist and sports coordinator, just to mention a few.

In the feedback survey, 85% of the tutorial respondents and 93% of the facilitated course respondents say that they feel more confident about their critical thinking skills. Many participants also shared positive feedback about their learning:

“This has been a very useful tutorial and eye opening. I have always assumed that I was a critical reader, but realised that there is much more that I did not know. I tend to be good at probing and questioning when dealing with verbal information, but not so good at that when I am dealing with written information. I am now more alert about this weakness.” (Tutorial participant)

“This course broadened my perspectives on arguments and how the premise and claim work hand in hand to shape arguments. I can now listen to people, read documents and form my opinion and arguments better. It has now improved the way I reason and inevitably talk. I am glad to have become a better "talker", so to say from this course. Thank you very much for this opportunity.” (Tutorial participant)

“The course is imperative for those who wish to be rational thinkers. The teaching method is quite commendable and I commend INASP for their efforts in passing this knowledge to the people.” (Facilitated course participant)

“I am very grateful for the course, as I sought to get the knowledge on critical thinking for some time but just didn't get it then. Keep up imparting more with the most needed insight. I am sure happy to come back again and tell more others about your course as I am very satisfied.” (Facilitated course participant)

We may conclude that we could reach a diversity of people who appreciated these two learning initiatives. Some participants highlighted that such a learning opportunity could be useful for students in Higher Education or even that they would integrate some contents into their teaching.

“This was perfect as an introduction to critical thinking and I am very grateful that you offered it as a free resource; With so much poverty and increased unemployment in South Africa at this time, it has been wonderful to have such a valuable resource available to offer students (I teach PostGrad business students). I intend prescribing the tutorial (and the one on searching) for all my students as compulsory preparation and will integrate testing of these skills into the content material that I teach (research methodology).” (Tutorial participant)

“As faculty in HE, I personally feel that this course should be a mandatory or an audit course taken up by students in HE institutions.” (Facilitated course participant)

“I remain to insist please advise the educationists to introduce this course to be one of the courses taught in all fields in general and the fields of science in particular so enable especially undergraduate students to think and analyse things critically.” (Facilitated course participant)

The feedback answers suggest that there is no general agreement on whether the courses' level of difficulty should be decreased or increased. Many uttered that the courses were 'just right'. However, there were also voices that found the courses quite difficult or too easy.

“The little background I had on Psychology (biases and personality issues) and Discourse Analysis course I took while doing a PhD. This was a very difficult course but I rank it very high because the skills are continuous useful to me. Because it was difficult I thought I need this course as well to add to what I know.” (Facilitated course participant)

“My suggestion would be to increase the difficulty level to make the course a little more challenging for the participants.” (Facilitated course participant)

“I thought it was just the right bits and pieces of information for this course. There was no information over-load.” (Facilitated course participant)

“The course is very good for fresh learner, mid learner and even advanced learner, because it reminds. People tend to forget thing even if they knew it, due to so many daily obligation.” (Facilitated course participant)

More detailed evaluation of the participants' feedback should be done to reveal what improvement ideas came up. Initial findings suggest that we should promote the course content for the more tailored use by lecturers with their students further, while continue to offer them as MOOC to a broad audience on a regular basis.

Was the light-touch facilitation good enough to add value to the learning experience?

Our assumption was that a facilitated course could add value to the participants' learning journey, even if we needed to keep it light-touch due to limited resources.

We found there was no difficulty in engaging the participants in discussion without dedicated content facilitators. We reminded the participants during the course when doing reflective activities that they could share their thoughts on the discussion forum. Furthermore, we made contribution to the discussion forum a completion criterion for receiving a certificate.

The discussion forum was very lively and meaningful discussions came up without any problems with inappropriate posts. Popular discussions were, for example: 'How does culture affect critical thinking?' (63 posts in the thread); 'When not to critical think' (23 posts); 'Age of critical thinking (How early do you all think we can start helping children to develop the skill of critical thinking)' (23 posts); 'Qualities of an ideal critical thinker, do they change with changing roles?' (22 posts); 'Is critical thinking the same as creative thinking? If not, what is the difference?' (20 posts); and 'Scientific research and critical thinking' (19 posts).

While 14% of the tutorial feedback survey respondents said they found it challenging that there was no facilitator support, only 3% of the facilitated course respondents ticked that the facilitator support was not enough. However, there were also some voices who appreciated that the tutorial gave them the freedom to learn at their own pace without needing to keep any deadlines.

"Please keep the timing open as it is. It really helped me to study at my pace else I would have missed the course." (Tutorial participant)

We conclude that our light-touch facilitation approach added significant value. Obviously, 'critical thinking' is a topic that encourages discussions so it would be interesting to see if other more specialist topics similarly generated discussions. Through the discussion forum, the participants were immediately able to practise the questioning and reading skills that they had learned in the first unit. However, having a tutorial without any deadlines as an alternative may benefit some learners.

A thorough analysis of the forum posts will help us to learn more about the learning needs around critical thinking that could be picked up in following learning initiatives.

What influence has the COVID-19 situation had on participants' learning?

We asked the participants in the feedback survey what difference this special situation made for them in terms of course participation, if any. The answers reveal challenges but also some advantages of this kind of learning opportunity.

While many participants said it made no difference, some participants felt they had more time for taking up such an opportunity, while others saw limited time due to other duties related to the COVID-19 situation as a challenge. It was mentioned that childcare duties made it difficult to concentrate. Another challenge for some people was the internet connectivity while studying from home – they mentioned poor network and/or higher expenses. And it was mentioned that these higher expenses can come together with lower income as a result of the crisis. Emotional difficulties and stress were also factors that some participants mentioned as barriers to learning.

However, some participants gained time they could use for learning because of not commuting to work. Some participants mentioned they would not have considered joining an online course before the COVID-19 lockdown – so this situation actually opened up a new opportunity to them. As one tutorial participant summed it up “Blessing in disguise. Gave opportunity for online learning.” And there was also some indication that online learning can contribute to easing the emotional stress of such a crisis.

Some more detailed analysis will need to be done to find out whether the pros and cons affected all gender groups in the same way. For example, women are traditionally more involved in childcare duties and therefore could have been disadvantaged. A higher exposure to the challenges mentioned could explain the lower participation of female compared with male participants – in the compulsory feedback survey 46% of the tutorial participants, 44% of the facilitated course respondents identified themselves as women and 54% (tutorial) 56% (facilitated course) as men.

“As an E-resources & Training librarian, I became more highly engaged during the pandemic lockdown and university shutdown. I constantly engaged with students online in library instruction, and learning and research support activities that I had little time to engage with this course and other online CPD opportunities that I registered for.” (Facilitated course participant)

“Well, in this phase of lockdown being inside home and making your brain work is really essential and I don't know.... I might not have free time to complete the task prior to covid emergency.” (Facilitated course participant)

“For now I am working from home and the children (both toddlers) are with me. My attention is now divided and I had to really make out time to participate.” (Facilitated course participant)

“Internet connectivity is expensive locally hence studying at home was difficult. I was working 2 days per week hence catching up especially watching videos was difficult due to other commitments and poor network at times.” (Facilitated course participant)

“The lockdown introduced the online learning to me. Working from home made it possible for me to identify online courses and join. I have attended two so far - thanks to COVID19. I now have knowledge and experience on online courses which I wouldn't have otherwise had.” (Facilitated course participant)

“Disruptive times ... tend to ruffle feathers ... after the initial ... anxiety and panic ... I was able to organise myself ... and permitted myself to concentrate more carefully. The joy of being 'present' without rushing from one unit to the next ... was quite evident in my engagement with this programme.” (Facilitated course participant)

Conclusions and next steps

The initial analysis of the feedback surveys shows that both the self-paced tutorial as well as the light-touch facilitated course were well accepted by a diversity of participants from the Global South. The level of difficulty seems to be adequate for a broad audience.

Pros and cons of the facilitated version and the tutorial were revealed. More participants are satisfied with the learning support in the facilitated version and the discussions added to the participants' learning; the tutorial's self-paced learning opportunity benefits participants who need more flexibility.

The COVID-19 situation motivated some people to join and complete the course, but some participants also faced challenges and barriers of learning.

Further analysis of the discussion forums and the feedback surveys could help to answer some open questions: Are there any topics that should be added or deepened in future learning opportunities? Do some participant groups need further support and if so, what kind of? How could such a course be tailored to the learning needs of undergraduate students?

The tutorial is still open for anyone to join (<https://moodle.inasp.info/course/view.php?id=203>). We are also considering the possibilities for running another facilitated course. Building on some of the very positive feedback about the potential value of this course, we would be keen to raise awareness with lecturers and with others who might be interested in working with us. We have a demo module of the course that anyone can look at and explore how this might be adapted and tailored for their contexts. Please get in touch if you would like to explore possible options.

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