



# PUNC Competence Framework Survey Report

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07-07-2021





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Co-funded by the  
Erasmus+ Programme  
of the European Union



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# 1 INTRODUCTION

People live, work and study in a world that can be characterized as VUCA: Volatile, Uncertain, Complex and Ambiguous. In a VUCA world it is evident, that not everything can be known on forehand. 'Not-knowing' in the broadest sense, can arouse feelings of uncertainty which can be on the surface, deep, steady, rapidly changing. Feelings of uncertainty can e.g. hinder to come into action and/or disturb a learning-, work- of development process. And on the other end of the continuum feelings of uncertainty can stimulate e.g. creativity and/or out-of-the-box thinking. If and in which degree feelings of uncertainty will be experienced, depends on how VUCA-isch the situation feels for a person and on the personal capability to deal with it.

In the PUNC-project we focus on the development of a PUNC competence framework for professionals in education: educators; and students as future professionals. The PUNC framework supports the development of a Professional UNcertainty Competence, which helps to define personal learning outcomes. To develop the framework we perform three activities (as shown in figure 1):

- a literature review
- a survey amongst educators and students from the institutions of the PUNC-project partners
- validations sessions.

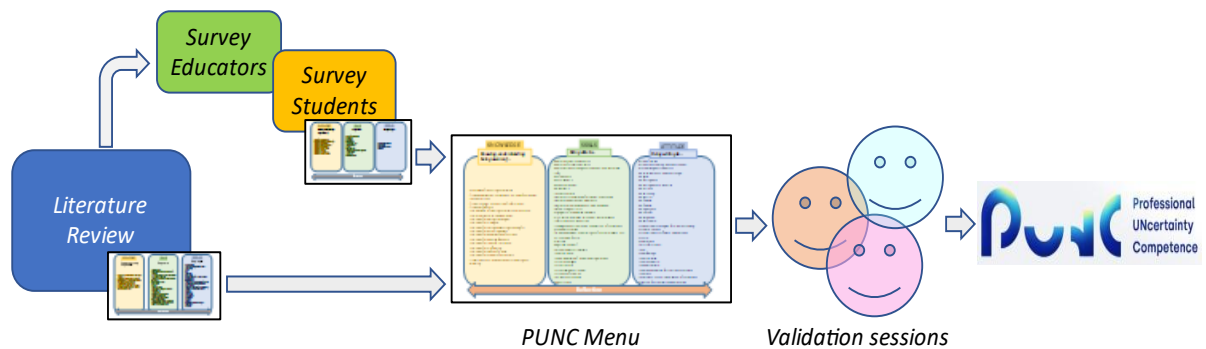


Figure 1: Visualisation development of PUNC competence framework

Based on the literature review<sup>1</sup> in February/March 2021, we see the development of a Professional Uncertainty Competence as a process of 'sense-making' (Weick,1995) as by sensemaking an individual makes the uncertainty productive, instead of denying it, ignoring it, or simply problematizing it. Sensemaking helps to turn the experienced uncertainty into a meaningful moment and successively into a productive action.

We distinguish in the process of 'sense-making' three strategies *acknowledgement*, *exploring* and *handling* uncertainty, in order to be able to move from: 'I feel uncertain' to 'I (can) make uncertainty productive'. In the first version of the PUNC competence framework, we deduced so called PUNC elements from relevant theory. These elements follow the general idea of a competence and are classified as:

- knowledge (knowing, understanding, being aware of...)
- skills (being able to ....)
- attitudes (being willing to ....).

<sup>1</sup> Bollinger, S., & Van Rooijen, R. (eds) (2021) PUNC Literature review IO2.

Based on this classification, educators and students can compose the right combination of PUNC elements in order to formulate their own PUNC learning outcomes. These learning outcomes correspond with their personal need in a particular situation and helps them to develop their specific and individual PUNC competence for that situation.

The PUNC elements, as result of the literature review, are classified in a theory-based PUNC ‘menu’, which is shown in figure 2.

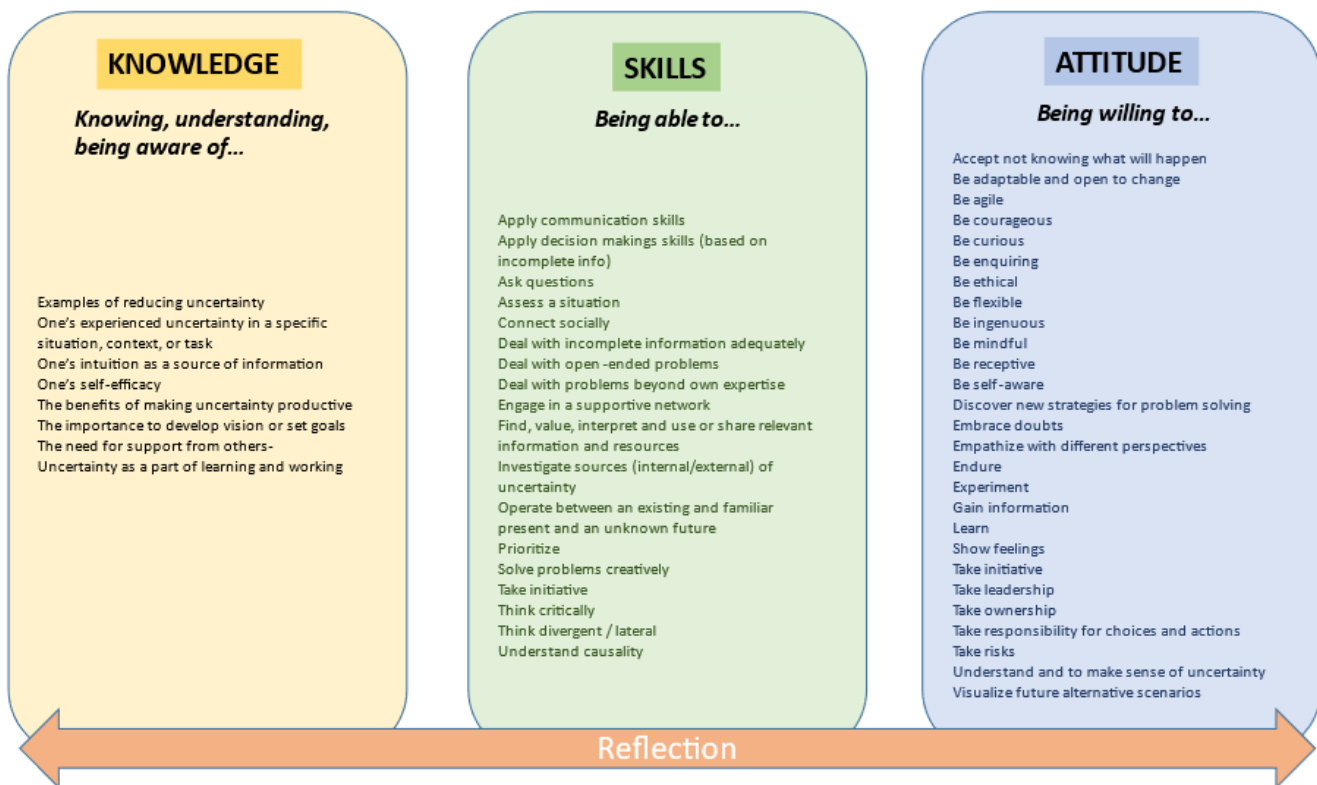


Figure 2: Theoretical ‘Menu map’ with PUNC elements (deducted from theory)

Based on this first step, the next step in the process of the development of a PUNC framework is a survey amongst educators and students of the PUNC partner institutions. Educators teach and guide students during their learning process and they develop an insight in student’s experienced uncertainty and what students need to handle the experienced uncertainty productively. To enrich the data from the educators survey, a similar survey is conducted among students of the PUNC-partner institutions. The result of these survey’s will be a second, practice-based ‘PUNC menu’.

These theory-based and practice-based PUNC menu’s will be combined and will be discussed and validated in upcoming validation sessions with the PUNC partners, in order to create a theoretically robust and actionable PUNC competence framework.

## 2 CONSTRUCTING THE SURVEY

### 2.1 Introduction

The survey is constructed during a Transnational Project Meeting in March 2021. Due to the Covid restrictions it was an on-line session with the PUNC- project partners from:

Finland (FI): Turku University of Applied Sciences (Turku UAS)  
Poland (PL): University of Gdansk (UG) and Innocamp  
Spain (SP): Valencia Polytechnic University (UPV)  
Denmark (DK): Business Academy Aarhus (BAA), were not able to attend but gave input before the construction 'day'.

With the survey we want to answer these questions:

1. What do students experience with regard uncertainty in their learning process?
2. What do students need to handle uncertainty in a productive way?

Based on the literature review, we approach uncertainty basically as 'not knowing'. The uncertainty mentioned in question 1 and 2 is the experienced (internal/subjective) uncertainty of the students during his/her learning process. In relation to VUCA this means that the Uncertainty in the students experience relates to Volatility, Complexity and Ambiguity: I don't know what will happen .....; I don't know how to act.... The same goes for the 'needs' of the students in order to handle uncertainty productively.

### 2.2 Method of construction

#### Topics of the survey

Using MURAL (see appendix A) as an interactive workspace, we took a twostep approach, which was performed together with team members from the PUNC partners:

- in step 1 all partners first worked individually on the first question with the focus on experiences. Every partner contributed by adding relevant topics at the V,C and A. And if there were topics that didn't match with the V,C,A, but were deemed important according a partner, it was placed at 'other topic's'. In a plenary session we prioritized the input and synthesized it into fewer but more generally relevant topics that are related to either the V, C or A;

- In step 2, the partners addressed the second question about the needs by individually adding possible needs to the defined topics of step 1. In a plenary session we once again decided on which 'need' fits the experience 'the best'.

These result of this twostep approach is a list of main topics for the survey. Also we added three extra (open) questions .

#### Three extra questions

On request of two PUNC-partners we added a first question, which retrieves information about the learning environment the respondent works in. The learning environments are relevant for the Intellectual Output of I.O.1 (A map of best practices for VUCA learning environments). For the development of a PUNC competence framework with personal defined learning outcomes, we are not particular interested in a possible relation between a learning environment and the experiences and needs. Therefore in this survey we will not distinguish between the experiences and needs in the different learning environments. A second

and third question will yield additional information about possible experiences and needs that are not mentioned in the survey. These two questions are voluntary to fill in.

### Structure of the survey

The survey consist of five questions with 5 subsequent answering categories (see table 1 and appendix B for the complete survey)

Table 1: survey structure

	Question structure	Answering categories
1	I am an educator at .....	Obligatory one choice between 13 learning environments (according to IO1)
2	What do students experience with regard to uncertainty in their learning process within the learning environment?	Obligatory one choice between: “always, often, sometimes, rarely, never”
3	Please indicate any additional students’ experiences of uncertainty in their learning process.	Free to add
4	What are students’ needs to handle uncertainty in their learning process within the learning environment?	Obligatory one choice between: “not, a little, moderate, much, very much”
5	Please indicate any additional students’ needs to handle uncertainty in their learning process.	Free to add

### 2.3 Conducting the survey

The tool used for the survey is CrowdTech. We opened the survey for educators of all PUNC-partner institutions during the April/May 2021. On request of one of the PUNC-partners we re-opened the educators survey in June for 5 additional days. In May we get signals from several educators, that they struggled with the perspective as they found it hard to know or imagine what the students actually experienced. We thereafter decided to conduct a survey among the students of the PUNC-partner institutions, between May 15<sup>th</sup> until the beginning of June. We reformulated three questions, namely: question 1 into: I am a student in .....(country) and question 3 and 5 were addressed to the students. The topics stays the same. The analysis of the collected data was performed in SPSS, after checking Cronbach’s alpha and after recoding some topics. For instance the topic *impatience*. In the survey respondents could choose at one side for *always having patience* and at the other end for *never having patience*, and of course everything in between.

### 2.4 Reflection

The topics of the survey are based on a literature review and on the knowledge and experiences of the PUNC partners. We assume that therefore the topics should be recognizable for educators and students. What we cannot foresee is what the respondents have in mind when they fill in the survey. Do they refer to a particular situation, was it recent or did it happen a long time ago, did it gave a minor or a major impact? Therefore the respondents can choose to answer in the ‘middle’. This is also inherent at using a 5-point Likert instead of a 4-point Likert scale. We do not want them to feel forced to choose, but give them the opportunity for nuances.

Together with the results of the literature review, the survey gives enough relevant input for the last activity for developing the PUNC competence framework: validation sessions in the five countries.

# 3 RESULTS EDUCATORS SURVEY

## 3.1 Introduction

The aim of the survey is to retrieve information from the educators what they see and think are the experiences and needs students have with regard to uncertainty in their learning process.

As mentioned before the educators survey was conducted in five countries (Denmark, Finland, Poland, Spain and the Netherlands) at the PUNC partners institutions. We received completed surveys from 109 educators, which is shown in figure 3.

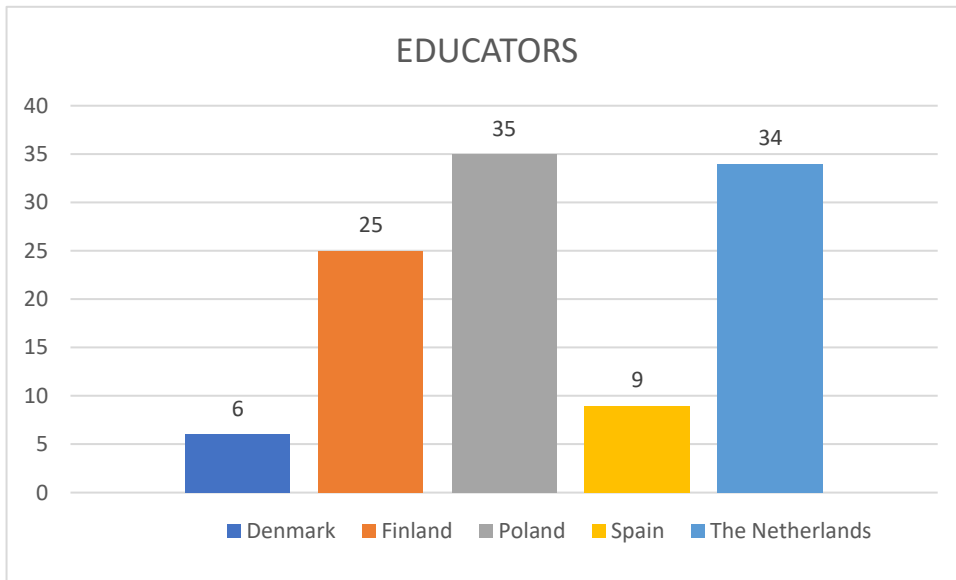


Figure 3: Educators respondents per country

## 3.2 Experiences

All educators recognize to a certain level the experiences as mentioned in the survey. The average score is 2.999 with a minimum of 2.459 and a maximum of 3.862. A detailed overview of the frequencies per answer can be found in appendix C. In order to get a quicker overview of the differences at the left and right side seen from the average, we recoded the cases into three answering categories: often (always+ often), sometimes and rarely (rarely + never).

Based on the recoding, table 2 shows the results of what  $\geq 45\%$  of the educators see or think that students experience in a VUCA learning environment with regard to uncertainty.

Table 2: students experiences of uncertainty in an VUCA learning environment according to educators

Students often	Students rarely
are being judged	ask questions
are curious	feel discouraged
feel vulnerable	feel lonely
have a drive to learn	feel safe
	have a perspective on the overall purpose
	have a sense of direction
	have conflicts during collaboration
	receive feedback

The answers of the open-end question 'Please indicate any additional students' experiences of uncertainty in their learning process' are divers, mostly mentioned by a single educator and examples of the survey



topics { See appendix C for the answers). In general the educators give examples of students uncertainty experiences related to:

- the context, e.g.: *'Students are feeling uncertain at the very beginning of the learning process because they do not know what is going to be the final product and how to get there';*
- judgment, e.g.: *'if it is not clear what they are judged on'* (translated from Dutch);
- peers, e.g.: *'pressure from peers to do well';*
- educators, e.g.: *'uncertainty about what they have done wrong with too little/unclear feedback from teachers'*(translated from Dutch);
- content / skills / ability, e.g.: *'Students do not read the material preparing them for classes, thus showing deficiencies in understanding the content. And after class, they don't have the habit of reading science in order to broaden their horizons';*
- Self / attitude, e.g.: *'I see that uncertainty also often leads to passivity. Don't want to give in. Avoiding feelings of uncertainty. Present themselves better than they actually feel, or present themselves dependent'* (translated from Dutch).

### 3.3 Needs

All educators recognize to a certain level the needs as mentioned in the survey. The average score is 3.928 with a minimum of 2.917 and a maximum of 4.284. A detailed overview of the frequencies per answer can be found in appendix C.

In order to get a quicker overview of the differences at the left and right side seen from the average, we recoded the cases into three answering categories: much (much + very much), sometimes and very little (not + a little).

Table 3 shows the results of what educators see or think what students need **much** in a VUCA learning environment in order to handle uncertainty.

Table 3: what students need much in order to handle uncertainty, according to educators

50 – 65% of the educators	65- 80% of the educators	≥80 % of the educators
acknowledgement of vulnerability	ability to prioritise	asking questions
conflict solution skills	able to define the goal	dialogue
scaffolding	acceptance of failures	experiences of success
	asking feedback	positive feedback
	being challenged	reflection
	courage to take risk	room for initiative
	doing something meaningful	social connection
	encouragement	support from others
	flexibility	
	making own choices	
	resilience	
	self confidence	
	self-regulation	
	take ownership of learning process	

	thinking critical	
	thinking out of the box	

The answers of the open-end question ‘Please indicate any additional students’ needs to handle uncertainty in their learning process’ are diverse, mostly mentioned by a single educator and examples of the survey topics. See appendix C for the answers). In general the educators give examples of students needs related to:

- the context, e.g.: *‘Safe learning environment. That reflection takes place at different levels, and that is ok’;*
- peers, e.g.: *‘Connection with learning teammates and coach. Perhaps fellow students who have (had) the same experience’ (translated from Dutch);*
- educators, e.g.: *‘Students more or less can and are able to be very independent and make own decisions, but they need to know and have the feeling that the teacher is there for them. Not necessarily physically present, but showing their presence in some way (e.g. greetings, asking how things are, is everything okay) and answering quickly to their messages. The actual need might be small, but the encouragement and positive presence and "I’m here for you, if needed"- feeling is important and ensures safe learning environment to the student’;*
- content / skills / ability, e.g.: *‘Learning to deal with failure and failure also as learning to see’ (translated from Dutch);*
- Self / attitude, e.g.: *‘giving and taking constructive feedback not so personally’.*

# 4

## RESULTS STUDENTS SURVEY

### 4.1 Introduction

The aim of the survey is to retrieve information from the students about what they experience and need in order to handle uncertainty.

A student survey was not planned in the PUNC-project plan, but it was added in reaction to some remarks from educators.

We received 141 completed surveys from students from the five countries , which is shown in figure 4.

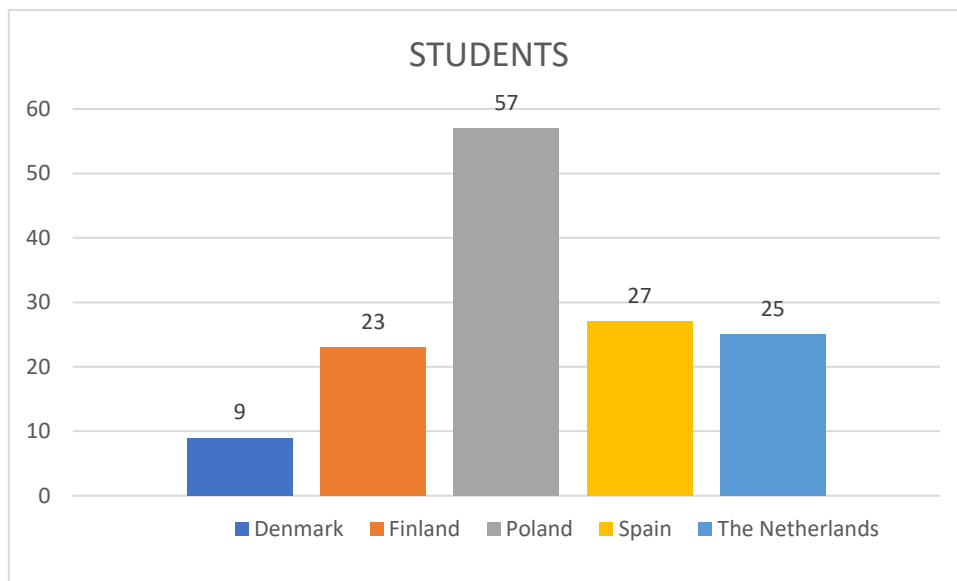


Figure 4: Students respondents per country

### 4.2 Experiences

All responding students recognize to a certain level the experiences as mentioned in the survey. The average score is 3.013 with a minimum of 2.319 and a maximum of 3.851. A detailed overview of the frequencies per answer can be found in appendix D.

In order to get a quicker overview of the differences at the left and right side seen from the average, we recoded the cases into three answering categories: often (always+ often), sometimes and not rarely (rarely + never).

Based on the recoding, table 4 shows the results of what  $\geq 40\%$  of the students experience in a VUCA learning environment with regard to uncertainty.

Table 4: students experiences in an VUCA learning environment according to students

Students say they often	Students say they rarely
are aware of one's own strengths and weakness	think they are capable to continue
are curious	ask questions
are excited	feel safe
are fascinated	have a perspective on the overall purpose
are judged	have conflicts during collaboration
avoid risks	have patience
cling to fixed strategies	Feel in control

feel overwhelmed	receive feedback
feel stressed	take responsibility

The answers to the open-end question ‘Do you have more experiences with regard of uncertainty in your learning process’ are divers, mostly mentioned by a single student and examples of the survey topics. (See appendix D for the answers). The answers show several examples of ‘not-knowing’ e.g. about unclear formulated assignments, expectations from others, how to approach learning tasks, when something is good enough, where and from who to get an answer on questions and missing information. There are a few students that feel pressure to do everything in a good way and with a good result. There are some students who don’t know what to do after graduation. There are students who experience uncertainty in group processes. Some answers are directly related to the Self, e.g. ‘*My usual state is uncertainty*’. One student brings a relation with the past ‘*I think too often I can't do it. I think things from the past can cause you to experience uncertainty in certain things*’ and another students writes ‘*Not so much loneliness, but feel like you are on your own* (translated from Dutch)’.

### 4.3 Needs

All responding students recognize to a certain level the needs as mentioned in the survey. The average score is 3.702 with a minimum of 3.248 and a maximum of 3.936. A detailed overview of the frequencies per answer can be found in appendix D.

In order to get a quicker overview of the differences at the left and right side seen from the average, we recoded the cases into three answering categories: much (much + very much), sometimes and a very little (not + a little). Table 5 shows the results of what students say they need **much** in a VUCA learning environment.

Table 5: what students need much in a VUCA learning environment in order to handle uncertainty

40-55% of the students	55-70% of the students	≥ 70% of the students
acknowledgement of vulnerability	asking questions	able to define the goal
asking feedback	being challenged	ability to prioritise
scaffolding	conflict solution skills	doing something meaningful
self-regulation	dialogue	positive feedback
	encouragement	
	flexibility	
	making own choices	
	reflection	
	resilience	
	room for initiative	
	self-confidence	
	skills to zoom in/out	
	support from others	
	taking ownership of learning process	
	thinking critical	
	thinking out of the box	
	acceptance of failures	
	experiences of success	
	social connection	
	courage to take risk	

The answers of the open-end question ‘What do you need more to handle uncertainty in your learning process’ are divers, mostly mentioned by a single student and examples of the survey topics. See appendix

D for the answers). Students often give suggestions about the support, encouragement, time and dialogue they need from educators and peers. Some students need more motivation, more time to process information, clarity about tasks. A single student want more solo tasks, guid lines, flexible grades. Looking to themselves a single student writes *'to deal with uncertainty I would need to be open to innovative perceptions of reality'*. Some students refer to the acknowledgement of uncertainty and the need for positive feedback or *'Reassurance that I'm doing my best, especially at this difficult time when you have to do a lot yourself. But also the feeling of getting other that I can be insecure'* (translated from Dutch).

## 5 SUMMARY OF EXPERIENCES AND NEEDS

109 Educators and 141 students filled in the survey. The first 28 topics refers to the question ‘What do students **experience** with regard to uncertainty in their learning process within the learning environment?’. The results are shown in table 6.

Table 6: students experiences according to  $\geq 45\%$  of the educators and  $\geq 40\%$  of the students

Students often	Student are rarely
are aware of one's owns strengths and weakness	capable to continue
are being judged	ask questions
are curious	feel discouraged
are excited	feel lonely
are fascinated	feel safe
are judged	have a perspective on the overall purpose
avoid risks	have a sense of direction
cling to fixed strategies	have conflicts during collaboration
feel overwhelmed	have patience
feel stressed	in control
feel vulnerable	receive feedback
have a drive to learn	take responsibility

The next 29 topics refers to the question ‘What are students’ **needs** to handle uncertainty in their learning process within the learning environment?’. The results are shown in table 7.

Table 7: students’ needs in a VUCA learning environment in order to handle uncertainty

50 - 65% of the educators 40 - 55% of the students	65- 80% of the educators 55-70% of the students	$\geq 80\%$ of the educators $\geq 70\%$ of the students
acknowledgement of vulnerability	ability to prioritise	ability to prioritise
asking feedback	able to define the goal	able to define the goal
conflict solution skills	acceptance of failures	asking questions
scaffolding	asking feedback	Dialogue
self-regulation	asking questions	doing something meaningful
	being challenged	experiences of success
	conflict solution skills	positive feedback
	courage to take risk	Reflection
	Dialogue	room for initiative
	doing something meaningful	social connection
	encouragement	support from others
	experiences of success	
	Flexibility	
	making own choices	
	reflection	
	resilience	
	room for initiative	
	self-confidence	
	self-regulation	
	skills to zoom in/out	
	social connection	
	support from others	

	taking ownership of learning process	
	thinking critical	
	thinking out of the box	

The two open-end question to add additional student's experiences of uncertainty and student's needs to handle uncertainty productively, did not resulted into new topics. The added information gave examples, personal and contextual information about the topics of the survey.

# 6 PRACTICE BASED 'MENU' OF PUNC ELEMENTS

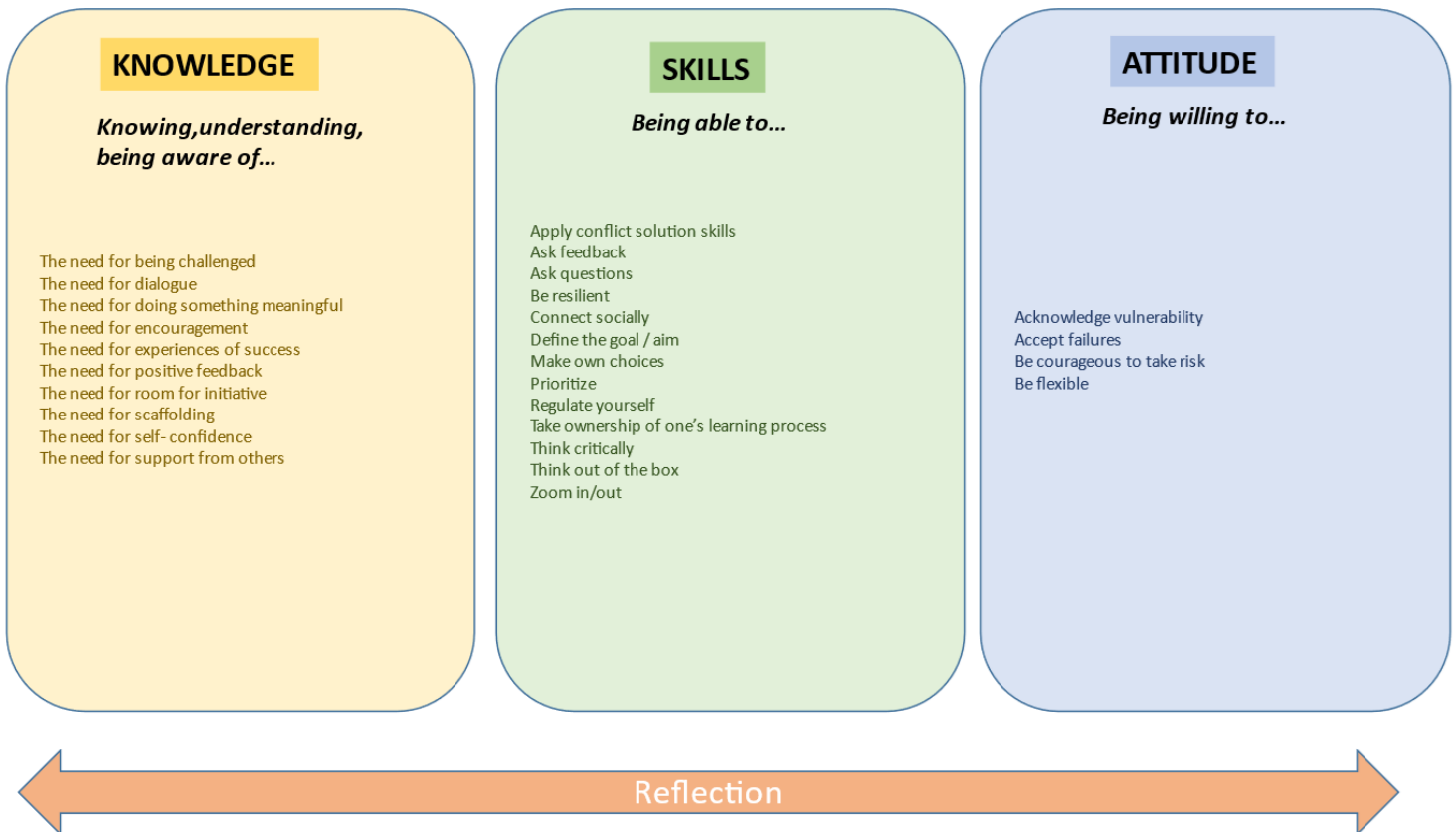
As written in the introduction the development of a PUNC framework consist of three activities. The first activity resulted into a first version with three strategies and a theory based 'menu' of PUNC elements. The survey, as second activity, results in a practice based 'menu'.

In order to create this practice based 'menu' we focus on the needs that are recognized by the educators and students. Although the level of the 'urgency' of a need can differ, we decide to use all the needs from table 7 (see former page) for the practice based 'menu' of PUNC elements.

Three needs are mentioned twice (e.g. doing something meaningful, asking feedback, experiences of success) and in the 'menu' we mention it only one time. The needs are divided over the three elements of the 'menu', namely: knowledge. skills and attitudes. Whereas knowledge refers to: knowing, understanding, being aware of...., skills refers to being able to ..... and attitudes refers to being willing to.....

Figure 5 shows the practice based 'menu' with PUNC elements

Figure 5: Practice based 'menu' with PUNC elements



The theory and practice based 'menu' are combined (as shown on the next page in figure 6). The third activity of the development process of the PUNC framework are validation sessions in which the PUNC framework with the PUNC 'menu' will be discussed and validated.



## KNOWLEDGE

*Knowing, understanding,  
being aware of...*

Examples of reducing uncertainty  
One's experienced uncertainty in a specific situation, context, or task  
One's intuition as a source of information  
One's self-efficacy  
The benefits of making uncertainty productive  
The importance to develop vision  
The need for being challenged  
The need for dialogue  
The need for doing something meaningful  
The need for encouragement  
The need for experiences of success  
The need for positive feedback  
The need for room for initiative  
The need for scaffolding  
The need for self-confidence  
The need for support from others  
Uncertainty as a phenomenon in learning and working

## SKILLS

*Being able to...*

Apply communication skills  
Apply conflict solution skills  
Apply decision making skills (based on incomplete info)  
Ask feedback  
Ask questions  
Assess a situation  
Connect socially  
Deal with incomplete information adequately  
Deal with open-ended problems  
Deal with problems beyond own expertise  
Define the goal / aim  
Engage in a supportive network  
Find, value, interpret and use or share relevant information and resources  
Investigate sources (internal/external) of uncertainty  
Make own choices  
Operate between an existing and familiar present and an unknown future  
Prioritize  
Regulate yourself  
Solve problems creatively  
Take initiative  
Take ownership of one's learning process  
Think critically  
Think divergent / lateral  
Think out of the box  
Understand causality  
Zoom in/out

## ATTITUDE

*Being willing to...*

Accept failures  
Accept not knowing what will happen  
Acknowledge vulnerability  
Be adaptable and open to change  
Be agile  
Be courageous  
Be courageous to take risk  
Be curious  
Be enquiring  
Be ethical  
Be flexible  
Be ingenuous  
Be mindful  
Be receptive  
Be self-aware  
Discover new strategies for problem solving  
Embrace doubts  
Empathize with different perspectives  
Endure  
Experiment  
Gain information  
Learn  
Show feelings  
Take initiative  
Take leadership  
Take ownership  
Take responsibility for choices and actions  
Take risks  
Understand and to make sense of uncertainty  
Visualize future alternative scenarios

Reflection

# APPENDIX A - MURAL: CONSTRUCTING THE SURVEY

## TPM2 - Preparations of the survey for IO2



**Explanation**

The goal of this Mural is to define concrete survey topics for IO2. We want to address things:

- what do students experience with regard uncertainty in their learning process?
- what do students need to handle this uncertainty in a productive way?

We approach uncertainty basically as 'not knowing'. The uncertainty mentioned in 1) and 2) is the experienced (inter)subjective uncertainty of the student during his/her learning process. In relation to VUCA this means that the Uncertainty in the students experience relates to Volatility, Complexity and Ambiguity in terms of 'not knowing' (I don't know what will happen, ... I don't know how to act...). The same goes for the 'needs' of the students in order to be able to handle uncertainty productively.

**Set up of the day:**

9:30 – 10:30: Plenary session 'Welcome and Introduction of the day' (on-line)  
 10:30 – 11:30: Work session 1 on step 1 in your team (off-line)  
 11:30 – 12:30: Plenary session: deciding on topics! (on-line)  
 12:30 – 12:30: Lunch break (off-line)  
 13:30 – 13:45: Plenary session: Energizer (on-line)  
 13:45 – 14:45: Work session 2 on step 2 in your team (off-line)  
 14:45 – 15:45: Plenary session: discussing results & further procedure (on-line)  
 15:45 – 16:00: Closure of the TPM (on-line)

**How to work with the mural:**

- Team get into their right position
- prepare for the plenary session
- work with your own sticky notes
- add a sticky note to the mural
- if for the mural you need to 'share' by drawing the note, you can use the 'Share' button on the screen
- Use the 'Share' button on the screen to share the mural with your team

**Instruction:**

In the quadrant to the right, we'll collect your input. Every square equals an aspect of VUCA. An additional square is added for 'Other topics'.

Keep in mind that the aim is to construct a questionnaire with topics on which respondents can score on a 4-points Likerscale like this:

What do students experience with regard uncertainty in their learning process?	None	A little	Much	Very much
Topic 1	X			
Topic 2			X	
Topic 3		X	X	
Topic 4				X

Please follow these steps with your team:

- In Step 1 we focus on this question: 'what do students experience with regard to uncertainty in their learning process?'  
 Make a list of topics that you think students experience with regard to the V, C, and A. Be sure to handle every V, C, and A aspect separately.  
 Copy these topics on sticky notes of your color (element per note) and paste them in the right square of the quadrant under the question: 'what do students experience?'  
 If a topic does not fit with the V, C or A, please put it in the category Other Topics.
- In Step 2 we focus on this question: 'what do students need to handle these experiences (topics) in a productive way?'  
 After having decided on the main topics for question 1, now address every separate topic with possible 'needs'.  
 Write the number of the experience that you want to address on every separate sticky note with a need and paste them in the right square of the quadrant under the question: 'what do students need?'  
 If a 'Need' does not fit with the V, C or A, please put it in the category Other Topics.

**For example:**

- to structure
- to integrate
- to planing

**Other Topics:**

- Distance change



**Welcome!**

**Please choose in question 1 the learning environment you work in and answer the questions with this learning environment in mind.**

**Choose one option per question and all questions have to be answered.**

**Thank you for taking part in this survey!**

**The PUNC team**

**[Please click here to start the survey.](#)**

**1. I am an educator at**

- Innovation camp (Innocamp PL)
- Experts in Teams (Aarhus)
- Character skills (Aarhus)
- Explorer (UPV)
- Business Economics (UPV)
- Project Hatchery (Turku UAS)
- Leading a Group (Turku UAS)
- Innovation Project (Turku UAS)
- Project-based learning environments e.g., Business Academy, theFIRMA, #Factory, Circular economy 2.0, Labriikki, Game/Health Tech/Sales Lab (Turku UAS)
- Research seminar (UG)
- Course Seminar (UG)
- Workshops (UG)
- Other

## 2. WHAT DO STUDENTS EXPERIENCE WITH REGARD TO UNCERTAINTY IN THEIR LEARNING PROCESS WITHIN THE LEARNING ENVIRONMENT?

Semantische  
differential

Aantal punten op de schaal: 5

<input type="radio"/> always feeling vulnerable	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling vulnerable
<input type="radio"/> always being curious	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never being curious
<input type="radio"/> always in control	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never in control
<input type="radio"/> always feeling safe	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling safe
<input type="radio"/> always feeling lonely	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling lonely
<input type="radio"/> always afraid to take responsibility	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never afraid to take responsibility
<input type="radio"/> always being excited	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never being excited
<input type="radio"/> always feeling self-confident	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling self-confident
<input type="radio"/> always having conflicts during collaboration	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never having conflicts during collaboration
<input type="radio"/> always able to overlook the total	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never able to overlook the total
<input type="radio"/> always feeling overwhelmed	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling overwhelmed

Rechthoekig knippen

<input type="radio"/> always having perspective on the overall purpose	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never having perspective on the overall purpose
<input type="radio"/> always having a clear view of the process	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never having a clear view of the process
<input type="radio"/> always feeling discouraged	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling discouraged
<input type="radio"/> always being aware of one's own strengths/weaknesses	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never being aware of one's own strengths/ weakness
<input type="radio"/> always clinging to fixed strategies	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never clinging to fixed strategies
<input type="radio"/> always in a flow	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never in a flow
<input type="radio"/> always having a drive to learn	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never having a drive to learn
<input type="radio"/> always being fascinated	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never being fascinated
<input type="radio"/> always having a sense of direction	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never having a sense of direction
<input type="radio"/> always experiencing contradictory roles in collaboration	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never experiencing contradictory roles in collaboration
<input type="radio"/> always afraid of being judged	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never afraid of being judged
<input type="radio"/> always afraid to ask questions	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never afraid to ask questions
<input type="radio"/> always feeling stressed	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling stressed
<input type="radio"/> always feeling able to continue	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> never feeling able to continue

Rechthoekig knip

always having patience

never having patience

always avoiding risk

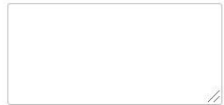
never avoiding risk

always receiving feedback

never receiving feedback

**3. Please indicate any additional students' experiences of uncertainty in their learning process**

Open (groot)



#### 4. WHAT ARE STUDENTS' NEEDS TO HANDLE UNCERTAINTY IN THEIR LEARNING PROCESS WITHIN THE LEARNING ENVIRONMENT?

Semantische  
differentiaal

Aantal punten op de schaal: 5

<input type="radio"/> no acknowledgment of vulnerability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much acknowledgement of vulnerability
<input type="radio"/> not thinking convergent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much thinking convergent
<input type="radio"/> no scaffolding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much scaffolding
<input type="radio"/> no acceptance of failures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much acceptance of failures
<input type="radio"/> no social connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much social connection
<input type="radio"/> no courage to take risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much courage to take risk
<input type="radio"/> no self-regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much self-regulation
<input type="radio"/> no experience of success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much experience of success
<input type="radio"/> no conflict solution skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very good conflict solution skills
<input type="radio"/> no ability to prioritise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much ability to prioritise
<input type="radio"/> no skills to zoom in/out	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very many skills to zoom in/out
<input type="radio"/> not able to define the goal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much able to define the goal
<input type="radio"/> not asking questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much asking questions
<input type="radio"/> no positive feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> very much positive feedback

Rechtshoeki





<input type="radio"/> no reflection	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much reflection
<input type="radio"/> not thinking out of the box	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much thinking out of the box
<input type="radio"/> not doing something meaningful	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much doing something meaningful
<input type="radio"/> not taking ownership of learning process	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much taking ownership of learning process
<input type="radio"/> no room for initiative	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much room for initiative
<input type="radio"/> not making own choices	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much making own choices
<input type="radio"/> no dialogue	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much dialogue
<input type="radio"/> no self-confidence	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much self-confidence
<input type="radio"/> no support from others	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much support from others
<input type="radio"/> no resilience	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much resilience
<input type="radio"/> no encouragement	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much encouragement
<input type="radio"/> no flexibility	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much flexibility
<input type="radio"/> not being challenged	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much being challenged
<input type="radio"/> not asking feedback	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much asking feedback
<input type="radio"/> not thinking critical	<input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> very much thinking critical

**5. Please indicate any additional students' needs to handle uncertainty in their learning process**

Open (groot)

[Return to previous question](#)

## APPENDIX C - SURVEY RESULTS EDUCATORS

EXPERIENCES	Number of educators N= 109				
	always	often	sometimes	rarely	never
2.1 feeling vulnerable	2	47	40	18	2
2.2 Being curious	12	46	40	11	-
2.3 In control	29	1	54	20	5
2.4 Feeling safe	21	-	39	37	12
2.5 Feeling lonely	-	13	39	41	16
2.6 To take responsibility	1	24	42	40	2
2.7 Being excited	4	43	46	13	3
2.8 Feeling self-confident	21	1	53	33	1
2.9 Having conflicts during collaboration	3	20	26	51	9
2.10 To be able to overlook the total	36	4	45	23	1
2.11 Feeling overwhelmed	6	35	39	26	3
2.12 Having perspective on the overall purpose	29	3	28	42	7
2.13 Having a clear view of the process	33	3	38	30	5
2.14 Feeling discouraged	-	10	39	46	14
2.15 Being aware of one's owns strengths and weakness	7	40	41	20	1
2.16 Clinging to fixed strategies	3	32	47	23	4
2.17 Being in a flow	8	32	58	14	-
2.18 Having a drive to learn	12	50	32	14	1
2.19 Being fascinated	5	42	40	20	2
2.20 Having a sense of direction	15	1	38	48	7
2.21 Experiencing contradictory roles in collaboration	2	18	50	32	7
2.22 Being judged	9	41	23	32	4
2.23 Asking questions	3	22	21	38	25
2.24 Feeling stressed	4	29	50	24	2
2.25 Being able to continue	24	-	37	37	11
2.26 Having patience	21	1	52	31	4
2.27 Avoiding risk	9	21	53	23	3
2.28 Receiving feedback	8	-	23	48	32

**Answers open-end question: Please indicate any additional students' experiences of uncertainty in their learning process'**

- Pressure from peers to do well
- The lack of clear expectations from the educator, the lack of proper feedback (individual feedback more important than the overall feedback after the course)
- Students sometimes are lost because of information overload and not sure of its reliability
- I do not know.

- It is a learning process to accept, that in Character skills there are many right answers. That it is mostly about (self) reflection, which can be difficult.
- The student becomes uncertain and experience lack in belief in their own abilities
- Students are often not sure what they are interested in. As a result they are not sure what research they want to make.
- May I suggest that you ask the students and not the teachers about "students experience" to get more valid data
- Professional self-esteem is still developing.
- Group leaders don't know their group members until the very first day, and still some changes might occur even after that (someone not showing up, a new member joining later), so they are expected to be ready for anything and very flexible. For some, this is very difficult. Also since they are Group Leaders in Project Hatchery, which consists of app. 1300 new students and app. 110 Hatcheries, the entity is huge and there is a lot of information that the group members are asking about and expecting from the Leader. Teachers, that are there for the Group Leaders, might also be new in the context, and might not know everything and all the latest developments. So the Group Leaders can have some uncertainty regarding the teacher as well.
- The role of theories in projects seems to be challenging.
- Lack of interest in studied subject, afraid of losing comfort zone, online loneliness
- Students do not read the material preparing them for classes, thus showing deficiencies in understanding the content. And after class, they don't have the habit of reading science in order to broaden their horizons
- Students have different opinions about lecturers, but most often they agree to the point. Students experience the same facts in different way when presented by different lecturers, which can cause to doubts and contradicting experience. Students sometimes have to learn something which is needed on one class, but will be explained in details in another class, but way later.
- The general observation is that students need attention. They all get involved in the class process, but some need encouragement or guidance.
- New methods introduced during learning online can cause uncertainty . Especially if they involve gamification.
- Fear of the unknown, the question is whether I can handle it? Will I be left alone with the problem?
- Problems accepting feedback which requires complete change of action Language and presentation skills
- Students are feeling uncertain at the very beginning of the learning process because they do not know what is going to be the final product and how to get there. I mean that they have to figure it out by themselves in a group and they do not have all the answers how and what they should do. The teachers give them the responsibility but not answers right away.
- Difficulty finding data sources
- Vagueness of a problem before it is well-defined
- Most students accept open ended projects with a solid dose of uncertainty and self-responsibility as a necessary or even great way to learn.
- No additional remarks
- Lack of courage to express their feelings in any way is a key thing.
- It is very hard for me as a teacher to tell what the students feel.
- Students prefer to have operational sub-goals
- Disappointed when things don't go as they imagined

- They tend to be passive, or even passive-aggressive and demanding.
- Varies so much among students that very difficult to answer
- The Students cannot sometimes to choose the most important or adequate to lessons knowledge. They seems to be like in the primary school students "give me the page number and I will learn only this page". The lack of the experience in the laboratory together with no idea of the reactions result is stressful for them. Even if they learned much more than other, no friend project discussion won't be taken by them.
- The tasks in the learning environment were changed several times quite late. It quite much up to own coach of the project to ensure that everyone are on track.
- Collaboration in interdisciplinary teams.
- No additional information
- Uncertainty in students often means a decrease in motivation. Stress prevents them from developing their interests and they want someone else to make decisions / take control for them.
- Facing technological troubleshooting, especially stressful during tests
- De wijze van toet afname, wijze van inleveren. Factor tijd kan ook onzekerheid opleveren.
- Corona, stage
- Weifelend, balancerend tussen wel en niet doorgaan, van heel veel zin hebben om, tot het toch niet meer zien zitten om verder te gaan.
- Onzekerheid ervaren in het leerproces, hangt sterk af van individu niet weten hoe de beoordelingscriteria te interpreteren (of anders gezegd waar de lat gelegd kan worden) Niet weten hoe goed te plannen zodat je met kwaliteit op tijd klaar bent
- Erkenning is ook een belangrijk onderdeel van onzekerheid. Bij DURF! kunnen we hier meer alert op zijn om de juiste momenten te vinden om deze erkenning duidelijk te maken. We geven constant aan in de begeleiding dat fouten maken mag. Maar we mogen ook vooral benoemen wanneer het juist goed gaat en complimenteren. Ook wanneer er fouten worden gemaakt is het belangrijk dat we er bij stil staan om ervan te leren. Daarnaast is het ervaren van succesmomenten een belangrijk onderdeel voor het bevorderen van zekerheid. Wanneer er successen worden ervaren, krijgen studenten vertrouwen in eigen kennis, kunde en handelen. Het is belangrijk binnen DURF! om deze momenten op te zoeken, te faciliteren en vooral te laten ervaren. Veel studenten nemen niet de tijd om het compliment of succes te ontvangen. Dit mag meer aandacht krijgen bij DURF!
- Niet goed kunnen plannen en (manier van) leren
- De beoordeling, wat zal de examinerator ervan vinden?
- Onduidelijkheid vanuit verschil in beoordeling tussen docenten.
- Dat ze, bij de leeromgeving die ik voor ogen heb, ze zelf meer eigenaarschap en verantwoordelijkheid hebben voor hun leerproces (en het vullen van hun portfolio) dan ze soms gewend zijn bij andere modules.
- Door de Corona maatregelen ervaren studenten minder steun van elkaar, dat brengt vaak meer onzekerheid met zich mee.
- als het niet duidelijk is waarop ze beoordeeld worden, als stages anders lopen dan ze verwacht hebben, of als er andere dingen van ze verwacht worden in stages dan waar ze zich op in gesteld hebben
- Weet ik niet zo goed.
- Mijn ervaring is dat studenten op inhoud het niet erg vinden om onzeker te zijn, mits de kaders en het doel maar duidelijk zijn. Als die laatste onduidelijk zijn of als structuur ontbreekt, voelen zij zich minder veilig onzeker.
- Afhankelijkheid van de leefwereld en beroepspraktijk

- Vind het moeilijk om dit voor de student in te vullen. Tegen mij hebben ze het vooral over gebrek aan motivatie.
- Geen aanvullende zaken naast voorgaande vragen
- De informatie voorziening is wisselend en soms erg laat. Er worden verschillende systemen gebruikt die daar ook debet aan zijn. Formuleringen zijn soms onduidelijk waardoor ze niet goed begrepen worden en daarmee onzekerheid opwekken. Beiden geldt ook voor de docenten waardoor die ook niet altijd de antwoorden kunnen geven die de studenten stellen.
- Onduidelijkheid over de bedoeling van het leerdomein. Een betere uitleg zou men soms op Canvas willen lezen. Zeker naarmate men verder in de opleiding komt wordt er steeds meer zelfstandigheid verwacht. Zeker voor instromers kan dat lastig zijn.
- Onzekerheid of ze het goed doen. Onzekerheid over wat ze verkeerd hebben gedaan bij te weinige/onduidelijke feedback van docenten. Onzekerheid of ze het niveau aan kunnen. Onzekerheid over het aanspreken van docenten/feedback geven aan docenten. Onzekerheid over hun eigen positie in de organisatie.
- De afhankelijkheid van de examinerator bij beoordelingen, helaas een moetje in een bekostigde hbo-opleiding, maakt onzeker.
- Geen vragen durven stellen, vooral online niet. Zoekende zijn naar hoe ze het beste kunnen leren (lezen, uit hoofd leren, casus oefenen, richten op leerdoelen etc). Onzekerheid over of ze het wel kunnen (bijv. in jaar 2 wordt meer zelfstandigheid gevraagd, dat is lastig voor ze vooral in het begin).
- Onduidelijkheid over de te halen norm. Door ofwel niet de Rubric zelf goed door te nemen of daar geen vragen over te durven stellen.
- Het is heel moeilijk om over "de student" te spreken, omdat er erg grote verschillen zijn. dit heeft te maken met persoonlijkheid en omstandigheden (ene student is andere niet, ene stage is andere niet).
- Hun rol als student / stagiair t.o.v. hun rol als aankomend professional
- Ze willen graag meer voorbeelden dat geeft ook meer zekerheid
- Ik zie dat onzekerheid ook vaak leidt tot passiviteit. Niet willen toegeven. Vermijden van gevoelens van onzekerheid. Zich beter presenteren dan ze zich in werkelijkheid voelen, of zich juist afhankelijk presenteren.

NEEDS	Number of educators N = 109				
	none	a little	moderate	much	Very much
4.1 Acknowledgement of vulnerability	-	6	42	42	14
4.2 Thinking convergent	12	15	54	26	2
4.3 Scaffolding	2	8	44	39	16
4.4 Acceptance of failures	1	9	19	43	37
4.5 Social connection	-	4	11	46	48
4.6 Courage to take risk	2	8	27	50	22
4.7 Self-regulation	1	6	26	60	16
4.8 Experiences of success	1	1	16	57	34
4.9 Conflict solution skills	1	5	33	47	23
4.10 Ability to prioritise	2	5	23	50	29
4.11 Skills to zoom in/out	-	5	27	56	21

4.12 Able to define the goal	-	6	21	55	27
4.13 Asking questions	1	3	9	47	49
4.14 Positive feedback	-	2	14	61	32
4.15 Reflection	-	3	13	49	44
4.16 Thinking out of the box	2	5	23	47	32
4.29 Thinking critical	1	2	25	57	24
4.17 Doing something meaningful	1	1	21	55	31
4.18 Taking ownership of learning process	2	3	19	47	38
4.19 Room for initiative	1	3	16	59	30
4.20 Making own choices	-	3	25	57	24
4.21 Dialogue	-	2	13	54	40
4.22 Self-confidence	1	2	22	55	29
4.23 Support from others	-	2	17	61	29
4.24 Resilience	-	4	28	51	26
4.25 Encouragement	1	2	19	58	29
4.26 Flexibility	1	3	23	56	26
4.27 Being challenged	1	5	29	56	18
4.28 Asking feedback	-	6	20	61	22

**Answers open-end question: Please indicate any additional students' needs to handle uncertainty in their learning process.**

- Confirmation if the way of thinking or the risk taken is worth the creative results
- The very well defined aims of the course and interactions with the educator, the centred goals
- The ability to cope with failure
- No more
- Safe learning environment. That reflection takes place at different levels, and that is ok
- When they start up a new project, they have to make up their own "template" for the project
- Students should be encouraged to read a lot, and then discuss what they read with both the teacher and the fellow students.
- May I suggest that you use a qualitative interview method and not a survey to cover "needs" and "experiences" and direct towards the students.
- We could emphasize that the route from finish to goal is not always a string line. Trial and error is often the way.
- Students more or less can be able to be very independent and make own decisions, but they need to know and have the feeling that the teacher is there for them. Not necessarily physically present, but showing their presence in some way (e.g. greetings, asking how things are, is everything okay) and answering quickly to their messages. The actual need might be small, but the encouragement and positive presence and "I am here for you, if needed"-feeling is important and ensures safe learning environment to the student.
- Tutor assistance
- The ones indicated in the above test were sufficient
- They should have better influence on how the lecturer is performing the lecture, by entering feedback look, when they express anonymously their feedback after EACH class, and when

the lecturer can address each vote/voice on next class immediately. This creates feedback loop and gives a real power to self-regulate classes in a dynamic way, when both sides are involved in creating the process.

- The student needs a space for development, attention and a work-friendly atmosphere.
- Demo demonstration or introduced methods. Hacking detailed instructions and guidelines available.
- He needs a master and a support group, he must have an environment for this type of learning
- Belonging to a well formed group
- Giving and taking constructive feedback not so personally
- To be reassured and trust the learning community
- It is a great help/requirement that the learning process is designed to allow for a lot of divergent thinking in the beginning (room for leadership and strategic positioning for example) followed up by a necessary convergent thinking (budgeting, legal aspects.)
- No additional comments
- Not that many personal experiences- age related issue
- They need to be responsible and active
- Absolute availability of a research tutor- the possibility of asking no -substantive questions- the ability to demonstrate knowledge gaps without consequences "
- Tolerance and patience from the others
- Competences to handle the conflicts that occur during team work.
- No additional information
- First of all, the support of more experienced people counts.
- Open for new challenge
- Verbinding met leerteam genoten en coach. Wellicht medestudenten die dezelfde ervaring hebben (gehad).
- Openheid van leerteamcoach over eigen onzekerheden, naast elkaar staan
- Het vertrouwen in zichzelf krijgen en contact met wat ze zelf willen, dus eerst ook kijk daarop krijgen.  
(NB bij veel antwoorden blijf ik in het midden omdat ze erg algemeen zijn. Dialoog met wie bv.
- Transparantie en openheid zijn belangrijke eigenschappen die moeten worden gestimuleerd bij DURF! In dialoog met medestudenten in een complexe en uitdagende omgeving zorgt ervoor dat je duidelijk krijgt als student dat je niet de enige bent die tegen bepaalde dingen aanloopt. Je bent niet alleen! Door het kunnen delen van onzekerheid en kwetsbaar opstellen, stimuleer je de ontwikkeling met elkaar. Door het bespreekbaar maken en te benoemen gaat het leven en krijg je inzichten van meerdere perspectieven. Een mooi voorbeeld is dat veel studenten eigen kwaliteiten vaak zien als iets vanzelfsprekends, terwijl ze in dialoog met medestudenten erachter komen dat het daadwerkelijk iets bijzonders is dat ze deze kwaliteit kunnen inzetten/gebruiken, in hun kracht staan en hiermee een belangrijke toevoeging geven voor het gemeenschappelijke ideaal. Dit geeft een boost in het vertrouwen en omgang met onzekerheid.
- Ook structuur, overzicht en planning skills
- Gezien en gehoord te worden
- Hulp durven vragen aan docenten
- Bewustwording dat ze onzeker zijn, en dat dat niet erg is. Sterker nog, dat dat normaal is, erbij hoort en dat dat ook helpt bij het leren.



- Vertrouwen van leerteambegeleider dat de student uiteindelijk wel terecht komt waar hij/zij past. Vertrouwen van de student dat onzekerheid erbij hoort.
- Hun onzekerheid kunnen benoemen en aanvaarden
- Vorige lijst was volledig.
- Geen aanvullende zaken (de dingen in de lijst zijn m.i. volledig).
- Liefde voor de mens en zijn of haar ontwikkeling
- Besef dat het een normaal onderdeel is van het leerproces.
- Geen aanvullende zaken naast hetgeen hiervoor is ingevuld
- Vroeger in het proces meer aandacht voor individuele (persoonlijke) ontwikkeling en reflectie, dat wordt nu weliswaar vaak op papier gevraagd maar dat wordt nog te vaak als een "moetje~ gezien in plaats van een persoonlijk en ondersteunend leerproces.
- Daadkracht en lef, het gewoon aangaan. Bijv. contact leggen met collega's in het werkveld en samen verbeteringen realiseren vinden veel studenten in eerste instantie heel eng, bang om de ander te overbelasten. Ze zijn tenslotte gewoon in dienst en moeten hun werk doen.
- Kunnen falen, schitterend blunderen
- Ik zit met sommige antwoorden niet helemaal aan de uiterste kant. Er moet wat mij betreft een mix zijn van steun door de docent en anderen en eigen kracht. Eigen verantwoordelijkheid staat bij mij hoog in het vaandel. Dat zou ook meer gestimuleerd moeten worden bij studenten. Geen rubberen stoeptegels mentaliteit. Je mag ook heus een keer goed op je bek gaan. Reflecteren op de eigen sterkte/zwakte helpt studenten. Dit reflecteren moet wel gebeuren in een veilige omgeving (bij voorkeur in het leerteam).
- Ook hier weer verschillen, maar ik denk wel dat sommige zaken voor iedereen gelden (bv ondersteuning) en andere nog ontwikkeld kunnen worden (bv zelfvertrouwen)
- Intervisie
- Leren dealen met falen en falen ook als leren zien
- Erkenning geven aan de onzekerheid, maar daarvoor is allereerst verbinding nodig. verbinding met zichzelf, met een ander (bijv. de leerteambegeleider). Als docent ruimte geven voor de onzekerheid en deze onzekerheid kunnen onderzoeken (wat gebeurt er nu eigenlijk en hoe komt dat?). Een voorbeeld van dat deze onzekerheid door iedereen wordt ervaren, ongeacht leeftijd, kennis en kunde. De onzekerheid hoort erbij en hoeft niet langer als 'vreemd' worden ervaren.

## APPENDIX D - SURVEY RESULTS STUDENTS

EXPERIENCES	Number of students N= 141				
	always	often	sometimes	rarely	never
2.1 feeling vulnerable	11	40	53	33	4
2.2 Being curious	24	60	47	8	2
2.3 In control	8	30	45	53	5
2.4 Feeling safe	3	24	46	54	14
2.5 Feeling lonely	7	34	45	39	16
2.6 To take responsibility	9	32	43	40	17
2.7 Being excited	7	52	46	32	2
2.8 Feeling self-confident	8	33	57	38	5
2.9 Having conflicts during collaboration	1	15	22	69	34
2.10 To be able to overlook the total	11	17	60	44	9
2.11 Feeling overwhelmed	12	46	49	28	6
2.12 Having perspective on the overall purpose	6	27	43	54	11
2.13 Having an clear view of the process	4	39	43	45	10
2.14 Feeling discouraged	6	31	49	52	3
2.15 Being aware of one's owns strengths and weakness	20	63	36	20	2
2.16 Clinging to fixed strategies	7	52	52	25	5
2.17 Being in a flow	5	33	58	37	8
2.18 Having a drive to learn	12	40	52	31	6
2.19 Being fascinated	11	51	58	19	2
2.20 Having a sense of direction	5	40	45	44	7
2.21 Experiencing contradictory roles in collaboration	1	33	59	39	9
2.22 Being judged	28	40	23	38	12
2.23 Asking questions	20	36	27	32	26
2.24 Feeling stressed	29	49	42	18	3
2.25 Being able to continue	3	29	40	50	19
2.26 Having patience	3	25	36	56	21
2.27 Avoiding risk	11	48	49	30	3
2.28 Receiving feedback	5	20	42	52	22

**Answers open-end question: Do you have more experiences with regard of uncertainty in your learning process'**

- no
- Yes, since lockdown
- Yes

- none
- In the approach to uncertainty in the learning process I have experience with uncertainty. I had an idea to experience learning to write a thesis with the second student, which was in accordance with the university regulations, but the authorities refused to write an innovative thesis.
- The assignments are never clearly formulated and I am always in doubt about the teachers expectations
- I usually feel uncertain at first, but I am usually able to overcome it quite quickly and focus on the tasks that I am given. Still I think it is important to get time to go through the information according to the task by myself first before I can take part in conversations.
- No
- Hesitance to act and doubting myself, procrastination and avoiding issues
- No.
- No.
- No
- no
- No
- No
- I was lucky to experience drama and creativity classes were many of the uncertainty elements were addressed experientially. It helped me a lot
- No, I don't.
- No
- No
- I am not sure if I chose the right degree course and I don't know what to do after graduation.
- no.
- My usual state is uncertainty
- Especially in a laboratory environment where we have to work with very little theory information about the work. This makes me feel very incompetent and uncertain about my abilities. I also feel stressed and I am afraid of negative feedback.
- I do not enjoy any group assignments since I am one of the few people who does most of the groups work. Some teachers do offer the option of doing solo assignments to avoid freeloaders. Most group assignments take away more than they give. I enjoy doing solo assignments due to only answering directly to the teacher. In solo assignments there are no conflicts of interest in timetables, interpersonal chemistry, etc.
- no
- Yes, some teachers in at the University of Gdansk do a poor job of teaching in general, and do not make themselves clear with what knowledge is needed in order to learn and do well in not only the course but life.
- Uncertainly mostly reflects from the misses in the introduction of the task or other breaks of information. We are trying to learn something but it's not made clear to us by the teacher or the leader how the process is moving ahead and details are missing.
- A tip: This study examined whether people with the same self-regulatory style of coping with uncertainty differed in their affective experiences as a function of what may be the dominant coping style of their culture. Two hundred twenty men and women from universities in Japan and Canada described the extent to which they experienced various emotions. Consistent with their expectations, the authors found that participants whose uncertainty orientation matched that of their country (i.e., uncertainty-oriented students in Canada, certainty-oriented students in Japan) experienced more active emotions than mismatched participants (i.e., certainty-oriented students in Canada, uncertainty-oriented students in Japan), who experienced more passive emotions. Moreover, those who matched their countries coping style also reported

experiencing more positive and fewer negative emotions than mismatched students. These results suggest that the theory of uncertainty orientation has important implications for research on affective experiences within and across cultures. Keywords: emotions: uncertainty orientation: individual differences. Uncertainty orientation refers to individual differences in how people handle uncertainty. Such behaviour can be described on a continuum with endpoints of uncertainty oriented and certainty oriented. Persons who are uncertainty oriented are characterized by direct responses to uncertainty, for example, obtaining information that resolves the uncertainty. In contrast, persons who are certainty oriented are characterized by indirect responses to uncertainty, for example, relying on the opinions of others to resolve uncertainty. Moreover, the normative expectations for uncertainty orientation may vary across cultures. In some societies, an uncertainty-oriented style of coping may be the norm, whereas in others, a certainty-oriented style may be the norm. Although uncertainty

AUTHORS NOTE: Research reported in this article was supported by various Social Sciences and Humanities Research Council of Canada grants to the first author and partially supported by a grant for cooperative research in graduate schools from the Japanese government, awarded to the third author. Thanks to Melissa Grigg, Andrew Szeto, and the editor and reviewers of this article for their helpful comments. JOURNAL OF CROSS-CULTURAL PSYCHOLOGY, Vol. 39 No. 2, March 2008 129-146DOI: 10.1177/0022022107312586© 2008 Sage Publications orientation is considered an informational var...

- I think regards , but the uncertainty is very hard
- no
- No, I don't
- no
- No
- No I don't
- No
- Not really. Maybe sometimes we are learning about things which are totally obvious and that makes us little bored
- no
- no
- At the moment I have more experiences in my learning process
- yes
- No
- Not really
- I am unsure what the question means, specifically "regard of uncertainty", and I have assumed the previous section was trying to simply ask about learning process experiences.
- no I don't
- Yes, especially in group projects
- no
- No
- doubts about the value of teaching offered for working life
- No
- Niet weten bij wie je moet zijn voor bepaalde vragen, weten dat je van het kastje naar de muur gestuurd gaat worden, niet weten of je een coach en klas gaat krijgen doordat je tussen twee jaren in zit
- Niet echt iets, maar door corona is alles iets onzekerder omdat we elkaar weinig zien en alles online is.
- Soms niet weten wat er vanuit de opleiding (Social Work!) verwacht wordt en dan de koppeling naar stage

- Ik ervaar onzekerheid in mijn leerproces wanneer ik geen duidelijk beeld heb van wat de opleiding van mij verwacht. Ook wanneer ik het gevoel heb dat ik teveel tegelijkertijd moet doen.
- Niet weten wat ik na mijn studie precies wil doen. Hiernaast vind ik het lastig om te weten wanneer je nou iets goeds doet. Dat is natuurlijk voor alles en iedereen anders, maar daardoor ook erg lastig. Je weet dat nooit of je het wel of niet goed doet.
- niet mijn eigen grenzen kunnen opstellen of me eraan houden
- Ik ben van de opleiding social work. Zelf ervaar dat ik vaak gestrest wordt en het overzicht kwijt raak waardoor ik nog meer gestrest raak.
- Veel druk om dingen meteen goed te doen
- Ik denk te vaak dat ik het niet kan. Ik denk dat dingen uit het verleden kunnen zorgen dat je onzekerheid ervaart bij bepaalde dingen.
- De inhoud van de eindopdrachten zijn elke week of elke dag anders. Hierdoor is er veel onzekerheid maar ook veel stress
- Met name de aspecten die in de vorige vraag naar voren kwamen. Ook nog bij het uit handen geven van werk wanneer je samenwerkt in een groep en wanneer er naar mijn idee geen format of duidelijke richtlijnen zijn voor een opdracht.
- Geen of weinig motivatie. En weinig sociale contacten op en buiten school
- Niet weten hoe je dingen aanpakt en welke studietechnieken je het beste in kan zetten. Wel vragen durven stellen, maar niet weten welke vragen ik zou moeten stellen.
- Ik heb niks toe te voegen
- Door onduidelijkheid kan ik gaan twifelen wat ik precies moet gaan doen.
- Ik studeer trouwens Sport, Management en Ondernemen. Als ik Engels moet presenteren vind ik dat minder fijn. Wanneer anderen altijd negatief en/of demotiverend zijn.
- Niet zo zeer eenzaamheid, maar wel het gevoel hebben er alleen voor te staan.

NEEDS	Number of students N = 141				
	none	a little	moderate	much	Very much
4.1 Acknowledgement of vulnerability	1	13	55	55	17
4.2 Thinking convergent	3	9	86	36	7
4.3 Scaffolding	2	12	69	44	14
4.4 Acceptance of failures	2	18	31	54	36
4.5 Social connection	1	18	27	54	41
4.6 Courage to take risk	1	19	36	56	29
4.7 Self-regulation	1	19	49	49	23
4.8 Experiences of succes	4	14	27	62	34
4.9 Conflict solution skills	1	18	35	54	33
4.10 Ability to prioritise	2	10	29	66	34
4.11 Skills to zoom in/out	1	14	43	61	22
4.12 Able to define the goal	1	11	28	67	34
4.13 Asking questions	7	19	25	45	45
4.14 Positive feedback	1	6	34	60	40
4.15 Reflection	1	12	31	62	35

4.16 Thinking out of the box	2	7	46	46	40
4.29 Thinking critical	0	7	39	55	40
4.17 Doing something meaningful	4	14	24	55	44
4.18 Taking ownership of learning process	2	14	41	58	26
4.19 Room for initiative	1	19	39	53	29
4.20 Making own choices	0	20	37	58	26
4.21 Dialogue	2	12	39	48	40
4.22 Self-confidence	5	10	32	58	36
4.23 Support from others	2	14	28	63	34
4.24 Resilience	1	12	46	55	27
4.25 Encouragement	2	14	42	53	30
4.26 Flexibility	2	9	40	59	31
4.27 Being challenged	2	15	39	60	25
4.28 Asking feedback	4	19	47	47	24

**Answers open-end question: What do you need more to handle uncertainty in your learning process'**

- No
- Self-confidence and drive to learn systematically
- Learning something I could use in the future
- Connection error
- teachers support and not judging because of weakness or gaps in knowledge also courage to ask with awareness that others know more
- Mentoring one on one with teachers
- I don't know
- To deal with uncertainty I would need to be open to innovative perceptions of reality
- Clarity and aligned expectations.
- I think that my personal learning process is being handled nicely. If anything, I would appreciate a tad more clarity and transparency concerning the different task that we as students are to solve. I am on an education where the goal never is truly definable, but that does sometimes make it for a bit if hair-pulling during discussions and group work.
- Self-confidence and people I can ask about things, feedback
- Una buena base en la cual sustentarte para nunca perder el rumbo.
- Spending more time on learning.
- No
- mentorship from professors
- A team of people
- Feeling of not being held responsible alone
- trusting relations, intercultural skills
- Nothing.
- Encouragement
- Support
- lectures and tutorial back in contact form
- I don't know

- more free time to process received information and new ideas
- Positive feedback and being able to ask questions even if they are stupid. That I am allowed to make mistakes, especially because I am a student and mistakes can also teach you something.
- I need less social interaction and more solo work to handle any uncertainties that might arise along the way.
- nothing
- I can only control my preparation, and my mindset towards uncertainty with regards to school. The rest I leave in God's hands
- Secure feeling that I am doing things right or that the way is good. Also some kind of guidelines and the change to ask for further information and make sure things.
- I think I need more information about my learning process and more support from my teachers
- nothing
- More one on one conversations with the professor.
- motivation, goal, someone I can ask to help or someone to guide me so that I'm on a right track
- More participation of the professoriate
- I don't know
- I need more concentration, and feeling that I am able to cope with the tasks I am given
- discussion of issues
- I think I need more support from the teachers and the university
- Support from the team and dialogue with others
- I don't know.
- Type answer here
- I need to do practical stuff which are learning
- I need the grades to be more flexible
- Dialogue with the teacher, mentor.
- More time and courage from others.
- to be acknowledged, appreciated, respected and listened to
- More support from the teachers
- Een coach hebben. Een persoon aan wie je vragen kunt stellen en die verantwoordelijkheid voor je neemt wanneer je ergens zelf niet uitkomt
- Niks
- Duidelijkheid over de taken
- Ik heb voornamelijk flexibiliteit nodig en een docent die out of the box kan denken.
- Geruststelling dat ik mijn best doe, zeker in deze lastige tijd dat je enorm veel zelf moet doen. Maar ook het gevoel van andere krijgen dat ik onzeker mag zijn.
- opbouwende kritiek en ook tools om hieraan te werken
- Erkenning dat een leerproces soms lastig kan zijn en dat er hulp wordt aangeboden ter ondersteuning.
- Meer open kunnen zijn over gevoelens
- Docenten zouden dit meer moeten erkennen
- Met name de aspecten die zijn genoemd bij de vorige vraag. En misschien duidelijke afspraken wanneer je in een groep samenwerkt.
- Motivatie vanuit mezelf

- Ondersteuning bij het onderzoeken waar die onzekerheid vandaan komt en wat ik ervoor nodig heb om het te adresseren.
- Niks toe te voegen
- Een goed vangnet
- Nee
- Meer support, van de opleiding. Wanneer je naar n decaan stapt met je problemen en zij zegt ja ik snap dat je hier je ei kwijt wilt maar ik kan toch niks voor je doen. Dan is dat n klap in het gezicht. Bij wie moet je dan terecht? Wist de decaan ook niet...