

Bijlagen

Bijlage 1 : Presence Questionnaire

(Witmer & Singer, Vs. 3.0, Nov. 1994)*

Revised by the UQO Cyberpsychology Lab (2004)

Characterize your experience in the environment, by marking an "X" in the appropriate box of the 7-point scale, in accordance with the question content and descriptive labels. Please consider the entire scale when making your responses, as the intermediate levels may apply. Answer the questions independently in the order that they appear. Do not skip questions or return to a previous question to change your answer.

WITH REGARD TO THE EXPERIENCED ENVIRONMENT

1. How much were you able to control events?

| | | | | | |

NOT AT ALL

SOMEWHAT

COMPLETELY

2. How responsive was the environment to actions that you initiated (or performed)?

| | | | | | |

NOT

MODERATELY

COMPLETELY

RESPONSIVE

RESPONSIVE

RESPONSIVE

3. How natural did your interactions with the environment seem?

| | | | | | |

EXTREMELY

BORDERLINE

COMPLETELY

ARTIFICIAL

NATURAL

4. How much did the visual aspects of the environment involve you?

| | | | | | |

NOT AT ALL

SOMEWHAT

COMPLETELY

5. How natural was the mechanism which controlled movement through the environment?

EXTREMELY			BORDERLINE			COMPLETELY
ARTIFICIAL						NATURAL

6. How compelling was your sense of objects moving through space?

NOT AT ALL			MODERATELY			VERY
COMPELLING						COMPELLING

7. How much did your experiences in the virtual environment seem consistent with your real world experiences?

NOT			MODERATELY			VERY
CONSISTENT			CONSISTENT			CONSISTENT

8. Were you able to anticipate what would happen next in response to the actions that you performed?

NOT AT ALL			SOMEWHAT			COMPLETELY

9. How completely were you able to actively survey or search the environment using vision?

NOT AT ALL			SOMEWHAT			COMPLETELY

10. How compelling was your sense of moving around inside the virtual environment?

NOT			MODERATELY			VERY
COMPELLING			COMPELLING			COMPELLING

11. How closely were you able to examine objects?

NOT AT ALL			PRETTY			VERY
CLOSELY						CLOSELY

12. How well could you examine objects from multiple viewpoints?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT AT ALL

SOMEWHAT

EXTENSIVELY

13. How involved were you in the virtual environment experience?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT

MILDLY

COMPLETELY

INVOLVED

INVOLVED

ENGROSSED

14. How much delay did you experience between your actions and expected outcomes?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NO DELAYS

MODERATE

LONG

DELAYS

DELAYS

15. How quickly did you adjust to the virtual environment experience?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT AT ALL

SLOWLY

LESS THAN

ONE MINUTE

16. How proficient in moving and interacting with the virtual environment did you feel at the end of the experience?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT

REASONABLY

VERY

PROFICIENT

PROFICIENT

PROFICIENT

17. How much did the visual display quality interfere or distract you from performing assigned tasks or required activities?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT AT ALL INTERFERED PREVENTED

SOMEWHAT TASK PERFORMANCE

18. How much did the control devices interfere with the performance of assigned tasks or with other activities?

|_____| |_____| |_____| |_____| |_____| |_____| |_____|

NOT AT ALL INTERFERED INTERFERED

SOMEWHAT GREATLY

19. How well could you concentrate on the assigned tasks or required activities rather

than on the mechanisms used to perform those tasks or activities?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT COMPLETELY

IF THE VIRTUAL ENVIRONMENT INCLUDED SOUNDS:

20. How much did the auditory aspects of the environment involve you?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT COMPLETELY

21. How well could you identify sounds?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT COMPLETELY

22. How well could you localize sounds?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT COMPLETELY

IF THE VIRTUAL ENVIRONMENT INCLUDED HAPTIC (SENSE OF TOUCH):

23. How well could you actively survey or search the virtual environment using touch?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT COMPLETELY

24. How well could you move or manipulate objects in the virtual environment?

|_____|_____|_____|_____|_____|_____|_____|

NOT AT ALL SOMEWHAT EXTENSIVELY

Last version : March 2013

*Original version : Witmer, B.G. & Singer, M.J. (1998). Measuring presence in virtual environments: A presence questionnaire. Presence : Teleoperators and Virtual Environments, 7(3), 225-240. Revised factor

structure: Witmer, B.J., Jerome, C.J., & Singer, M.J. (2005). The factor structure of the Presence Questionnaire. Presence, 14(3) 298-312.

Questionnaire sur l'État de Présence (QÉP)

Laboratoire de Cyberpsychologie de l'UQO

Validation of the French-Canadian version developed by the UQO Cyberpsychology

Bijlage 2: Self-Presence Questionnaire (Ratan & Hasler)

(note: these questions are subject to change. Updates on the project can be found here: <http://self-presence.com>)

Proto Self-Presence

1. When using your avatar, do you feel physically close to the objects and other avatars in the game/virtual environment?

(Example response prompt: When using my avatar, I feel [not at all/somewhat/moderately/very much/a great deal] physically close to the objects and other avatars in the game/virtual environment.)

2. When playing the game/using the virtual environment, how much do you feel like your avatar is an extension of your body within the game/virtual environment?

3. When something happens to your avatar's body, to what extent does it feel like it is happening to any part of your body?

4. When using your avatar, to what extent do you feel like your arm is elongated into the game/virtual environment through your avatar?

5. When using your avatar, to what extent do you feel like you can reach into the game/virtual environment through your avatar?

6. When playing the game/using the virtual environment, to what extent do you feel like your hand is inside of the game/virtual environment?

7. When playing the game/using the virtual environment, how much do you feel your avatar is a part of your body?

Core Self-Presence

1. When happy events happen to your avatar, to what extent do you feel happy?

2. When surprising events happen to your avatar, to what extent do you feel surprised?

3. When sad events happen to your avatar, to what extent do you feel sad?

4. When upsetting events happen to your avatar, to what extent do you feel angry?

5. When arousing events happen to your avatar, to what extent do you feel aroused?

Extended Self-Presence

1. How much effort did you put into making your avatar's sex clear to others?
 2. How much effort did you put into making your avatar's race clear to others?
 3. How important is it for your profile to portray a specific identity for your avatar?
 4. How much do you care about the age of your avatar?
 5. How much do you care about the race of your avatar?
 6. To what extent has the experience of using your avatar helped you learn more about your own identity?
 7. To what extent have you customized your avatar to make it look the way it does?
 8. To what extent does your avatar's appearance represent some aspect of your identity?
 9. How much do you care about the sex of your avatar?
 10. How much effort did you put into making your avatar's age clear to others?
 11. How much do you care about how your avatar looks?
-

Bijlage 3: Measuring presence: The Temple Presence Inventory (TPI)

Matthew Lombard, Theresa B. Ditton and Lisa Weinstein

The Temple Presence Inventory (TPI) is a set of questionnaire items that can be used to measure dimensions of (tele)presence.

The TPI:

Contains items culled from a comprehensive literature review of presence theory and research.

Has been developed and validated using traditional psychological measurement procedures.

Is appropriate for use with most media and media content.

Measures diverse presence dimensions including several types of social presence.

Is free.

Researchers can use the entire inventory, sets of items for specific dimensions, and/or individual items as deemed useful and appropriate for a specific study. Items can also be modified as needed. All that we ask is that you help refine the instrument by reporting on your experience using all or part of the TPI. Please direct reports of use and/or questions to Matthew Lombard at lombard@temple.edu.

The 42 TPI items followed by various supplementary materials regarding the background and validity and reliability testing of the TPI are below.

TPI - Spatial presence:

How much did it seem as if the objects and people you saw/heard had come to the place you were?

(Not at all O O O O O O O Very much [7 points])

How much did it seem as if you could reach out and touch the objects or people you saw/heard?

(Not at all O O O O O O O Very much [7 points])

How often when an object seemed to be headed toward you did you want to move to get out of its way?

How often did you want to or did you make eye-contact with someone you saw/heard?

(Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always [7 points])

Seeing and hearing a person through a medium constitutes an interaction with him or her. How much control over the interaction with the person or people you saw/heard did you feel you had?

(None ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much [7 points])

TPI - Social presence - Passive interpersonal:

During the media experience how well were you able to observe the facial expressions of the people you saw/heard?

(Not well ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very well [7 points])

During the media experience how well were you able to observe the changes in tone of voice of the people you saw/heard?

(Not well ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very well [7 points])

During the media experience how well were you able to observe the style of dress of the people you saw/heard?

(Not well ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very well [7 points])

During the media experience how well were you able to observe the body language of the people you saw/heard?

(Not well ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very well [7 points])

TPI - Social presence - Active interpersonal:

How often did you make a sound out loud (e.g. laugh or speak) in response to someone you saw/heard in the media environment?

(Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always [7 points])

How often did you smile in response to someone you saw/heard in the media environment?

Unemotional 0 0 0 0 0 0 Emotional (7 points)

Overall, how much did the things and people in the environment you saw/heard look they would if you had experience them directly

(Not at all O O O O O O O Very much [7 points])

Overall, how much did the things and people in the environment you saw/heard sound like they would if you had experienced them directly?

(Not at all O O O O O O O Very much [7 points])

Bijlage 4: User Experience Questionnaire

Maak dan nu uw evaluatie.

Voor de beoordeling van het product, vragen we u de onderstaande vragenlijst in te vullen. De vragenlijst bestaat uit twee tegengestelde eigenschappen die van toepassing zijn op het product. De rondjes staan voor verschillende gradaties. U kunt uw beoordeling geven door het rondje, die het meest uw indruk weerspiegelt, aan te vinken.

Voorbeeld:

aantrekkelijk ○ ○ ○ ○ ○ ○ ○ onaantrekkelijk

Graag uw eerst ingeving invullen. Wacht niet te lang met invullen om te voorkomen dat u gaat twijfelen over uw eerste ingeving. Soms bent u misschien niet helemaal zeker van uw antwoord of u vindt de eigenschap niet volledig van toepassing, kruis dan toch een rondje aan.

Het is uw mening die telt. Let op: er is geen goed of fout antwoord!

Gelieve beoordeel het product nu door het aanvinken van een rondje per regel.

	1	2	3	4	5	6	7		
onplezierig	☐	☐	☐	☐	☐	☐	☐	plezierig	1
onbegrijpelijk	☐	☐	☐	☐	☐	☐	☐	begrijpelijk	2
creatief	☐	☐	☐	☐	☐	☐	☐	saai	3
makkelijk te leren	☐	☐	☐	☐	☐	☐	☐	moeilijk te leren	4
waardevol	☐	☐	☐	☐	☐	☐	☐	inferieur	5
vervelend	☐	☐	☐	☐	☐	☐	☐	spannend	6
oninteressant	☐	☐	☐	☐	☐	☐	☐	interessant	7
onvoorspelbaar	☐	☐	☐	☐	☐	☐	☐	voorspelbaar	8
snel	☐	☐	☐	☐	☐	☐	☐	langzaam	9
origineel	☐	☐	☐	☐	☐	☐	☐	conventioneel	10
belemmerend	☐	☐	☐	☐	☐	☐	☐	ondersteunend	11
goed	☐	☐	☐	☐	☐	☐	☐	slecht	12
complex	☐	☐	☐	☐	☐	☐	☐	eenvoudig	13
afstotend	☐	☐	☐	☐	☐	☐	☐	aantrekkelijk	14
gebruikelijk	☐	☐	☐	☐	☐	☐	☐	nieuw	15
onaangenaam	☐	☐	☐	☐	☐	☐	☐	aangenaam	16
vertrouwd	☐	☐	☐	☐	☐	☐	☐	niet vertrouwd	17
motiverend	☐	☐	☐	☐	☐	☐	☐	demotiverend	18
volgens verwachtingen	☐	☐	☐	☐	☐	☐	☐	niet volgens verwachtingen	19
inefficiënt	☐	☐	☐	☐	☐	☐	☐	efficiënt	20
overzichtelijk	☐	☐	☐	☐	☐	☐	☐	verwarrend	21
onpraktisch	☐	☐	☐	☐	☐	☐	☐	praktisch	22
ordelijk	☐	☐	☐	☐	☐	☐	☐	rommelig	23
aantrekkelijk	☐	☐	☐	☐	☐	☐	☐	onaantrekkelijk	24
aardig	☐	☐	☐	☐	☐	☐	☐	onaardig	25
conservatief	☐	☐	☐	☐	☐	☐	☐	innovatief	26

Bijlage 5: Virtual reality sickness questionnaire

Form Approved
OMB No. 0920-XXXX
Exp. Date xx/xx/20xx

Instrument D

VIRTUAL REALITY SICKNESS QUESTIONNAIRE

Instructions: Circle how much each symptom below is affecting you right now.

1. General discomfort	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
2. Fatigue	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
3. Headache	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
4. Eye strain	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
5. Difficulty focusing	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
6. Fullness of the Head	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
7. Blurred vision	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
8. Dizziness with eyes closed	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>
9. *Vertigo	<u>None</u>	<u>Slight</u>	<u>Moderate</u>	<u>Severe</u>

A = Sum of questions 1-4: _____ C = A/12 x 100: _____

B = Sum of questions 5-9: _____ D = B/15 x 100: _____

VRSQ Score = (C + D)/ 2: _____

Virtual Reality Sickness Questionnaire (VRSQ) is modified from the Simulator Sickness Questionnaire (SSQ).

Kim, H. K., Park, J., Choi, Y., & Choe, M. (2018). Virtual reality sickness questionnaire (VRSQ): Motion sickness measurement index in a virtual reality environment. *Applied ergonomics*, 69, 66-73.

Original version of Simulator Sickness Questionnaire (SSQ): Kennedy, R.S., Lane, N.E., Berbaum, K.S., & Lilienthal, M.G. (1993). Simulator Sickness Questionnaire: An enhanced method for quantifying simulator sickness. *International Journal of Aviation Psychology*, 3(3), 203-220.

Bijlage 6: Immersive Experience Questionnaire

Your Experience of the Game: Please answer the following questions by circling the relevant number (1-7). In particular, remember that these questions are asking you about how you felt at the end of the game.

1) To what extent did the game hold your attention?

Not at all 1 2 3 4 5 6 7 A lot

2) To what extent did you feel you were focused on the game?

Not at all 1 2 3 4 5 6 7 A lot

3) How much effort did you put into playing the game?

Very little 1 2 3 4 5 6 7 A lot

4) Did you feel that you were trying your best?

Not at all 1 2 3 4 5 6 7 Very much so

5) To what extent did you lose track of time, e.g. did the game absorb your attention so that you were not bored?

Not at all 1 2 3 4 5 6 7 A lot

6) To what extent did you feel consciously aware of being in the real world whilst playing?

Not at all 1 2 3 4 5 6 7 Very much so

7) To what extent did you forget about your everyday concerns?

Not at all 1 2 3 4 5 6 7 A lot

8) To what extent were you aware of yourself in your surroundings?

Not at all 1 2 3 4 5 6 7 Very aware

9) To what extent did you notice events taking place around you?

Not at all 1 2 3 4 5 6 7 A lot

10) Did you feel the urge at any point to stop playing and see what was happening around you?

Not at all 1 2 3 4 5 6 7 Very much so

11) To what extent did you feel that you were interacting with the game environment?
Not at all 1 2 3 4 5 6 7 Very much so

12) To what extent did you feel as though you were separated from your real-world environment?
Not at all 1 2 3 4 5 6 7 Very much so

13) To what extent did you feel that the game was something fun you were experiencing, rather than a task you were just doing?
Not at all 1 2 3 4 5 6 7 Very much so

14) To what extent was your sense of being in the game environment stronger than your sense of being in the real world?
Not at all 1 2 3 4 5 6 7 Very much so

15) At any point did you find yourself become so involved that you were unaware you were even using controls, e.g. it was effortless?
Not at all 1 2 3 4 5 6 7 Very much so

16) To what extent did you feel as though you were moving through the game according to your own will?
Not at all 1 2 3 4 5 6 7 Very much so

17) To what extent did you find the game challenging?
Not at all 1 2 3 4 5 6 7 Very difficult

18) Were there any times during the game in which you just wanted to give up?
Not at all 1 2 3 4 5 6 7 A lot

19) To what extent did you feel motivated while playing?
Not at all 1 2 3 4 5 6 7 A lot

20) To what extent did you find the game easy?
Not at all 1 2 3 4 5 6 7 Very much so

21) To what extent did you feel like you were making progress towards the end of the game?
Not at all 1 2 3 4 5 6 7 A lot

22) How well do you think you performed in the game?
Very poor 1 2 3 4 5 6 7 Very well

23) To what extent did you feel emotionally attached to the game?
Not at all 1 2 3 4 5 6 7 Very much so

24) To what extent were you interested in seeing how the game's events would progress?
Not at all 1 2 3 4 5 6 7 A lot

25) How much did you want to "win" the game?
Not at all 1 2 3 4 5 6 7 Very much so

26) Were you in suspense about whether or not you would do well in the game?
Not at all 1 2 3 4 5 6 7 Very much so

27) At any point did you find yourself become so involved that you wanted to speak to the game directly?
Not at all 1 2 3 4 5 6 7 Very much so

28) To what extent did you enjoy the graphics and the imagery?
Not at all 1 2 3 4 5 6 7 A lot

29) How much would you say you enjoyed playing the game?
Not at all 1 2 3 4 5 6 7 A lot

30) When it ended, were you disappointed that the game was over?
Not at all 1 2 3 4 5 6 7 Very much so

31) Would you like to play the game again?
Definitely no 1 2 3 4 5 6 7 Definitely yes

32) How immersed did you feel? (10 = very immersed; 1 = not at all immersed)

1	2	3	4	5	6	7	8	9	10
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Scoring the Immersive Experience Questionnaire (IEQ)

IEQ Immersion Score: Add up the responses to all 31 questionnaire items; responses to Q6, Q8, Q9, Q10, Q18 and Q20 are reversed (e.g. 1 becomes 7, 2 becomes 6, 3 becomes 5).

Single Question Measure of Immersion: The last question “How immersed did you feel?” gives the researcher an additional measure to check whether the IEQ is reliably reflecting the participant’s immersive experience.

IEQ Immersion Factors: Scores for five immersion factors can be computed, see Excel sheet “IEQ Scoring v2”. The five factors are: cognitive involvement, emotional involvement, real world dissociation, control, challenge.

If the item has +1 then you include that item’s response in the factor score (e.g. rating of 1).

If the item has -1 this means you include the item, but reverse the rating scale (e.g. rating of 1 becomes 7, etc.)

Reference: Jennett, C., Cox, A. L., Cairns, P., Dhoparee, S., Epps, A., Tijs, T. & Walton, A. (2008). Measuring and defining the experience of immersion in games. *International Journal of Human-Computer Studies*, 66, 641-661.

References Virtual Embodiment Questionnaire (VEQ) - English The scale was published in the following publication, that can be used as a reference (citation) for the use of the scale in further studies: D. Roth and M. E. Latoschik (2020), Construction of the Virtual Embodiment Questionnaire (VEQ), in IEEE Transactions on Visualization and Computer Graphics, doi: 10.1109/TVCG.2020.3023603. Bibtex: @article{roth_veq_2020, author={D. {Roth} and M. E. {Latoschik}}, journal={IEEE Transactions on Visualization and Computer Graphics}, title={Construction of the Virtual Embodiment Questionnaire (VEQ)}, year={2020}, volume={26}, number={12}, doi={10.1109/TVCG.2020.3023603}, pages={3546-3556} } Predecessor Roth, D., Lugin, J. L., Latoschik, M. E., & Huber, S. (2017, May). Alpha IVBO-construction of a scale to measure the illusion of virtual body ownership. In Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (pp. 2875-2883). ACM.

Instructions

Please read each statement and check the relevant response to indicate how strongly you agree or disagree with each statement (1 through 7). There are no right or wrong answers. Answer spontaneously and intuitively.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Acceptance/Body Ownership	1	2	3	4	5	6	7
AC1 myBody It felt like the virtual body was my body.	0	0	0	0	0	0	0
AC2 myBodyParts It felt like the virtual body parts were my body parts.	0	0	0	0	0	0	0
AC3 humanness The virtual body felt like a human body.	0	0	0	0	0	0	0
AC4 belongsToMe It felt like the virtual body belonged to me.	0	0	0	0	0	0	0
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Control/Agency	1	2	3	4	5	6	7
CO1 myMovements The movements of the virtual body felt like they were my movements.	0	0	0	0	0	0	0
CO2 controlMovements I felt like I was controlling the movements of the virtual body.	0	0	0	0	0	0	0
CO3 causeMovements I felt like I was causing the movements of the virtual body.	0	0	0	0	0	0	0
CO4 syncMovements The movements of the virtual body were in sync with my own movements.	0	0	0	0	0	0	0
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Change	1	2	3	4	5	6	7
CH1 myBodyChange I felt like the form or appearance of my own body had changed.	0	0	0	0	0	0	0
CH2 echoHeavyLight I felt like the weight of my own body had changed.	0	0	0	0	0	0	0
CH3 echoTallSmall I felt like the size (height) of my own body had changed.	0	0	0	0	0	0	0
CH4 echoLargeThin I felt like the width of my own body had changed.	0	0	0	0	0	0	0

Scoring process

Acceptance (Ownership) = $(AC1 + AC2 + AC3 + AC4)/4$

Control (Agency) = $(CO1 + CO2 + CO3 + CO4)/4$

Change = $(CH1 + CH2 + CH3 + CH4)/4$

Method

The scale measures virtual embodiment based on the factors Acceptance (ownership), Control (agency), and Change (perceived change in the body scheme). The scale should be measured immediately after exposure/induction of virtual embodiment. A 0-6-point scale can be used instead of the 1-7-point scale.

Additional items (excluded through CFA)

AGX1 bodyControlEnjoyment (AG)

I enjoyed controlling the virtual body.

VOX1 ownOtherBody (BO)

I had the illusion of owning a different body to my own.

CHX1 myBodyCheck (CH)

I felt like I had to check that my own body still looked like I remembered.

VOX2 belongsOtherPerson (BO*)

I felt like the virtual body belonged to someone else. *(recoded)

Contact

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Bijlage 8: Development and validation of a theory-based questionnaire to measure different types of cognitive load

Cognitive load	Proposed item (in German)	Proposed item (in English)
ICL		
ICL1 (Item 1)	Die Lerninhalte waren schwer zu verstehen	The learning content was difficult to understand
ICL2 (Item 2)	Die Erklärungen des Lerninhalts waren schwer nachvollziehbar	The explanations of the learning content were difficult to understand
ICL3 (Item 3)	Die Lerninhalte waren komplex	The learning contents were complex
ICL4 (Item 4)	Die Lerninhalte enthielten viele komplexe Informationen	The learning content included much complex information
ICL5 (Item 5)	Ohne Vorwissen waren die Informationen nicht verständlich	Without prior knowledge, the information was not understandable
ECL		
ECL1 (Item 6)	Es war schwierig, einen Überblick über den Aufbau des Lernmaterials zu erlangen	It was difficult to gain an overview of the structure of the learning material
ECL2 (Item 7)	Die Gestaltung des Lernmaterials machte es schwer, die Zusammenhänge zwischen den einzelnen Informationen herzustellen	The design of the learning material made it difficult to recognise links between individual information units
ECL3 (Item 8)	Das Lernmaterial war ungünstig gestaltet	The design of the learning material was inconvenient
ECL4 (Item 9)	Die Gestaltung des Lernmaterials machte es schwierig, wichtige Informationen zugänglich zu finden	The design of the learning material made it difficult to find relevant information quickly

Cognitive load	Proposed item (in German)	Proposed item (in English)
ECL5 (Item 10)	Aufgrund der Gestaltung des Lernmaterials hatte ich das Gefühl, mich nicht auf die Lerninhalte konzentrieren zu können	Because of the design of the learning material, I had the impression that I could not concentrate on the learning content
GCL		
GCL1 (Item 11)	Ich habe aktiv über die Lerninhalte nachgedacht	I actively reflected upon the learning content
GCL2 (Item 12)	Das Lernmaterial hat mich angeregt, aktiv über die Lerninhalte nachzudenken	The learning material encouraged me to actively think about the learning content
GCL3 (Item 13)	Ich habe mich bemüht, die Lerninhalte zu verstehen	I made an effort to understand the learning content
GCL4 (Item 14)	Ich war in der Lage, die einzelnen Informationen in einen Zusammenhang zu bringen	I was able to put the individual pieces of information into context
GCL5 (Item 15)	Ich habe ein umfassendes Verständnis der Lerninhalte erlangt	I achieved a comprehensive understanding of the learning content
GCL6 (Item 16)	Ich konnte mein bestehendes Wissen mit den Lerninhalten erweitern	I was able to expand my prior knowledge with the learning content
GCL7 (Item 17)	Das Wissen, das ich durch das Lernmaterial erworben habe, kann ich schnell und sicher anwenden	I can apply the knowledge that I acquired through the learning material quickly and accurately

Bijlage 9: The post-experimental intrinsic motivation inventory

THE POST-EXPERIMENTAL INTRINSIC MOTIVATION INVENTORY

(Below are listed all 45 items that can be used depending on which are needed.)

For each of the following statements, please indicate how true it is for you, using the following scale:

1 2 3 4 5 6 7
not at all somewhat very
true true true

Interest/Enjoyment

I enjoyed doing this activity very much.
This activity was fun to do.
I thought this was a boring activity. (R)
This activity did not hold my attention at all. (R)
I would describe this activity as very interesting.
I thought this activity was quite enjoyable.
While I was doing this activity, I was thinking about how much I enjoyed it.

Perceived Competence

I think I am pretty good at this activity.
I think I did pretty well at this activity, compared to other students.
After working at this activity for awhile, I felt pretty competent.
I am satisfied with my performance at this task.
I was pretty skilled at this activity.
This was an activity that I couldn't do very well. (R)

Effort/Importance

I put a lot of effort into this.
I didn't try very hard to do well at this activity. (R)

I tried very hard on this activity.
It was important to me to do well at this task.
I didn't put much energy into this. (R)

Pressure/Tension

I did not feel nervous at all while doing this. (R)
I felt very tense while doing this activity.
I was very relaxed in doing these. (R)
I was anxious while working on this task.
I felt pressured while doing these.

Perceived Choice

I believe I had some choice about doing this activity.
I felt like it was not my own choice to do this task. (R)
I didn't really have a choice about doing this task. (R)
I felt like I had to do this. (R)
I did this activity because I had no choice. (R)
I did this activity because I wanted to.
I did this activity because I had to. (R)

Value/Usefulness

I believe this activity could be of some value to me.
I think that doing this activity is useful for _____.
I think this is important to do because it can _____.
I would be willing to do this again because it has some value to me.
I think doing this activity could help me to _____.
I believe doing this activity could be beneficial to me.
I think this is an important activity.

Relatedness

I felt really distant to this person. (R)
I really doubt that this person and I would ever be friends. (R)
I felt like I could really trust this person.
I'd like a chance to interact with this person more often.
I'd really prefer not to interact with this person in the future. (R)
I don't feel like I could really trust this person. (R)
It is likely that this person and I could become friends if we interacted a lot.
I feel close to this person.

Constructing the IMI for your study. First, decide which of the variables (factors) you want to use, based on what theoretical questions you are addressing. Then, use the items from those factors, randomly ordered. If you use the value/usefulness items, you will need to complete the three items as appropriate. In other words, if you were studying whether the person believes an activity is useful for improving concentration, or becoming a

better basketball player, or whatever, then fill in the blanks with that information. If you do not want to refer to a particular outcome, then just truncate the items with its being useful, helpful, or important.

Scoring information for the IML. To score this instrument, you must first reverse score the items for which an (R) is shown after them. To do that, subtract the item response from 8, and use the resulting number as the item score. Then, calculate subscale scores by averaging across all of the items on that subscale. The subscale scores are then used in the analyses of relevant questions.

The following is a 22 item version of the scale that has been used in some lab studies on intrinsic motivation. It has four subscales: interest/enjoyment, perceived choice, perceived competence, and pressure/tension. The interest/enjoyment subscale is considered the self-report measure of intrinsic motivation; perceived choice and perceived competence are theorized to be positive predictors of both self-report and behavioral measures of intrinsic motivation. Pressure/tension is theorized to be a negative predictor of intrinsic motivation. Scoring information is presented after the questionnaire itself.

TASK EVALUATION QUESTIONNAIRE

For each of the following statements, please indicate how true it is for you, using the following scale:

1	2	3	4	5	6	7
not at all			somewhat			very
true			true			true

- While I was working on the task I was thinking about how much I enjoyed it.
- I did not feel at all nervous about doing the task.
- I felt that it was my choice to do the task. ●
- I think I am pretty good at this task.
- I found the task very interesting.
- I felt tense while doing the task.
- I think I did pretty well at this activity, compared to other students.
- Doing the task was fun.
- I felt relaxed while doing the task.
- I enjoyed doing the task very much.
- I didn't really have a choice about doing the task.
- I am satisfied with my performance at this task.
- I was anxious while doing the task.
- I thought the task was very boring.
- I felt like I was doing what I wanted to do while I was working on the task.
- I felt pretty skilled at this task.
- I thought the task was very interesting.
- I felt pressured while doing the task.
- I felt like I had to do the task.
- I would describe the task as very enjoyable.
- I did the task because I had no choice.
- After working at this task for awhile, I felt pretty competent.

Scoring information. Begin by reverse scoring items # 2, 9, 11, 14, 19, 21. In other words, subtract the item response from 8, and use the result as the item score for that item. This way, a higher score will indicate more of the concept described in the subscale name. Thus, a higher score on pressure/tension means the person felt more pressured and tense; a higher score on perceived competence means the person felt more competent; and so on. Then calculate subscale scores by averaging the items scores for the items on each subscale. They are as follows. The (R) after an item number is just a reminder that the item score is the reverse of the participant's response on that item.

Interest/enjoyment: 1, 5, 8, 10, 14(R), 17, 20
Perceived competence: 4, 7, 12, 16, 22
Perceived choice: 3, 11(R), 15, 19(R), 21(R)
Pressure/tension: 2(R), 6, 9(R), 13, 18

The subscale scores can then be used as dependent variables, predictors, or mediators, depending on the research questions being addressed.

TEXT MATERIAL QUESTIONNAIRE I

For each of the following statements, please indicate how true it is for you, using the following scale as a guide:

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|------------|---|---|----------|---|---|------|
| | not at all | | | somewhat | | | very |
| | true | | | true | | | true |
1. While I was reading this material, I was thinking about how much I enjoyed it.
 2. I did not feel at all nervous while reading.
 3. This material did not hold my attention at all.
 4. I think I understood this material pretty well.
 5. I would describe this material as very interesting.
 6. I think I understood this material very well, compared to other students.
 7. I enjoyed reading this material very much.
 8. I felt very tense while reading this material.
 9. This material was fun to read.

Scoring information. Begin by reverse scoring items # 2 and 3. In other words, subtract the item response from 8, and use the result as the item score for that item. This way, a higher score will indicate more of the

concept described in the subscale name. Then calculate subscale scores by averaging the items scores for the items on each subscale. They are shown below. The (R) after an item number is just a reminder that the item score is the reverse of the participant's response on that item.

Interest/enjoyment: 1, 3(R), 5, 7, 9
Perceived competence: 4, 6,
Pressure/tension: 2(R), 8

The next version of the questionnaire was used for a study of internalization with an uninteresting computer task (Deci et al., 1994).

ACTIVITY PERCEPTION QUESTIONNAIRE

The following items concern your experience with the task. Please answer all items. For each item, please indicate how true the statement is for you, using the following scale as a guide:

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|------------|---|---|----------|---|---|------|
| | not at all | | | somewhat | | | very |
| | true | | | true | | | true |
1. I believe that doing this activity could be of some value for me.
 2. I believe I had some choice about doing this activity.
 3. While I was doing this activity, I was thinking about how much I enjoyed it.
 4. I believe that doing this activity is useful for improved concentration.
 5. This activity was fun to do.
 6. I think this activity is important for my improvement.
 7. I enjoyed doing this activity very much.
 8. I really did not have a choice about doing this activity.
-

9. I did this activity because I wanted to.
10. I think this is an important activity.
11. I felt like I was enjoying the activity while I was doing it.
12. I thought this was a very boring activity.
13. It is possible that this activity could improve my studying habits.
14. I felt like I had no choice but to do this activity.
15. I thought this was a very interesting activity.
16. I am willing to do this activity again because I think it is somewhat useful.
17. I would describe this activity as very enjoyable.
18. I felt like I had to do this activity.
19. I believe doing this activity could be somewhat beneficial for me.
20. I did this activity because I had to.
21. I believe doing this activity could help me do better in school.
22. While doing this activity I felt like I had a choice.
23. I would describe this activity as very fun.
24. I felt like it was not my own choice to do this activity.
25. I would be willing to do this activity again because it has some value for me.

Scoring information. Begin by reverse scoring items # 8, 12, 14, 18, 20, and 24 by subtracting the item response from 8 and using the result as the item score for that item. Then calculate subscale scores by averaging the items scores for the items on each subscale. They are shown below. The (R) after an item number is just a reminder that the item score is the reverse of the participant's response on that item.

Interest/enjoyment: 3, 5, 7, 11, 12(R), 15, 17, 23
 Value/usefulness: 1, 4, 6, 10, 13, 16, 19, 21, 25
 Perceived choice: 2, 8(R), 9, 14(R), 18(R), 20(R), 22, 24(R)

SUBJECT IMPRESSIONS QUESTIONNAIRE

The following sentences describe thoughts and feelings you may have had regarding the other person who participated in the experiment with you. For each of the following statement please indicate how true it is for you, using the following scale as a guide:

1	2	3	4	5	6	7
not at all			somewhat			very
true			true			true

1. While I was interacting with this person, I was thinking about how much I enjoyed it.
 2. I felt really distant to this person.
 3. I did not feel at all nervous about interacting with this person.
 4. I felt like I had choice about interacting with this person.
 5. I would describe interacting with this person as very enjoyable.
 6. I really doubt that this person and I would ever become friends.
 7. I found this person very interesting.
 8. I enjoyed interacting with this person very much.
 9. I felt tense while interacting with this person.
 10. I really feel like I could trust this person.
 11. Interacting with this person was fun.
 12. I felt relaxed while interacting with this person.
 13. I'd like a chance to interact more with this person.
-

14. I didn't really have a choice about interacting with this person.
15. I tried hard to have a good interaction with this person.
16. I'd really prefer not to interact with this person in the future.
17. I was anxious while interacting with this person.
18. I thought this person was very boring.
19. I felt like I was doing what I wanted to do while I was interacting with this person.
20. I tried very hard while interacting with this person.
21. I don't feel like I could really trust this person.
22. I thought interacting with this person was very interesting.
23. I felt pressured while interacting with this person.
24. I think it's likely that this person and I could become friends.
25. I felt like I had to interact with this person.
26. I feel really close to this person.
27. I didn't put much energy into interacting with this person.
28. I interacted with this person because I had no choice.
29. I put some effort into interacting with this person.

Scoring information. Begin by reverse scoring items # 2, 3, 6, 12, 14, 16, 18, 21, 25, 27, and 28 by subtracting the item response from 8 and using the result as the item score for that item. Then calculate subscale scores by averaging the items scores for the items on each subscale. They are shown below. The (R) after an item number is just a reminder that the item score is the reverse of the participant's response on that item.

Relatedness:	2(R), 6(R), 10, 13, 16(R), 21(R), 24, 26
Interest/enjoyment:	1, 5, 7, 8, 11, 18(R), 22
Perceived choice:	4, 14(R), 19, 25(R), 28(R)
Pressure/tension:	3(R), 9, 12(R), 17, 23,
Effort:	15, 20, 27(R), 29

Bijlage 10: Experiential learning processing questions

EXPERIENTIAL LEARNING PROCESSING QUESTIONS

SHARE

- ▲ What did you like about this activity?
- ▲ What part of the activity was hardest to do?
- ▲ How did you decide what to choose?
- ▲ What was the most fun about doing this activity?
- ▲ How did it feel to do this activity?
- ▲ How did your group work together?
- ▲ What happened during the activity?
- ▲ What did you observe?
- ▲ What does it feel like to pretend to _____?
- ▲ What kinds of _____ did you discover?
- ▲ How did you learn _____?
- ▲ What help did you get?
- ▲ How did you feel about successfully being able to _____?
- ▲ What are some decisions you had to make to carry out this activity?
- ▲ What steps did you go through before you made your decision?
- ▲ How did you feel about _____ before the activity? After the activity?
- ▲ What did you learn about _____?
- ▲ What was the easiest to do?
- ▲ Why do you think everyone in your group didn't agree about _____?
- ▲ How did you feel about this game?
- ▲ What was it like to have to make quick decisions?
- ▲ How did you keep track of everyone's ideas?
- ▲ Do you think you get more ideas working alone or in a group? Why?
- ▲ How did you feel in your role?
- ▲ If you did not know _____ before, how did you figure it out?
- ▲ How did you feel about doing _____?
- ▲ What were some of the things that were hard to understand when you started _____?
- ▲ What kinds of feelings did you have when group members argued?
- ▲ What did you observe about the way the groups disagreed (or agreed)?
- ▲ What did you do to plan and conduct the activity?
- ▲ What did you learn about conducting the activity?
- ▲ How was this different from _____?
- ▲ Tell us about your experience doing _____.
- ▲ What surprised you about _____?
- ▲ What skills do you need to have in order to _____?
- ▲ How did you use your various senses to _____?
- ▲ What new words did you learn?
- ▲ Why do you think people have different ideas about what is correct?

PROCESS

- ▲ What did you learn about yourself by doing this activity?
 - ▲ Why is it important to know _____?
 - ▲ How did you group decide to _____?
 - ▲ What did you learn as a group that you might not have learned alone?
 - ▲ What were some common themes or thoughts you heard?
 - ▲ How were each person's viewpoints the same? How were they different?
 - ▲ What is your favorite way of _____?
 - ▲ Why is it important to think through and decide _____?
 - ▲ What problems came up over and over?
 - ▲ Why was this a fun way to learn _____?
 - ▲ How does having fun help you learn?
 - ▲ What would you do if _____ were to happen?
 - ▲ How did you work together with your group to _____?
 - ▲ What did you learn about making decisions?
 - ▲ What did you learn about communicating with others?
 - ▲ What types of communication helped you make your decisions? Why?
 - ▲ How have _____ been important in your life?
 - ▲ Why is it important for other people to know _____?
 - ▲ What was hard about trying to _____?
 - ▲ How did others help you _____?
 - ▲ Why is it important to be able to _____?
 - ▲ How do you tell the difference between _____?
 - ▲ Why is it important to _____?
 - ▲ What was easy or difficult about working with a group to _____?
 - ▲ What did you do if everyone in the group didn't agree on _____?
 - ▲ What did the "leader" do to make you feel he or she was the group leader?
 - ▲ Why is it important to learn the proper way to _____?
 - ▲ What was the most challenging or difficult part of the activity?
 - ▲ What did you learn from this activity that you didn't know before?
 - ▲ How did this differ from the way you are usually taught in school?
 - ▲ Give an example of a challenge you had and what you did to solve it?
 - ▲ What works best to get people involved and excited about doing this type of activity?
 - ▲ Why is learning with others sometimes more fun than learning alone?
 - ▲ What suggestions would you have for someone who wanted to _____?
 - ▲ What made this a good activity?
-

GENERALIZE

- ^ How will learning _____ help you?
- ^ What other situations like this have you experienced?
- ^ Why is knowing _____ important?
- ^ Why is it important that each person has his/her own view?
- ^ When have you had to _____ before?
- ^ Where can you find resources to help you make decisions about _____?
- ^ When else have you had fun and learned new things at the same time?
- ^ Why is it important to have plenty of information before making decisions?
- ^ When do you make decisions that require everyone in the group to agree?
- ^ What do you do when you don't agree with the group?
- ^ What did you learn about your own skill in making decisions?
- ^ What did you learn about your own skill in communicating with others?
- ^ Describe five ways in which new ideas are communicated to you?
- ^ In what ways do people help each other learn new things?
- ^ What are some ways you like to learn?
- ^ Where can you go to find information you may need to _____?
- ^ What did you learn by observation?
- ^ What are qualities that you think are important in a leader?
- ^ How would you describe your skill at _____?
- ^ What do you feel you need to work on to be effective at _____?
- ^ What advice would you give to someone who wants to _____?
- ^ What other skills do you need to be good at _____?
- ^ What can people do to help themselves continue learning?
- ^ What are some ways we can learn new things?
- ^ What do you think about your own _____ skills?
- ^ Why was this important?
- ^ What did you learn?

APPLY

- ^ How would you teach someone about this activity or concept?
 - ^ What did you learn today that you will be able to use in school?
 - ^ How will your new skills help you at home?
 - ^ What did you learn by participating in this process that will help you in the future?
 - ^ Describe a time when you might need the skills/knowledge you learned today.
 - ^ What are some other situations when you will need to use the skills you learned today?
 - ^ How could the things you learned today be used to help you in other situations?
 - ^ Can you name some times when you will need to use your skills in _____?
 - ^ In what other ways could you apply the skills you gained in this activity?
 - ^ How can you apply the thinking process used in this process to evaluate other issues at home or school?
 - ^ What would you do differently if you conducted this activity?
-

Bijlage 11: Experiential Learning Process Questions



Experiential Learning Process Questions

1. EXPERIENCE—The hands-on action step. Youth do their activity/project before they are shown or told how to do it. Remember it is important to not rob youth of their discoveries. Youth must experiment with new ideas, interests, projects, etc., first-hand.

The following ideas for questions can help you utilize the whole experiential learning process.

2. SHARE—Describe what was done.

Promote discussion by asking the following:

- What kinds of hopes and dreams did you have for your 4-H experience this year?
- What did you do? Where did you go? What was your goal for this project/activity when you began?
- What did you do to plan your project/activity? Tell me about your most/least favorite things about working on your project/activity.
- What did you learn while doing this project/activity? How did you feel? What was easiest? What surprised you?
- What did you learn about yourself? How did you share your project/activity with others?

3. PROCESS—Identify common themes and discover what was most important (the life skill) about the project, activity, or service opportunity.

Use the following process questions:

- What did you learn about yourself by doing this project/activity? How did others help you?
- How did you make your decisions? What steps did you take?
- What did you learn about making decisions?
- What made this a good project/activity?
- What were some of the common themes or thoughts you had?
- What problems came up over and over? How did you handle them?
- What would you do if _____?
- What was the most challenging part of your project/activity? Why? How did you solve it? What did you learn from this project/activity that you didn't know before?
- What suggestions would you have for someone else who wanted to do a similar project or activity?
- Why does it matter (to you or anyone else) that you did this project/activity?
- What life skill(s) were you developing through your project? Why is the life skill important?
- What did you learn through sharing with others?
- What new questions do you have about yourself and others?

4. GENERALIZE—So what?

Identify how to use what's been learned in real life. These questions transition the experience or "product" itself to the skill being practiced in real life. They explore the nature of the life skill and help participants reflect on how the life skill has been developed through their experiences. Generalizing sets the stage for applying the life skill in new situations.

- What key points have you learned?
- Have you had similar experiences related to this project/activity?
- Where have you faced similar challenges in your life?
- How is this life skill important to you?
- Where might this situation occur in the future?
- Discuss another time when you had fun and learned new things at the same time.
- Why is it important to have plenty of information before making decisions?
- Describe what you learned about your decision making skills?
- What did you learn about your own skill in communicating with others?
- How would you describe your skills regarding _____?
- What advice would you give to someone who wants to learn about this life skill?

5. APPLY—What's next?

These are the questions the experiential learning process has been building toward. Adults can help youth show that they have gained knowledge and practiced the life skills learned rather than solely focusing on the subject matter.

- How do you think the project/activity relates to your everyday life?
- Why was this project/activity important to you?
- What have you learned about yourself? Others?
- Are there principles or guidelines you can use in real-life situations?
- What similar situations have you experienced?
- How can you use these skills in different situations?
- In what ways do people help each other learn new things?
- How will you act differently as a result of this experience?
- List some ways you can learn new things?
- What are qualities that you think are important in a leader?
- If someone helped or mentored you in this project, what would you tell him/her you learned and what difference it has made in your life? How would you express your appreciation?

Adapted from the Essential Elements of 4-H Youth Development Programs – 4-H National Headquarters and 4-H National Council and from the 2005 Minnesota 4-H Curriculum Committee.
Revised December 2012, by Chris Gleason, 4-H Youth Program Specialist

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Bijlage 12: Kolb's Learning Style Questionnaire

This questionnaire is designed to find out your preferred learning styles(s) as an adult. Over the years, you have probably developed learning habits that help you benefit more from some experiences than from others. You may be unaware of this, and this questionnaire will help you pinpoint your learning preferences and share them with the other Community Facilitators.

This questionnaire will probably take you about 10 minutes to complete. The accuracy of your results depends on how honest you are. There are no right or wrong answers. If you agree more than you disagree with a statement, place a tick (✓) in the box to the left of the question. If you disagree more than you agree, leave the box blank. If you find yourself wondering which situation to think of when answering a question, just think about how you are when you are working with people. Go with your first gut reaction instead of over-thinking your response.

QUESTIONS

1. I have strong beliefs about what is right and wrong, good and bad.
 2. I often act without considering the possible consequences.
 3. I tend to solve problems using a step-by-step approach.
 4. I believe that formal procedures and policies restrict people.
 5. I have a reputation for saying what I think, simply and directly.
 6. I often find that actions based on feelings are as sound as those based on careful thought and analysis.
 7. I like the sort of work where I have time for thorough preparation and implementation.
 8. I regularly question people about their basic assumptions.
 9. What matters most is whether something works in practice.
 10. I actively seek out new experiences.
 11. When I hear about a new idea or approach, I immediately start working out how to apply it in practice.
 12. I am keen on self discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc.
 13. I take pride in doing a thorough job.
 14. I get on best with logical, analytical people and less well with spontaneous, 'irrational' people.
 15. I take care over how I interpret data and avoid jumping to conclusions.
 16. I like to reach a decision carefully after weighing up many alternatives.
 17. I am attracted more to novel, unusual ideas than to practical ones.
 18. I don't like disorganised things and prefer to fit things into a coherent pattern.
 19. I accept and stick to laid down procedures and policies so long as I regard them as an efficient way of getting the job done.
-

20. I like to relate my actions to a general principle, standard or belief.
 21. In discussions, I like to get straight to the point.
 22. I tend to have distant, rather formal relationships with people at work.
 23. I thrive on the challenge of tackling something new and different.
 24. I enjoy fun-loving spontaneous people.
 25. I pay careful attention to detail before coming to a conclusion.
 26. I find it difficult to produce ideas on impulse.
 27. I believe in coming to the point immediately.
 28. I am careful not to jump to conclusions too quickly.
 29. I prefer to have as many sources of information as possible – the more information to think over the better.
 30. Flippant, superficial people who don't take things seriously enough usually irritate me.
 31. I listen to other people's points of view before putting my own view forward.
 32. I tend to be open about how I'm feeling.
 33. In discussions, I enjoy watching the plotting and scheming of the other participants.
 34. I prefer to respond to events in a spontaneous, flexible way rather than plan things out in advance.
 35. I tend to be attracted to techniques such as flow charts, contingency plans etc.
 36. It worries me if I have to rush work to meet a tight deadline.
 37. I tend to judge people's ideas on their practical merits.
 38. Quiet, thoughtful people tend to make me feel uneasy. 39. I often get irritated by people who want to rush things.
 40. It is more important to enjoy the present moment than to think about the past or future.
 41. I think that decisions based on a careful analysis of all the information are better than those based on intuition.
 42. I tend to be a perfectionist.
 43. In discussions, I usually produce lots of spontaneous ideas.
 44. In meetings, I put forward practical, realistic ideas.
 45. More often than not, rules are there to be broken.
 46. I prefer to stand back from a situation and consider all the perspectives.
 47. I can often see inconsistencies and weaknesses in other people's arguments.
 48. On balance I talk more than I listen.
-

49. I can often see better, more practical ways to get things done.
 50. I think written reports should be short and to the point.
 51. I believe that rational, logical thinking should win the day.
 52. I tend to discuss specific things with people rather than engaging in social discussion.
 53. I like people who approach things realistically rather than theoretically.
 54. In discussions, I get impatient with irrelevant issues and digressions.
 55. If I have a report to write, I tend to produce lots of drafts before settling on the final version.
 56. I am keen to try things out to see if they work in practice.
 57. I am keen to reach answers via a logical approach.
 58. I enjoy being the one that talks a lot.
 59. In discussions, I often find I am a realist, keeping people to the point and avoiding wild speculations.
 60. I like to ponder many alternatives before making up my mind.
 61. In discussions with people I often find I am the most dispassionate and objective.
 62. In discussions I'm more likely to adopt a 'low profile' than to take the lead and do most of the talking.
 63. I like to be able to relate current actions to the longer-term bigger picture.
 64. When things go wrong, I am happy to shrug it off and 'put it down to experience'.
 65. I tend to reject wild, spontaneous ideas as being impractical.
 66. It's best to think carefully before taking action.
 67. On balance, I do the listening rather than the talking.
 68. I tend to be tough on people who find it difficult to adopt a logical approach.
 69. Most times I believe the end justifies the means.
 70. I don't mind hurting people's feelings so long as the job gets done.
 71. I find the formality of having specific objectives and plans stifling.
 72. I'm usually one of the people who puts life into a party.
 73. I do whatever is practical to get the job done.
 74. I quickly get bored with methodical, detailed work.
 75. I am keen on exploring the basic assumptions, principles and theories underpinning things and events.
 76. I'm always interested to find out what people think.
 77. I like meetings to be run on methodical lines, sticking to laid down agenda.
-

78. I steer clear of subjective (biased) or ambiguous (unclear) topics.

79. I enjoy the drama and excitement of a crisis situation.

80. People often find me insensitive to their feelings.

Bijlage 13: Course Experience Questionnaire

Ramsden, P. (1991). A performance indicator of teaching quality in higher education: the course experience questionnaire. *Studies in Higher Education*, 16, 129-150.

Richardson, JTE (1994). A British evaluation of the course experience questionnaire. *Studies in Higher Education*. 19, 59-68.

Wilson, K. L., Lizzio, A., & Ramsden, P. (1997). The development, validation and application of the Course Experience Questionnaire. *Studies in higher education*, 22(1), 33-53.

37 Items

6 Dimensions

Good Teaching scale

- #*4 The teaching staff of this course motivate students to do their best work
- #* 9 Staff here put a lot of time into commenting on students' work
- #*20 The staff make a real effort to understand difficulties students may be having with their work
- #*22 Teaching staff here normally give helpful feedback on how you are going
- #*23 Our lecturers are extremely good at explaining things to us
- #*25 Teaching staff here work hard to make subjects interesting
- # 31 Staff here show no real interest in what students have to say.
- # 33 This course really tries to get the best out of all its students

Clear Goals and Standards scale

- *1 It's always easy here to know the standard of work expected
- #* 8 You usually have a clear idea of where you're going and what's expected of you
- #*18 It's often hard to discover what's expected of you in this course
- # 24 The aims and objectives of this course are NOT made very clear
- #*35 The staff here make it clear right from the start what they expect from students

Generic Skills scale

- *2 This course has helped me to develop my problem-solving skills (GS)
- *6 This course has sharpened my analytic skills
- *11 This course has helped develop my ability to work as a team member
- * 12 As a result of doing this course, I feel more confident about tackling unfamiliar problems
- *13 This course has improved my written communication skills
- *28 This course has helped me develop the ability to plan my own work

Appropriate Assessment scale

- # 7 Lecture here frequently give the impression they have nothing to learn from student
- #*10 To do well on this course all you really need is a good memory
- #*17 Staff seem more interested in testing what you're more than that you understand
- #*26 Too many staff ask us questions just about facts
- # 29 Feedback on student work is usually provided ONLY in the form of marks and grades
- # 32 It would be possible to get through this course just by working hard around exam times

Appropriate Workload scale

- #* 5 The workload is too heavy
 - 6 This course has sharpened my analytical skills
 - # 14 It seems to me that the syllabus tries to cover too many topics
 - #*19 We are generally given enough time to understand the things we have to learn
 - #*27 There's a lot of pressure on you as a student here
-

#*36 The sheer volume of work to be got through in this course means you can't comprehend it all thoroughly

Emphasis on Independence Scale

3 There are few opportunities to choose the particular areas you want to study (IN)

15 The course has encouraged me to develop my own academic interests as far as possible

16 Students have a great deal of choice over how they are going to learn in this course

21 Students here are given a lot of choice in the work they have to do

#30 We often discuss with our lecturers or tutors how we are going to learn in this course

34 There's very little choice in this course in the ways you are assessed

37 Overall, I am satisfied with the quality of this course Items 1-36=CEQ36; #

items=CEQ30 (used in Ramsden, 1991; Richardson, 1994); *items = CEQ23

5-point Likert Scale (means 'definitely disagree' and 5 means 'definitely agree')

Good Teaching: Cronbachs α = 0.79 - 0.88

Clear Goals: Cronbachs α = 0.76 – 0.82

Workload: Cronbachs α = 0.69 – 0.77

Assessment: Cronbachs α = 0.47 - 0.74

Independence: Cronbachs α = 0.55 - 0.72

Generic Skills: Cronbachs α = 0.77- 0.8

Bijlage 14: Échelle de flow en contexte éducatif v.2 (EduFlow-2)

Échelle de flow en contexte éducatif v.2 (EduFlow-2)

Lisez attentivement chaque phrase et répondez, sur l'échelle située en face, en entourant un nombre correspondant le mieux à ce que vous pensez 1 = pas du tout d'accord à 7 = tout à fait d'accord.

pas du tout d'accord	très peu d'accord	un peu d'accord	Moyennement d'accord	Assez d'accord	Fortement d'accord	tout à fait d'accord
1	2	3	4	5	6	7

[strongly disagree] <-----> [totally agree]

En général, quand je suis dans une activité (formation en ligne, travail en classe ou devoirs à la maison...) à contextualiser en fonction de l'activité... [During a learning activity...]

01 D1a	Je me sens capable de faire face aux exigences élevées de la situation.	1 2 3 4 5 6 7
02 D2a	Je suis totalement absorbé-e par ce que je fais.	1 2 3 4 5 6 7
03 D3a	Je ne suis pas préoccupé-e par ce que les autres pourraient penser de moi.	1 2 3 4 5 6 7
04 D4a	J'ai le sentiment de vivre un moment enthousiasmant.	1 2 3 4 5 6 7
05 D1b	Je sens que je contrôle parfaitement mes actions.	1 2 3 4 5 6 7
06 D2c	Je ne vois pas le temps passer.	1 2 3 4 5 6 7
07 D3b	Je ne suis pas préoccupé-e par le jugement des autres.	1 2 3 4 5 6 7
08 D4b	Cette activité me procure beaucoup de bien-être.	1 2 3 4 5 6 7
09 D1c	A chaque étape, je sais ce que je dois faire.	1 2 3 4 5 6 7
10 D2b	Je suis profondément concentré-e sur ce que je fais.	1 2 3 4 5 6 7
11 D3c	Je ne suis pas inquiet-e de ce que les autres peuvent penser de moi.	1 2 3 4 5 6 7
12 D4c	Quand j'évoque cette activité, je ressens une émotion que j'ai envie de partager.	1 2 3 4 5 6 7

- FlowD1 : Contrôle cognitif/Cognitive control
- FlowD2 : Immersion et altération de la perception du temps/Immersion and Time transformation
- FlowD3 : Absence de préoccupation à propos du soi/Loss of self-consciousness
- FlowD4 : Expérience autotélique (Bien-être procuré par l'activité)/Autotelic experience (well-being provided by the activity)

Note : FlowD1+FlowD2+FlowD3 = Absorption cognitive/Cognitive absorption

Merci d'utiliser cette référence pour citer l'échelle de flow en éducation v.2 (EduFlow-2)

Heutte, J., Fenouillet, F., Martin-Krumm, C., Gute, G., Raes, A., Gute, D., Bachelet, R. & Csikszentmihalyi, M. (2021). Optimal Experience in Adult Learning: Conception and Validation of the Flow in Education Scale (EduFlow-2) *Frontiers in Psychology*, section *Educational Psychology*, 12, 1-12. <https://doi.org/10.3389/fpsyg.2021.828027>

Echelle de flow en éducation v.2 [Flow in Education scale v.2] (EduFlow-2)

FlowD1a	Je me sens capable de faire face aux exigences élevées de la situation. [I trust my ability to meet the high demands of the situation.]
FlowD1b	Je sens que je contrôle parfaitement mes actions. [I feel completely in control of my actions.]
FlowD1c	A chaque étape, je sais ce que je dois faire. [At each step, I know exactly what I have to do.]
FlowD2a	Je suis totalement absorbé-e par ce que je fais. [I am wholly absorbed in what I am doing.]
FlowD2b	Je suis profondément concentré-e sur ce que je fais. [I am deeply focused on what I am doing.]
FlowD2c	Je ne vois pas le temps passer. [I am losing track of time.]
FlowD3a	Je ne suis pas préoccupé-e par ce que les autres pourraient penser de moi. [I don't care about what others may think of me.]
FlowD3b	Je ne suis pas préoccupé-e par le jugement des autres. [I am not concerned about the judgement of others.]
FlowD3c	Je ne suis pas inquiet-e de ce que les autres peuvent penser de moi. [I am not worried about what others might think of me.]
FlowD4a	J'ai le sentiment de vivre un moment enthousiasmant. [I have the feeling I am living a very exciting experience.]
FlowD4b	Cette activité me procure beaucoup de bien-être. [This activity brings me a sense of well-being.]
FlowD4c	Quand j'évoque cette activité, je ressens une émotion que j'ai envie de partager. [When I talk about this activity, I feel such a deep emotion that I want to share it.]

- FlowD1 : Contrôle cognitif/Cognitive control
- FlowD2 : Immersion et altération de la perception du temps/Immersion and Time transformation
- FlowD3 : Absence de préoccupation à propos du soi/Loss of self-consciousness
- FlowD4 : Expérience autotélique (Bien-être procuré par l'activité)/Autotelic experience (well-being provided by the activity)

Note : FlowD1+FlowD2+FlowD3 = Absorption cognitive/Cognitive absorption

Please use this reference to cite the Flow in Education scale v.2 (EduFlow-2)

Heutte, J., Fenouillet, F., Martin-Krumm, C., Gute, G., Raes, A., Gute, D., Bachelet, R. & Csikszentmihalyi, M. (2021). Optimal Experience in Adult Learning: Conception and Validation of the Flow in Education Scale (EduFlow-2) *Frontiers in Psychology*, section *Educational Psychology*, 12, 1-12. <https://doi.org/10.3389/fpsyg.2021.828027>

Bijlage 15: Constructivist Learning Environment Survey

Please respond to the following questions using the scale described and circling the appropriate number:

5= very often

4= often

3= sometimes

2= seldom

1= never

In this class, I would prefer ...

5 4 3 2 1 | 1. to ask other students about their ideas

5 4 3 2 1 | 2. the teacher to help me think about what I learned in past lessons.

5 4 3 2 1 | 3. to think hard about my own ideas

5 4 3 2 1 | 4. the teacher to give me problems to investigate.

In this class, I would prefer ...

5 4 3 2 1 | 5. not to ask other students about their ideas

5 4 3 2 1 | 6. to see if what I learned in the past still makes sense to me.

5 4 3 2 1 | 7. to do investigations in my own way.

5 4 3 2 1 | 8. the teacher to expect me to remember important ideas I learned in the past.

In this class, I would prefer ...

5 4 3 2 1 | 9. not to be aware of other students' ideas.

5 4 3 2 1 | 10. there to be not enough time to really think.

5 4 3 2 1 | 11. to find my own way of doing investigations.

5 4 3 2 1 | 12. the teacher to set my learning activities.

In this class, I would prefer ...

5 4 3 2 1 | 13. to talk with other students about the most sensible way of solving a problem.

5 4 3 2 1 | 14. to think about interesting, real-life problems.

5 4 3 2 1 | 15. that I decide how much time to spend on an activity.

5 4 3 2 1 | 16. the teacher to expect me to remember things I learned in past lessons.

In this class, I would prefer ...

5 4 3 2 1 | 17. to try to make sense of other students's ideas

5 4 3 2 1 | 18. to learn about things that interest me.

5 4 3 2 1 | 19. that I could decide if my solutions made sense.

5 4 3 2 1 | 20. to learn the teacher's method for doing investigations.

In this class, I would prefer ...

5 4 3 2 1 | 21. to pay close attention to other students's ideas.

5 4 3 2 1 | 22. that what I learn has nothing to do with real-life.

5 4 3 2 1 | 23. that I could decide if my ideas are sensible.

5 4 3 2 1 | 24. the teacher to insist that my activities be completed on time.

In this class, I would prefer ...

5 4 3 2 1 | 25. not to pay attention to other students's ideas.

5 4 3 2 1 | 26. to learn about things that are not really interesting.

5 4 3 2 1 | 27. that I could decide how much time I spend on an activity

5 4 3 2 1 | 28. the teacher to show the correct method for solving problems.

Scales Items

Negotiation 1, 5, 9, 13, 17, 21, 25

Prior Knowledge 2, 6, 10, 14, 18, 22, 26

Autonomy 3, 7, 11, 15, 19, 23, 27

Student Centredness 4, 8, 12, 16, 20, 24, 28

Bijlage 16: Development and validation of an instrument to measure social constructivism in a virtual classroom

Appendix A

Instrument Items

Authentic, Relevant, and Meaningful (AUT)

- • I understand what I am doing in a task and why I am doing it.
- • I have experienced methods of authentic practices like making or building things; analyzing problems; designing solutions; trying out solutions; testing and evaluating solutions.
- • Special guests are brought in to discuss an emerging field or hot topic.
- • I have opportunities to revise or modify my assessments.
- • Assignments I complete are related to real-world settings.
- • I have lead discussions in online my class.
- • I could see a logical connection connecting the learning task to a worthwhile practice. (For eg. I can see that learning about the environment will help me make informed choices about what I buy from the market)

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38

Tasks that require Higher Cognitive Skills (COG)

- • I am provided sample tasks or methods to help me understand what I'm supposed to do in a task.
 - • I critically evaluate my own (and others's) work. (After a test I can check my answers with a mark scheme and understand what I did wrong).
 - • I have exhibited creative use of my knowledge. (Eg. I have designed a lab activity).
 - • I revisited and improved my assignment because I understood it better at a later step. (Eg. I submitted a second copy of my presentation as I had explained my topic better on it).
 - • I have participated in 'what if' discussions that require me to think beyond what I have covered in my class.
 - • I have participated in an activity that required me to tutor or mentor someone.
-

- • I have participated in an activity where I considered and proposed alternatives.
- • I have constructed, built, or enacted something that is abstract in theory or idea. Like a poem or a song.
- • I have analyzed online case situations and reacted to the posts of their peers’ case solutions.
- • I got the chance to describe my work from my perspective/belief. (For eg. I presented my point of view about racial discrimination).
- • I have used my knowledge to solve local problems and situations.

Collaborative and Cooperative Small Group Work (COLL)

- • I have had the opportunity to take part in group activities.
- • I have negotiated with my teacher or peers about something. (Eg. While we were writing an essay, we discussed and negotiated the word limit).
- • I or my class has created grading rubrics with my teacher.
- • I have received a grade simply for participating in an activity; like a discussion.
- • I participate in collaborative and cooperative small group work (this would include: chat discussions; discussions with outside experts; small-group exercises; projects with multiple authors).
- • I experienced that the process of collaborative work is as important as the final result. (eg. in a group project I noticed my partner had made good contributions which raised the quality of the final work)
- • During group work, my team shares with others what we are doing and we react to the progress or final products of other teams. (For. eg. Group 1 posts, “hey we are on Q4” and you respond it that comment)

Project-based Learning Tasks (PBL)

- • I explore important problem areas and ask questions, debate ideas, make predictions, and draw conclusions while creating relevant artifacts. (an artifact can be the end product like a poster, an essay, an article, a lab report, a presentation, an artwork, etc).
 - • I share my project drafts with my peers during development and completion and ask
-

them for feedback.

- • Projects I work on are authentic (takes place in a real-world setting with real-world participants).
- • I have completed projects that are open-ended in nature. (for example, you are asked to investigate a civilization where you can choose which civilization you would want to work with).
- • I have completed a variety of project-based learning tasks that would include: design and development projects; research and evaluation projects; analysis and critique projects; scenario and case responses; knowledge-based development projects.
- • I completed projects for which I was given some general guidelines as to possible projects to complete, but I decided what is relevant and meaningful to me while completing it.

Safe Environment (SAFE)

- • I can freely communicate with my teachers and peers.
- • I feel trusted and supported by my teachers.

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Bijlage 17: Safety checklist

SAFETY CHECK LIST

Before entry into the enclosed space the appropriate safety checks listed below must be carried out by a competent person or officer authorised by the Master and by the person(s) who is/are to enter.

Space Date Time

Section 1 – To be confirmed by the competent person or officer authorised by the Master to take charge of entry:

1.1	Have all hazards been identified?	
1.2	Has the space been properly ventilated, tested and found safe?	
1.3	Has the space been isolated and secured against the ingress of harmful substances from adjacent or connected spaces?	
1.4	Have arrangements been made to continue ventilation during occupancy of the space and at breaks?	
1.5	Have arrangements been made to repeat testing at regular intervals during occupancy and after breaks?	
1.6	Are rescue and resuscitation equipment available for immediate use at the entrance to the space?	
1.7	Have arrangements been made for a responsible person with breathing apparatus to be in constant attendance at the entrance to the space?	
1.8	Has a system of communication between the person at the entrance and those entering the space been agreed and tested?	
1.9	Has the space and its access areas been adequately illuminated?	
1.10	Are portable lights and other equipment to be used of an appropriate type?	
1.11	Is a rescue team briefed and available in the event of an emergency arising?	
1.12	Is entry into the space suitable using breathing apparatus?	
1.13	Have the person(s) entering the space attended a dedicated course for entry into enclosed spaces?	

Section 2 – To be confirmed by the person/s who is/are to enter the space after the relevant checks in SECTION 1 have been completed.

2.1	Are you satisfied all relevant checks in Section 1 have been completed?	
2.2	Do you understand the instructions and permit to work given by the competent person or officer authorised by the Master to enter the space?	
2.3	Do you understand the arrangements made for communication between yourself and the responsible person in attendance at the entrance to the space?	
2.4	Are you aware you should leave the space immediately in the event of ventilation problems or communication failure?	
2.5	Do you have any other safety concerns?	
2.6	Have you been trained in entry into enclosed spaces?	

Section 3 – To be confirmed jointly by the officer authorised by the Master and the person(s) who is/are to enter the space if breathing apparatus is to be used.

3.1	Are you trained in the use of the apparatus?	
3.2	Is the apparatus in good condition and has it been checked for:	
	(i) adequacy of air supply	
	(ii) high pressure integrity	
	(iii) working of low pressure audible alarm	
	(iv) face mask seal?	

The completed card should be handed to the competent person at the entrance to the space before entering.

Bijlage 18: Sample checklist for confined space work

SAMPLE CHECKLIST FOR CONFINED SPACE WORK

This checklist provides the basic requirements of a confined space plan. Occupiers and employers should ensure and maintain a safe working environment for entry and working in a confined space. This checklist is non-exhaustive, and users should customise the checklists suitable for the work processes and conditions at the workplace.

S/N	Items		Remarks
Section A: Responsibilities of Personnel			
1.	Have the following key personnel, who are involved in confined space entry or work, been appointed? • Authorised Manager • Confined Space Safety Assessor (CSSA) • Confined Space Attendant • Rescue Personnel	☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No	
2.	Are the duties and responsibilities of all employees (including key personnel) clearly stipulated?	☐ Yes ☐ No	
Section B: Confined Space Identification			
3.	Have you identified all the confined spaces within your workplace?	☐ Yes ☐ No	
4.	Do you keep a record of all identified confined spaces?	☐ Yes ☐ No	
5.	Have all affected employees been informed of the existence of these confined spaces and warned of the possible hazards?	☐ Yes ☐ No	
Section C: Risk Assessment			
6.	Have all confined space entry or work been evaluated to assess the necessity of conducting such work within the workplace?	☐ Yes ☐ No	
7.	Has a risk assessment been conducted to identify, evaluate and control all risks arising from entry or work in confined spaces?	☐ Yes ☐ No	
8.	Are the risk control measures selected based on the hierarchy of control for management of confined space hazards?	☐ Yes ☐ No	
9.	Are confined space hazards re-evaluated when new operations or work procedures are introduced or when current operations or work procedures are altered?	☐ Yes ☐ No	
Section D: Safe Work Procedures & Confined Space Entry Permit			
10.	Have safe work procedures been established for all confined space works?	☐ Yes ☐ No	
11.	Do the safe work procedures for confined space cover the following key areas? • Evaluation of the need to enter or carry out work in the confined space • A confined space entry permit • The types of atmospheric testing required and the interpretation of results of the tests	☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No	

	- The safety and health precautions to be taken during entry into the confined space and during an emergency situation - The provision and safe use of safety equipment and PPE - The means to prevent unauthorised entry into the confined space, including the display of warning signs.	☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No	
12.	Are the following information provided on the confined space entry permit? - The location and identity of the confined space - The purpose of entry into the confined space - The results of the gas testing of the atmosphere of the confined space - The validity of the confined space entry permit	☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No	
13.	Is a copy of the confined space entry permit and a sketch of work area displayed prominently at the entrance to the confined space?	☐ Yes ☐ No	
14.	Are identification badges of entrants displayed at the entrance to the confined space?	☐ Yes ☐ No	
15.	Are the entry permits kept for a minimum of 2 years from the date of approval?	☐ Yes ☐ No	
Section E: Atmospheric Testing and Monitoring			
16.	Is the space tested by a CSSA for oxygen levels, flammable and/or toxic gases, vapours or fumes before an entry permit is issued?	☐ Yes ☐ No	
17.	Are the test results within the acceptable criteria?	☐ Yes ☐ No	
18.	Are the results recorded on the entry permit?	☐ Yes ☐ No	
19.	Is the atmosphere in the space tested at periodic intervals subsequently?	☐ Yes ☐ No	
20.	Are the periodic test results recorded?	☐ Yes ☐ No	
Section F: Ventilation Provisions			
21.	Is adequate ventilation provided and maintained at all times in the confined space during the validity of the confined space entry permit?	☐ Yes ☐ No	
22.	Is the air supply for the ventilation system from a source or area which is free of contaminants?	☐ Yes ☐ No	
Section G: General Safety Provisions			
23.	Are safe means of access and egress provided for the movement of entrants to and within the confined space?	☐ Yes ☐ No	
24.	Are all pressurised confined spaces depressurised and rendered safe prior to opening?	☐ Yes ☐ No	
25.	Are all confined space openings barricaded or guarded properly after opening?	☐ Yes ☐ No	
26.	Are all confined space openings covered effectively to prevent objects from falling through?	☐ Yes ☐ No	
27.	Is there sufficient and suitable lighting provided for entry into and work in confined space?	☐ Yes ☐ No	

28.	Are all electrical installation and equipment used of good construction, sound material and properly maintained?	☐ Yes ☐ No	
29.	Are all moving parts and equipment inside the confined space locked out and tagged?	☐ Yes ☐ No	
30.	Are warning signs posted at the entrances of confined space?	☐ Yes ☐ No	
Section H: Emergency Preparedness and Rescue			
31.	Has a written rescue plan for confined space work been established?	☐ Yes ☐ No	
32.	Are sufficient supplies of rescue equipment provided/ made readily available?	☐ Yes ☐ No	
33.	Are the rescue equipment properly maintained?	☐ Yes ☐ No	
34.	Are records of every test and examination of the rescue equipment by a competent person available for inspection?	☐ Yes ☐ No	
35.	Are regular drills for confined space rescue conducted?	☐ Yes ☐ No	
Section I: Training			
36.	Have the persons entering the confined space received adequate safety and health training pertaining to the hazards associated with entry/work in the confined space?	☐ Yes ☐ No	
37.	Have all appointed rescue personnel received adequate training in rescue operation, including first aid and proper usage of PPE and other rescue equipment?	☐ Yes ☐ No	
38.	Are training records maintained and made available for inspection?	☐ Yes ☐ No	

Bijlage 19: Checklist for entry into enclosed spaces

CHECKLIST FOR ENTRY INTO ENCLOSED SPACES



This permit relates to entry into any enclosed space and should be completed by the Master, Responsible Officer and by all persons entering the space.

MV/MT: _____ Location/ Name of enclosed Space: _____
 Sea/ Port/ Anchor: _____ Loaded/ Ballast: _____ Present/ Last Cargo: _____
 Reason for Entry: _____

- A. This permit fulfills the 'Risk Assessment' required for entering enclosed spaces. If any item is marked as 'NO', it is essential that permission is obtained from the company and a safe system of work agreed prior making entry. Hazards as detailed in section HSM 9.2.1.1 are also to be taken into account.
- B. Validity of this permit should not exceed 8 hours and the maximum time the space can be left unattended shall not exceed 4 hours.
- C. A separate checklist is to be filled for each compartment to be entered.
- D. All previously issued 'Safety Permits' should be revoked immediately upon vessel's berthing and fresh permit should be issued only after obtaining permission from port/ terminal.

SECTION 1 – PRE-ENTRY PREPARATION (To be checked by the Responsible Officer)

YES NO N/A

1. Has the space been thoroughly ventilated by mechanical means? ☐ ☐ ☐
2. Has the space been segregated by blanking off or isolating all connecting pipelines or valves and electrical power/equipment? ☐ ☐ ☐
3. Has the space been cleaned where necessary? ☐ ☐ ☐
4. Pre-entry atmosphere test readings: (To be tested from outside the space) Time: _____

Location of Checks	Height (m)	Oxygen (% vol)	LFL (%)	Toxic Gas 1	PPM	TLV	Toxic Gas 2	PPM	TLV	Toxic gas 3	PPM	TLV

5. Has the space been tested and found safe for entry? (See notes 1, 2 & 3) ☐ ☐ ☐
 6. Have arrangements been made for frequent atmosphere checks to be made while the space is occupied and after work breaks? ☐ ☐ ☐
- (The interval will depend upon nature of enclosed space, duration of work and in any case shall not exceed 60 minutes)
7. Have arrangements been made for the space to be continuously ventilated throughout the period of occupation and during work breaks? ☐ ☐ ☐
 8. Are access and illumination adequate? ☐ ☐ ☐
 9. Is a proper Fall Arrestor Device (FAD) available, checked and being used for tank entry unless permanent fall prevention structure such as full length guard railings are provided on the vertical ladder? ☐ ☐ ☐
 10. Are persons entering the space briefed about importance of maintaining 3-Point contact on ladders? ☐ ☐ ☐
 11. Has an attendant(s) been designated to be in constant attendance at the entrance to the space? ☐ ☐ ☐
- Name(s) / Rank(s) _____
12. Has the officer of the watch (bridge / engine-room / cargo control room) been advised of the planned entry? ☐ ☐ ☐
 13. Has a system of communication between all parties been tested and emergency signals agreed? ☐ ☐ ☐
 14. Are emergency and evacuation procedures established and understood by all personnel involved with the enclosed space entry? ☐ ☐ ☐
 15. Is all equipment used in good working condition and inspected prior to entry? ☐ ☐ ☐
 16. Are personnel properly clothed and equipped? ☐ ☐ ☐
 17. Has inert gas pressure of adjacent tanks been lowered to reduce possibility of any inter-tank leakage? ☐ ☐ ☐
 18. Has the Generic Risk Assessment Template given in HSM section 9.3.1 been referred to? ☐ ☐ ☐

SECTION 2 – PRE-ENTRY CHECKS (To be checked by Person InCharge of Entry Team and each person entering the space)

1. I have received instructions or permission from the Responsible Officer to enter the enclosed space ☐ ☐ ☐
2. Section 1 of this permit has been satisfactorily completed by the Responsible Officer ☐ ☐ ☐
3. I have agreed and understand the communication procedures ☐ ☐ ☐
4. I have agreed upon a reporting interval of _____ minutes ☐ ☐ ☐
5. Emergency and evacuation procedures have been agreed and are understood ☐ ☐ ☐
6. I am aware that the space must be vacated immediately in the event of ventilation failure or if atmosphere tests show a change from agreed safe criteria ☐ ☐ ☐

CHECKLIST FOR ENTRY INTO ENCLOSED SPACES



SECTION 3 – EMERGENCY PREPAREDNESS (To be checked jointly by the Responsible Officer and the persons who are to enter the space)

Is rescue and resuscitation equipment available for immediate use by the entrance to the space?
Following to be checked:

1. A breathing apparatus is standby and those entering the space are familiar with its use
The breathing apparatus shall be tested for its guage & capacity of air supply, low pressure audible alarm and the face mask under positive pressure and not leaking
2. Rescue Hoist is readily available for evacuating a casualty from enclosed space.
3. Rescue harness with complete lifeline
4. First aid and resuscitation equipment kept ready including a Stretcher
5. The means of communication has been tested and emergency signals agreed

Signed upon completion of sections 1, 2 and 3 by:

Person entering the space

Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____
(InCharge of Entry Team - See Note 4)				
Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____
Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____
Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____
Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____
Name: _____	Signature: _____	Rank: _____	Date: _____	Time: _____

Responsible Officer: _____ Signature: _____ Rank: _____ Date: _____ Time: _____

Master's Approval: _____ Signature: _____ Rank: _____ Date: _____ Time: _____

This permit is valid: From _____ hrs Date _____ To _____ hrs Date _____

SECTION 4 – PERSONNEL ENTRY (To be completed by the Responsible Officer supervising entry)

Initial Time in: _____ Final Time out: _____

SECTION 5 – COMPLETION OF JOB (To be completed by the Responsible Officer supervising entry)

Job completed	Date: _____	Time: _____
Space secured against entry	Date: _____	Time: _____
The officer of the watch has been informed	Date: _____	Time: _____

Signed upon completion of sections 4 and 5 by:

Responsible Officer supervising entry _____ Date: _____ Time: _____

**THIS PERMIT IS RENDERED INVALID SHOULD VENTILATION OF THE SPACE STOP
OR IF ANY OF THE CONDITIONS NOTED IN THE CHECKLIST CHANGE**

Notes:

1. For entry purposes, steady readings of all the following should be obtained: 20.9% oxygen by volume; Hydro Carbon content not more than 1% of lower flammable limit (LFL); Toxic gases 0.0 ppm. TLV values to be checked from MSDS sheets or Shore Office.
2. In order to obtain a representative cross-section of the space's atmosphere, samples should be taken from several levels and through as many openings as possible. Ventilation should be stopped for about 10 minutes before the pre-entry atmosphere tests are taken.
3. Tests for specific toxic contaminants, such as benzene or hydrogen sulphide, should be undertaken depending on the nature of the previous contents of the space.
4. Cadet or Trainee shall not be nominated as person incharge of entry team.

