It's a wicked world; A travel report from a higher education course exploring Learning in Complexity.

Introduction and context

Management in Healthcare is a BSc programme in the Hanze University in Groningen, the Netherlands. Part of the course is a learning unit called: It's a wicked world of 5 European Credits. The aim of the course is to train the capability of students to understand, anticipate and act in congruence on the complexity of health care and the necessity to work towards a transition of health in the role of a manager. This course is a context in which *learning in complexity* plays a major part and within the ECOLAH project it will be the environment where the concepts and learning units will be piloted. The course ran from September till November 2022, and we have been using the inspiration and concepts from learning in complexity for experiments in the class room. We will be part of the Training, Teaching and Learning Activities (TTLA) and viewed this new learning unit "It's a wicked world" as a case to experiment with the concepts discussed in the kick-off meeting of ECOLAH. For this we formulated the following learning questions:

- can we design a learning space in the course Management in care what offers learning in complexity.
- How do we facilitate this learning?

This resulted in a travel report based on lessons learned we formulated as a kind of guided principles. We hope to discuss the lessons learned and some learning questions when we participate in the capacity building (TTLA) January 2023 in Bergen.

Maaike Huizing and Marleen van Dijk

Summary

Course name: It's a wicked world

Year: 4

Number of students: 35
(last year BSc)

Period: 10 weeks, sept – nov 22

Study load: 5 ECS

Contact hours: +/- 50 hours

Exam: article about a self-chosen wicked problem in healthcare and welfare

Number of external lecturers: 7

Number of teachers: 2

Lessons learned

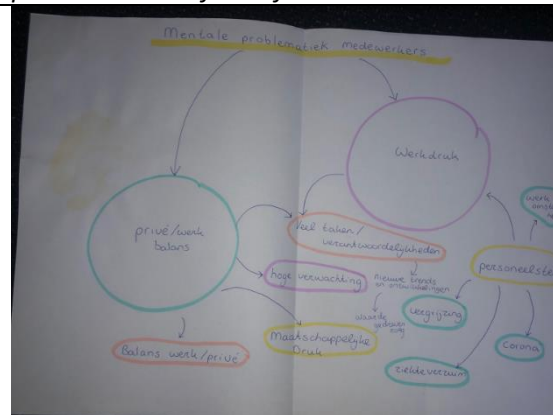| Lessons learned in terms of guiding principles	Illustration & quotes
1. Start with creating a sense of urgency *We've tried to show the 'bigger picture' at the start by a lecture from Paul Beenen about the transition in healthcare and the upcoming challenges associated with it.*	 *Student: 'It gives me the feeling that I have to take action, that something really has to change.'* *Student: 'How can one as an individual contribute to solving so many complex problems in the field of health care?'*
2. Focus on understanding and embracing complexity *Jos van Kempen gave a lecture about complexity, with a focus on the difference between simple, complicated and complex problems. In addition, attention was paid to ambiguity and uncertainty. Students had to make a system drawing on a self-chosen wicked problem in healthcare.*	 *Student: 'By making a system drawing I understand the interaction patterns and I see how wicked this problem really is.'*

3. Put theory into practice and create a sense of understanding.

Different lectures were followed by exercises in which students experienced the theory in practice. For example: an exercise with ropes to illustrate complexity and self-organization or by taking a MentiMeter test about their worldview and the influence of bubbles of information.

Student: 'By working together, you solve this knot much faster.'
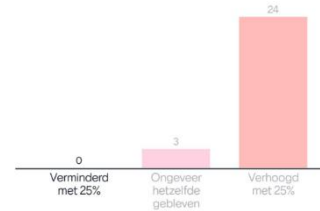
Student: 'I can't believe this answer is the right answer.'

4. Use creative work forms and make it visual

It's not all about thinking and knowledge; we've tried to put in some moments of creativity by giving a workshop about making a visualization of the self-chosen wicked problem. Also, students had to listen a podcast while walking outdoors and give a speech addressed to the ministry of long-term healthcare.

Student: 'The combination of listening and doing is nice.'

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5. Broaden the perspectives & FL Lab *Many guests were introduced during the course, to introduce different perspectives. For example the perspective of an innovation member, a CEO, a lector etc.* *In addition, we took a whole day for a 'Futures Literacy Lab', where the focus was on using the future to innovate in the present. Students were asked to bring their own guests; we had 6 extra guests during this class. The guests and the students were very enthusiastic about it, it was inspiring and it brought different perspectives in the classroom.*	 *Student: 'You must be aware of the lens you use to look at an issue and discuss it with each other: which 'language' do you speak?'*
6. Organise many moments of feedback We organized many moments of feedback during the course. Students used these feedback moments to refine their article. In addition, almost every week we organized moments for students to work on their article. We used different forms of feedback moments, like comparative judgment, class discussion and 'silent wall conversations'.	
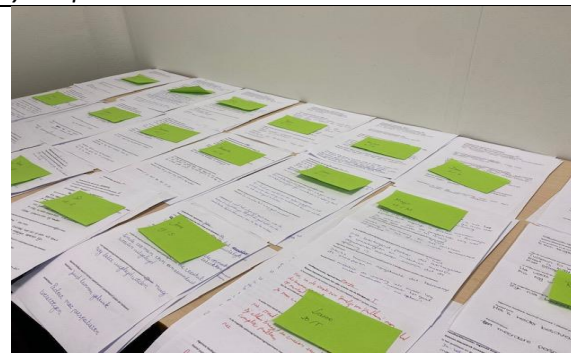
7. Provide clear and structured teaching frameworks for guidance in uncertainty

Because students can experience uncertainty because of the content of this course, we organized a structured framework:
- Classes were scheduled every Friday from 9 am-1.30 pm
- Every lesson was given by the same duo of teachers during the whole period
- Teachers were also in class when students had an external lecture
- Students had to prepare the various lectures/topics by making a flash lecture in advance
- Assignment submission was always on the same day, every Monday. Flash lectures were made available to all students on Monday.
- We always started with input of knowledge, followed by 'landing moment' and dialogue.

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Student: 'The combination of a speaker followed by a landing moment works well.'

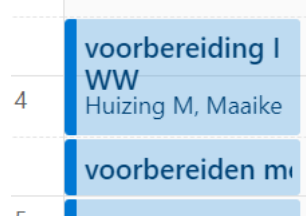|	
8. Having fun is legit Learning is enhanced by having fun, especially in times of uncertainty. So we tried to put in a variety different teaching methods and interactions to have more fun. Examples include a lesson that used the setting of a television program called 'Collegetour' and a lesson where students explored moral questions about complex issues during a walk in the woods. Classes were organized with plenty of time and space, so we don't have to hurry and students feel comfortable.	 *Student: 'It is inspiring to listen to someone who has so much experience.'* *Student: 'When you walk in the woods, the conversation gets more depth, in a classroom that often works less well.'*
9. Create collaboration between teachers & students As teachers, we believe that learning in complexity requires many individual moments of discussion with students in the time in between. Because the lessons were given by two teachers there was always a moment to respond to questions and individual	Feedback of a guest/mother of one of the students: *Guest/mother: 'You relate to students from an equality point of view and you also get on well with each other. I notice that, as a guest. You give a lot of space to students but just add this little extra. It's very inspiring.'*

needs. With these moments we tried to set an atmosphere of 'we don't know what the future will bring, but we are in it together'	
10. We don't know either & we aren't ready We really think the education must be consistent with the content. Therefore, we tried to ask more questions than to give answers and show that we don't have this silver bullet solution either. Besides that, we thought it is important to stay flexible in the classes. When the course started, not everything was clear, we developed the education just in time. This gave us space for adjustments and for matching the students' needs.	 *Teacher: 'So what do you think for the next lesson, maybe we should take some time to reflect with the students on the past few lessons and see how they relate things to eachother?'* *Teacher: 'I see and hear that students need some time to discuss what they have heard today, let's take a moment for that.'*

Learning questions

What remains to further discuss and develop:

- How do we cope with the paradox between innovating in the system (and often optimizing the current system) versus system innovation? How do we translate this paradox into our lessons and the whole curriculum?
- How do we facilitate collective learning that goes beyond the classroom setting?
- How do we offer sufficient guidance when learning in uncertainty, especially for first-year students?