

## **Debate is on! – Creating a validated guideline for effective teaching on controversial issues**

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### **Introduction**

Debate is an effective yet forgotten learning tool (Darby, 2007). Students in various disciplines respond positively to participation in debates as learning process in classroom (Dy-Boarman et al., 2018). Main advantages of implementing debates are improving students' ability to form persuasive scientific statements on controversial issues by learning about both sides of the issues (Budesheim & Lundquist, 1999) as well as enhancing their interactions in classrooms (Carini et al., 2006). Moreover, it helps students to develop their ability for critical thinking even more effectively than the formal lecture (Omelicheva & Avdeyeva, 2008).

Teaching on modern agriculture means dealing with dilemma. While emphasizing on the environmentally friendly production is demanded by the general public and even by the students, the mainstream agriculture still largely relies on input-intensive systems. It invokes a never-ending controversy for farmers, consumers and input producing corporates. And the students, who will work for one of the stakeholders should have their own opinions on the issue by acquiring knowledge on the multiple facets of the arguments.

Given the context, I hypothesize that debate can be an effective format to teach on such controversial issues as it motivates students to form their own ideas actively in persuasive manners. However, there is a lack of guideline how to adopt debate in general, more so, in agricultural courses. Therefore, the aim of this project was to create a solid guideline of a mock-debate session to be used for agricultural courses at M.Sc. level. For this

purpose, two extremely contrasting forms of crop production, i.e., organic and conventional systems were chosen for the debate.

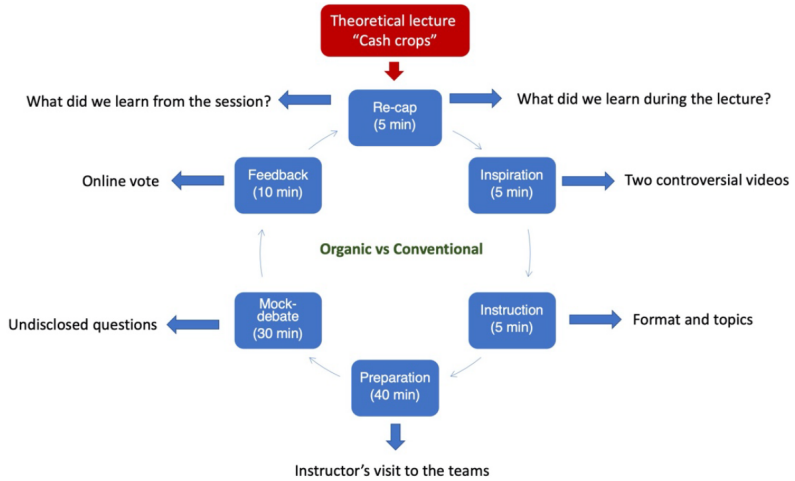
## **Materials and methods**

### **Course description**

Tropical Crop Production (TCP: ECTS 7.5) is an elective course (Block 1) in M.Sc program in Agriculture and in Environment and Development. The course runs on 4 types of learning method - theoretical lecture, exercise in classroom/lab/green house, excursion and individual report. The TCP has been re-aligned by the course responsible (Assistant Professor Gabriela Alandia Robles) who applied the knowledge gained during previous UP course in 2018 for her final project (Robles, 2020). However, according to the course evaluation for last several years, it was identified that the course lacks in interactive teaching format that can encourage students' participation.

### **Format of the mock-debate**

In TCP, 13 teachers cover a wide range of in three different modules. One criticism can be of that they are in quite similar formats and teaching methods, especially the theory exercises in the classroom. While the course contents are unique and positively reviewed by the students, I believed that the course will benefit from developing more interactive teaching-learning environments. Therefore, I have developed one session to be implemented in a theory exercise in the topic of “cash crops” in the format of “mock-debate”.



**Fig. 10.1.** Procedure of mock-debate implemented.

The session was formulated as shown in Figure 10.1. As the mock-debate was implemented after a theoretical lecture, a short re-cap (5 min) for a reminder on what we have learned during the lecture and how it is related to the upcoming session was necessary. Shortly after that, two video materials containing contrasting opinions were shown to the students for inspiration (5 min). After that concept and format of the mock-debate were introduced for 5 min. Students were divided into two groups (organic and conventional groups) at their will, and each team had 40 min of preparation time. During the preparation I, as an instructor, visited both teams making sure of which sub-topics to focus on. Finally, a 30-min mock-debate was implemented by my moderation, and two external panels including the course responsible were invited for observation. I divided the debate sub-topics into three to cover the important aspects of the topic. Debates on each sub-topic were initiated by my asking 2-4 questions on both sides which were not disclosed to the students beforehand. I prioritized on equal distribution of the speaking opportunities between the two teams and individuals. After the debate, online voting and student feedback were received using the Absalon platform and the responses were discussed (10 min). As

a final step, we did the re-cap the entire session in relation with the theory lecture.

## Data analysis

I have used (i) on-spot feedback (Absalon quiz); (ii) online survey (MonkeySurvey); (iii) dialogue with the course responsible to evaluate the implemented format of the session using debate (Table 10.1).

**Table 10.1.** Source for analysis.

Source	Platform	Response rate
On-spot feedback	Absalon quiz	100 % (10 out of 10)
Online survey	Monkey survey	20 % (2 out of 10)
Dialogue with the course responsible	Personal communication	-

## Results and Discussion

### On-site feedback

I report on the on-site feedback which was received with 100 % response rate (10 out of 10 respondents). Out of 10 students, 9 students responded positively to the question as shown in Figure 10.2. The examples of the response in Figure 10.2 are an evidence that student welcome such interactive teaching format (Dy-Boarman et al., 2018) - two students used the wording “*really liked*” and “*really interesting*”.

*“I liked the format as everyone has a chance to share their opinion.”*

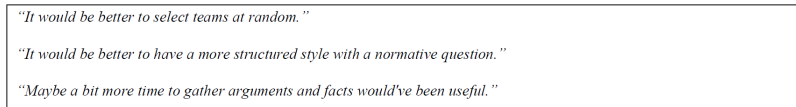
*“I liked that format because it required a very intense immerse into the topic and we could use the newly gained knowledge right away.”*

**Fig. 10.2.** Two positive feedbacks from the students on the format of the session.

Reflecting on the wording in Figure 10.2, the students were firstly, happy to be interactive in the class, secondly, liked the feeling of being

engaged. Enhanced student interactions via debate format in teaching has been reported previously (Carini et al., 2006). And based on other comments “*I learned more from both sides (of the counter-partner)*”, the given format might be effective to create a learning environment for students to explore different facets of a controversial topic (Budesheim & Lundquist, 1999).

Some improvements were also suggested as shown in Figure 10.3. The students were given a choice to decide on teams for the debate prior to the preparation phase. It was intentional as I assumed that students’ own motivation on either position, i.e., organic or conventional would enhance their learning outcomes. However, it shall be considered to randomly assign the students based on the comments “*It would be better to select teams at random.*”.



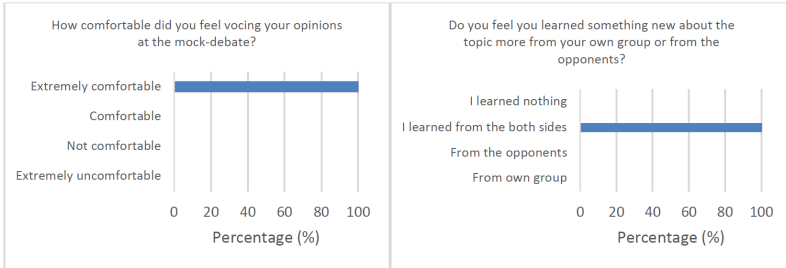
**Fig. 10.3.** Three improvement points from the students.

Moreover, there was a suggestion on the style that they were given during the debate. As a moderator I disagree with more structured style as the session and the format are intended to have a high degree of “liveliness”. I designed the debate in a way not only for the students to exchange knowledge but to express passion about their opinions, and I am afraid that structuring the debate might rule-out the intention, hence the openness of the format.

### **Online survey**

I report on the results from the online survey which were sent to the 10 students. The response rate was 20 % only (2 out of 10 responded). The both participants felt “*extremely comfortable*” voicing their opinions at the debate (Figure 10.4; left). During the dialogue with the course responsible, the way how the debate was moderated was effective to make the students comfortably speak out their opinions. Partially, it might be due to that the

debate was not graded. The both responders answered “*I learned from the both sides*” during the debate (Figure 10.4; right), which is in align with the on-site feedback and previous studies (Budesheim & Lundquist, 1999).



**Fig. 10.4.** Response of students to the online survey (<https://www.surveymonkey.com/r/J3G283Z>).

When asked with a question “*Would you rather have the mock debate than a formal lecture to obtain knowledge on the given topic (organic vs conventional), if so why?, and if not why?*”, both respondents preferred to having a debate rather than a formal lecture, and the reasons are showing in Figure 10.5. Debate is, in fact, known to be more effective than formal lecture in terms of acquiring comprehension, application and critical evaluation skills (Omelicheva & Avdeyeva, 2008).

“*We had to prepare and read about the topic before we start discussion.*”

“*It forces students to “take a stand” on issues they may not politically have agreed with.*”

**Fig. 10.5.** Formal lecture vs. mock-debate.

Based on the survey results, and the responses in Figure 10.5, the given format and procedure might be effective, firstly, to enhance the level of engagement of the students in classroom, second, to acquire knowledge on both sides of conflicting issues, and finally to motivate the students to have their own opinions (Budesheim & Lundquist, 1999).

## Dialogue with the course responsible

During the dialogue with the course responsible (see Table 10.2), we agreed that the students might benefit from receiving a few guideline questions rather than going to the debate blindly. In this way the students can focus more effectively on the specific sub-topics. Moreover, we also agreed on assigning a student coordinator in each group during their preparation for the debate. The coordinator will remind of the group to focus on the given topics, questions and the remaining time before the debate.

**Table 10.2.** Summary of dialogue with the course responsible regarding the format of the session.

Specifics	Evaluation
Students' participation	Students were engaged intensively. Even the exam-oriented students enjoyed the procedure. Students took responsibility to find the arguments. Some students were put into the position against their original opinion, and it was a pleasure to see that they stick to the given opinion with a passion.
Facilitation	Moderator tried to involve all the participants. Moderator summarized
Material	The two video materials were sufficient.
Improvements	Longer time for instruction (e.g. 40 min). Give them guideline questions so that the students can focus on them. Assign a coordinator in each group so that he/she can facilitate the preparation procedure with time and focus.

## Amended guideline and further considerations

Based on the data analysis on various sources, I suggest an amended guideline (Figure 10.6) for the mock-debate session, which hopefully, can be used by other teachers in different courses and disciplines for teaching on controversial topics.

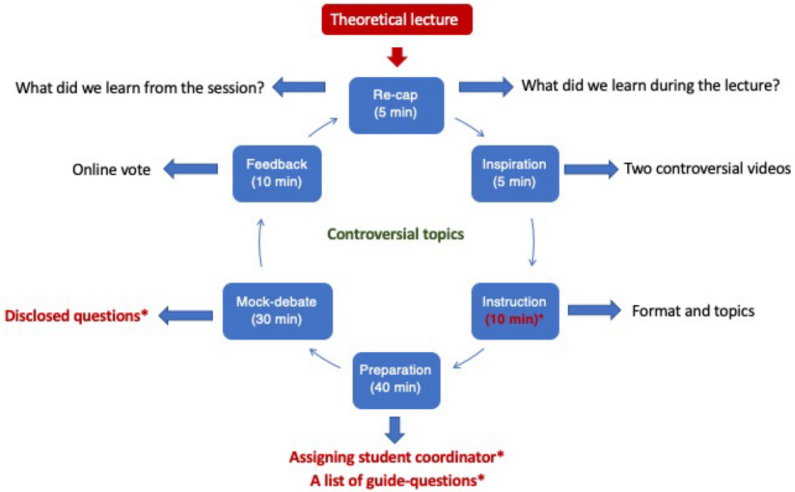


Fig. 10.6. Amended guideline for mock-debate.

In short, I recognize that the instruction time shall be longer than 5 min, depending on the length of the session (e.g. 10 min). Alternatively, the teacher can utilize the preparation time for detailed instruction. In preparation, as mentioned above, assigning student coordinator and provision of guide-questions are expected to enhance students’ focus and discussion. The same questions (disclosed) shall be used in the mock-debate.

## Conclusions

The results demonstrate that debate can be an ideal format for students’ engagement and critical thinking. Students highly welcome the format and enjoy the learning environment. From teachers’ side, well-planned procedure for such lively session is necessary. I believe that the amended guideline can be helpful for those wish to implement debate in teaching. As far as agricultural courses are concerned, other controversial issues can be taught using debate such as “use of pesticide for leafy vegetables”, “provision of farm-subsidies in tropics”, “large-scale organic farming”, “climate change and agriculture”. In my opinion, the guideline can be further modified for



other courses at various disciplines for an interactive teaching and learning processes.

## References

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