
Engaging students at a distance

Learnings from the sanitary crisis in Swiss Teacher Education



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Agenda

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- Research interest and questions
 - Project
 - Methodological aspects
 - First insights
 - First consequences



Starting point

Context

Students in Swiss Teacher Education were affected in different ways by the abrupt switch to emergency remote teaching (ERT) in spring 2020:

- Some fulltime students were stuck at home with a lot of time because jobs and practicum were on hold.
- Some parttime students in parallel to studying online were also teaching online and involved with schooling their own children at home.

Initial questions

- How did students in different programmes of Swiss teacher education in spring 2020 perceive the ERT offer with regard to their individual engagement?
- What do they consider to be beneficial or detrimental to their own behavioral, cognitive and emotional engagement?

Student engagement (SE) as a guiding concept

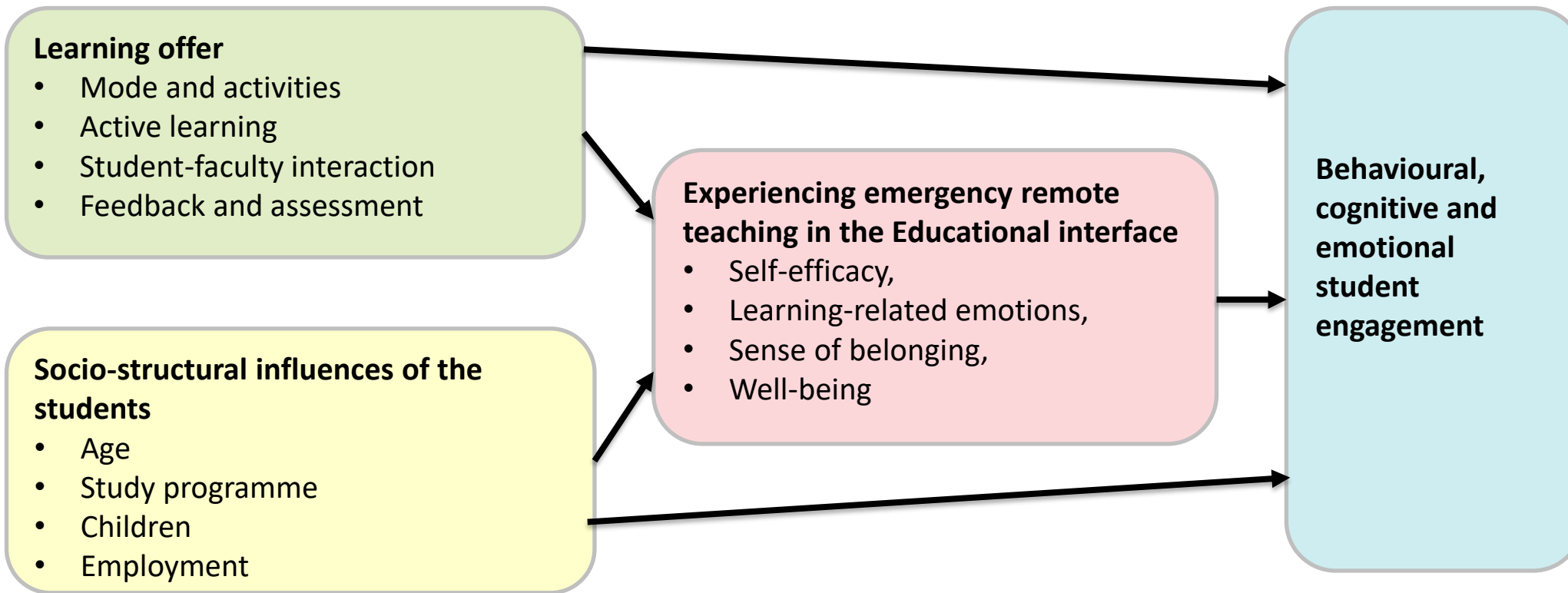
- Student engagement (SE) as a **predictor of academic** success (e.g. meta-analysis by Lei, Cui & Zhou 2018).
- Focus on **SE** rather than on students' characteristics:
Student engagement **defined** as *"the energy and effort that students employ within their learning community, observable via any number of behavioural, cognitive or emotional indicators across a continuum"* (Bond et al., 2020, 317).
- According to Kahu and Nelson (2018, 59), a **shared responsibility** between the learner and the institution emerges: *"individual student engagement occurs dynamically within an educational interface at the intersection of the student and their characteristics and background, and the institution and its practices"*.
- As student population is very diverse the focus should be on **providing opportunities** for engagement rather than engaging them in prescribed ways. (Pickford, 2016)

Facets of (Dis-)Engagement (Bond et al., 2020, p. 359)

Behavioral engagement	Cognitive engagement	Emotional engagement
• draws on the idea of participation; • it includes involvement in academic and social or extracurricular activities	• draws on the idea of investment; • it incorporates willingness to exert the effort necessary to comprehend complex ideas.	• encompasses positive and negative reactions to teachers, classmates, academics, and school
<i>Examples of Engagement</i> • e.g. Attendance • Developing agency • Participation/involvement • Attention/focus	• e.g. Trying to understand • Reflection • Deep learning	• e.g. Enthusiasm • Sense of belonging • Positive interactions with peers & teachers
<i>Examples of Disengagement</i> • E.g. Half-heartedness • Distraction • inattentive	• E.g. Rejection • Feeling overwhelmed • pressured	• E.g. Frustration • Disappointment • Boredom

Student engagement - Theoretical model

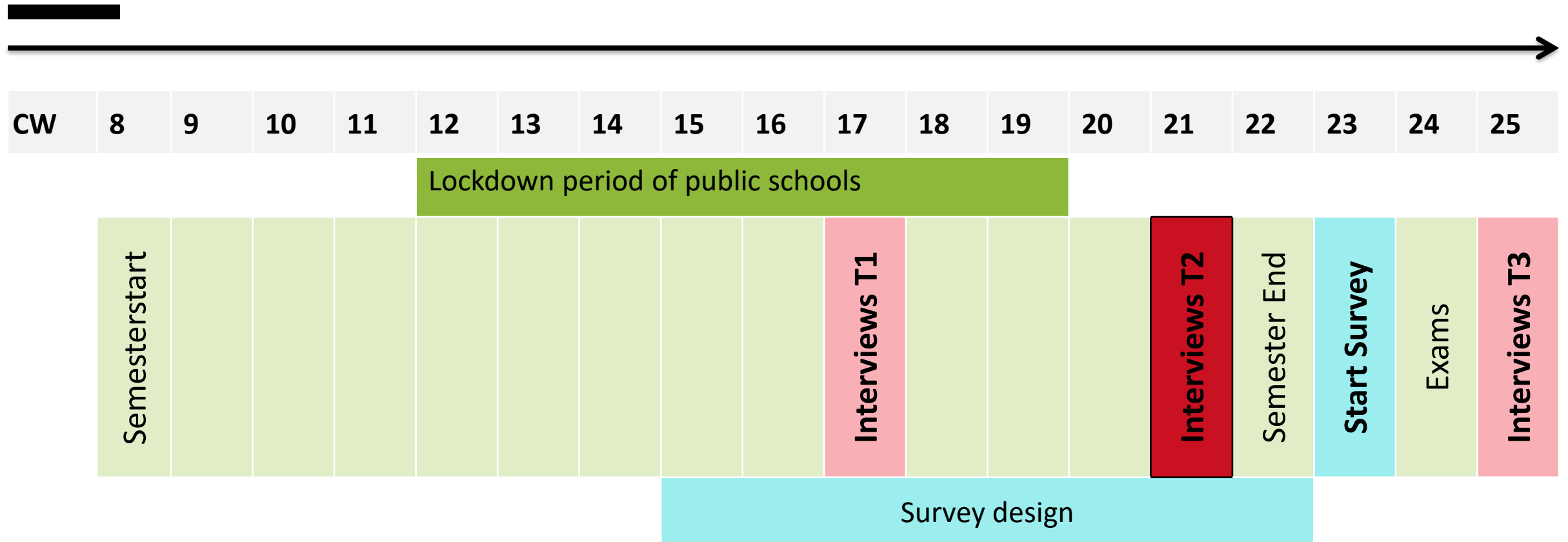
Based on Kahu & Nelson (2018)



Mixed methods approach

	Quantitative approach: Survey	Qualitative approach: Semi-structured Interviews
Data collection	3 Swiss universities of teacher education 6 study programs level Secondary 1 & 2 N=261, response rate=36%	With a total of 9 students at 3 points in time
Data analysis	Descriptive analysis Correlations Regression analysis	Content structuring qualitative method according to Kuckartz (2018, p. 97)

Data collection – Spring semester 2020



What effects do structural, personal and learning environmental aspects have on SE? An exploratory regression analysis (spring 2020)

Predictors of student engagement	B	SE B	β	T	p
Study programme	-0.04	0.02	-0.12	-1.94	n.s.
Children	-0.23	0.12	-0.10	-1.84	n.s.
Employment	0.01	0.06	0.01	0.09	n.s.
Learning-related joy	0.47	0.07	0.46	6.65	<.01
Self-Efficacy	0.12	0.13	0.06	0.95	n.s.
Subjective feelings of stress	-0.02	0.05	-0.02	-0.41	n.s.
Missing direct contact with faculty	-0.41	0.12	-0.20	-3.37	<.01
Active learning	0.08	0.08	0.07	0.93	n.s.
Feedback and assessment	0.31	0.08	0.27	4.05	<.01

$R^2 = .69$, adjusted $R^2 = .47$; $F(9, 176) = 17.19$, $p < .01$

Starting point of data analysis: Remarkable survey results

- Socio-structural data and its diversity don't explain the differences in perceived student engagement
- Teaching design in ERT has an impact on student engagement (e.g., feedback & assessment, direct contact with faculty)
- Ambiguous impact of constructs in the educational interface on student engagement (e.g., learning related emotions, self-efficacy, belonging, wellbeing)

Re-defined questions for qualitative data analysis



- How do students address student engagement in the interviews?
- Which dimensions of student engagement occur?
- Engagement from which perspective / motivation?



Structure of the codebook for coding the interviews (T2)

(Based on Bond et al., 2020; Kahu & Nelson, 2018; Hawelka & Hiltmann., 2018)

Perceived learning setting	Interaction	Student use	Effects on student engagement
1 Curricular aspects(n=72)	7. Student-faculty interaction (n=123)	10. Autonomy (n=48)	13. Behavioural student engagement (n=61)
2. Course setting (n=13)	8. Cooperation among students (n=9)	11. Efficiency/ Time on task (n=66)	14. Emotional student engagement (n=100)
3. Course design: Methodical aspects (n=99)	9. Feedback (n=21)	12. Experience of tests (n=61)	15. Cognitive student engagement (n=27)
4. Learning tasks (n=27)		16. Environmental conditions (n=17)	
5. Learning resources (n=25)			
6. Assessment forms (n=42)			

Insight I: How do students address SE?

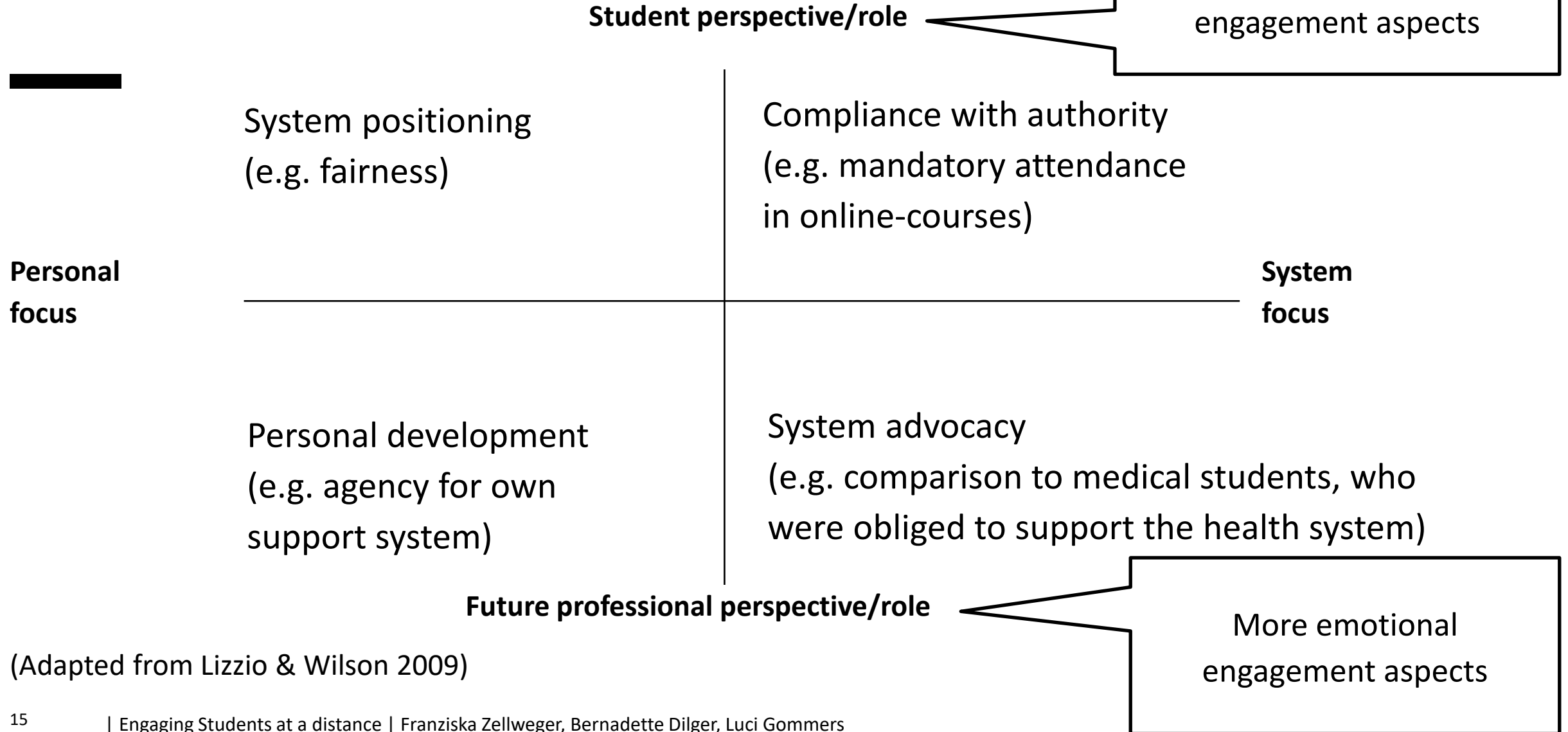
- Very different narratives,
- very different aspects of SE are addressed in different manners
- Not following “expected” typologies

Anna	Sandra	Amélie	Hervé
And I found it quite good that I could just work through the things from home and also save time , so I was relatively happy. And, yes, now it's also a bit of discomfort because I would really like to go to the library and I'm not allowed to. And now it's not so happy times anymore, (laughs) of course also because the exams are coming up .	I always find it great when I can research a topic in chemistry in a group or on my own and then somehow present it or write assignments on it. And it's always a bit like a larger project, where you really have to delve in. I always learn a lot this way, especially if it's a topic that I might not know so well or find very exciting.	Here's the work, it's understanding this video, reading these articles, being comfortable with this subject (...) and that's stimulating because we do it, it takes the time it takes. (...) But as a result, it's much more dependent on what we want to invest in than an imposed structure saying you have to do it like this, (..)	For example, in this course, I find that every week it's worse in terms of the number of documents that the teacher gives. (...), it's always more difficult to know in what order to do things , to follow, his programme and then to find which document corresponds to which title. (...) But the rest is fine.

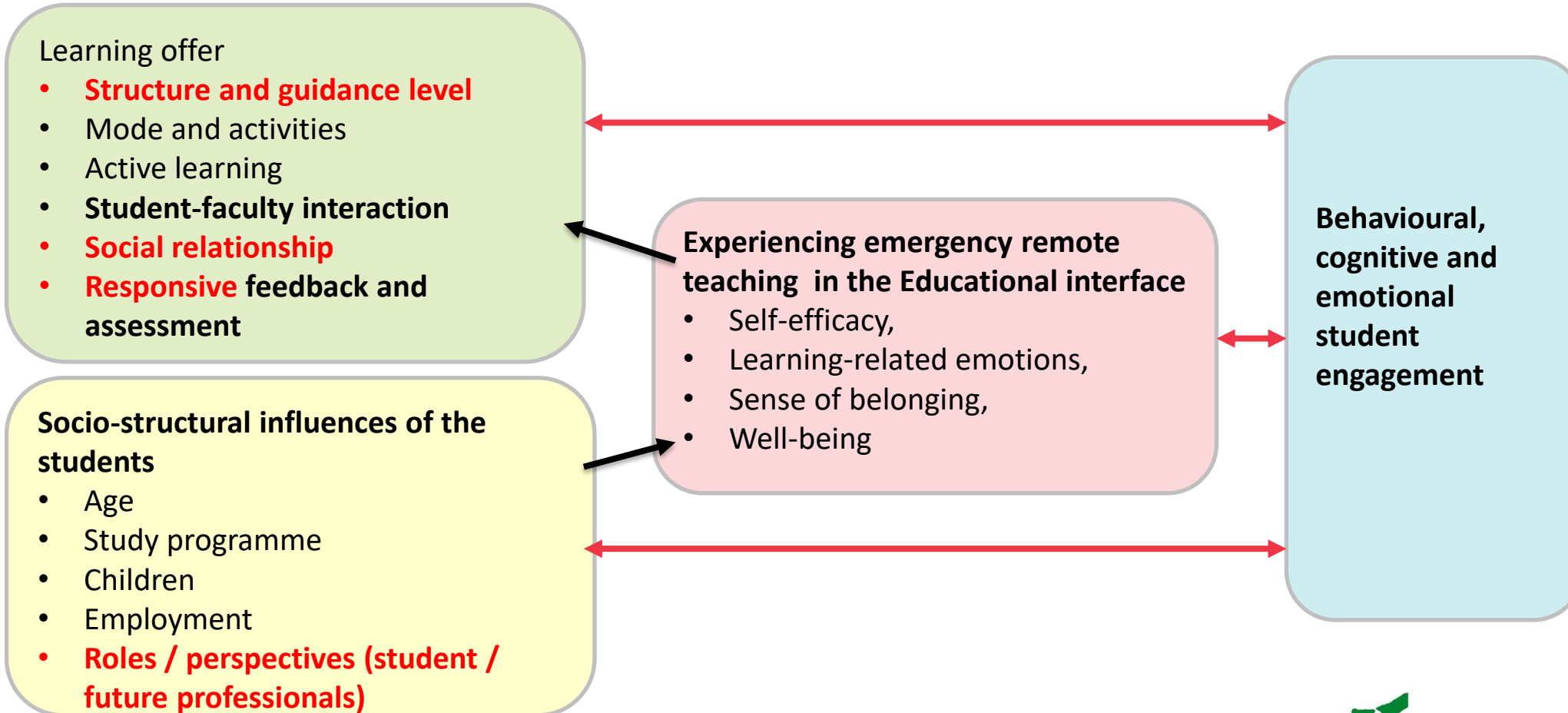
Insights II: Which dimensions of SE occur?

Emotional engagement (n=100)	Behavioral engagement (n=61)	Cognitive engagement (n=27)
- Wide variety of emotions, dominance of negative and activating emotions (e.g., anger, anxiety) - Fewer emotions that relate to people but diffuse perception of the overall situation - Interest and motivation as important topics	- Student's learning strategies - Role of activating tasks - Extrinsic motivation through assessment - Motivational effect of formative feedback for future learning - Appreciation of engagement from system (what counts) and faculty (what is seen). - Difficult balance between supporting structure and autonomy.	- Engaging learning activities - Feedback with impact - Missed learning opportunities in schools (practical work) => Dimension was far less addressed

Insight III: SE from which perspective?

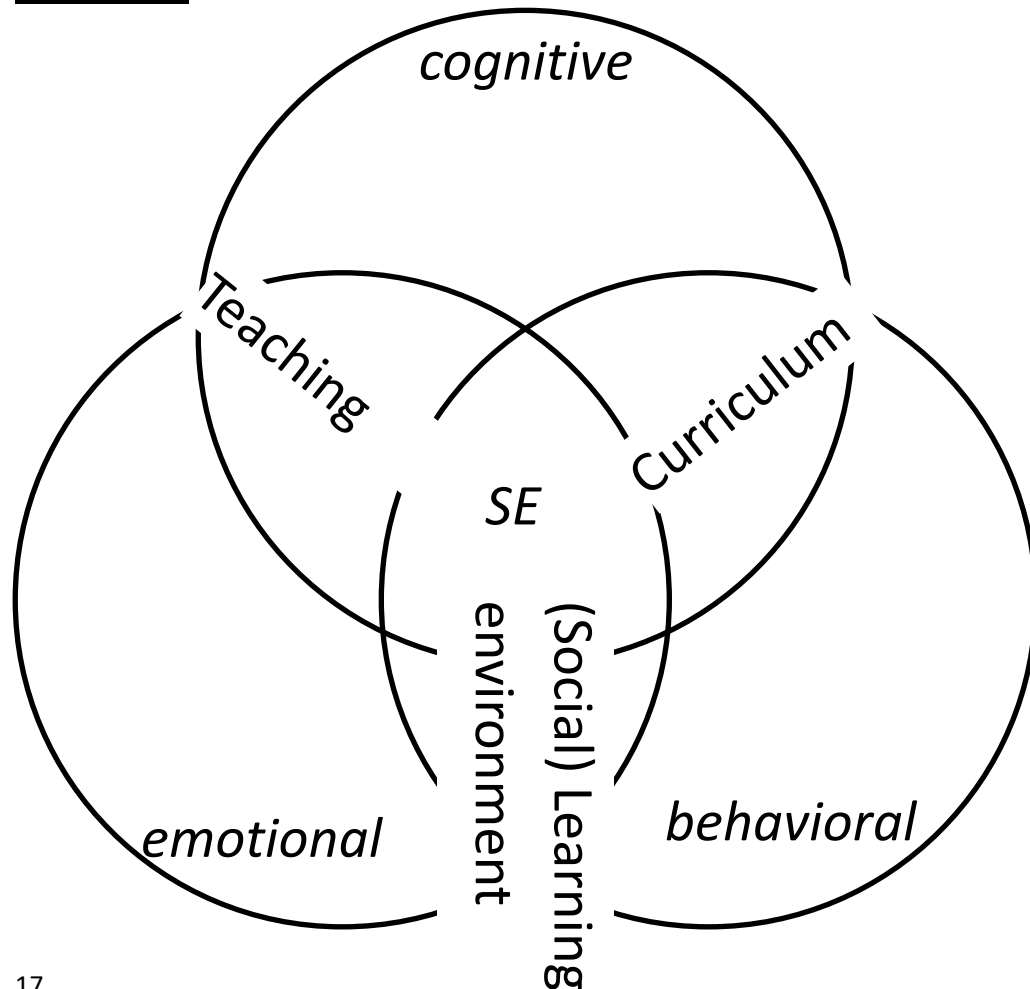


Insights IV: Interdependence of conditions for SE and dimensions of SE



Insights V: Conclusions for didactical design to foster SE

(Pickford 2016)



- Sensitizing faculty in Teacher Education to address students in different roles (students and future members of the profession).
- Calibrating the adequate level of (pre-) structure and self regulation
- Investing in teacher-student-interaction in different modalities and formats
- Showing responsiveness
- Creating a variety of conditions for SE

Outlook

Limitations

- «Biased» interview sample of rather engaged students.
- 3 different Teacher Education institutions differ culturally
- Open interview questions vs. specific research questions.
- As this is not a longitudinal design it is not possible to assess the effect of ERT.
- Generalizability beyond the context of teacher education?

Next steps

- More thorough analysis of T1 and T3 data to further elaborate and back with data.
- Re-analysis of all interview regarding the relation between student engagement dimensions and conditions resp. roles
- Case-based analysis in a longitudinal perspective (T1-T3)

Thank you very much for your attention

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We look forward to discuss with you further
For more information, please contact us



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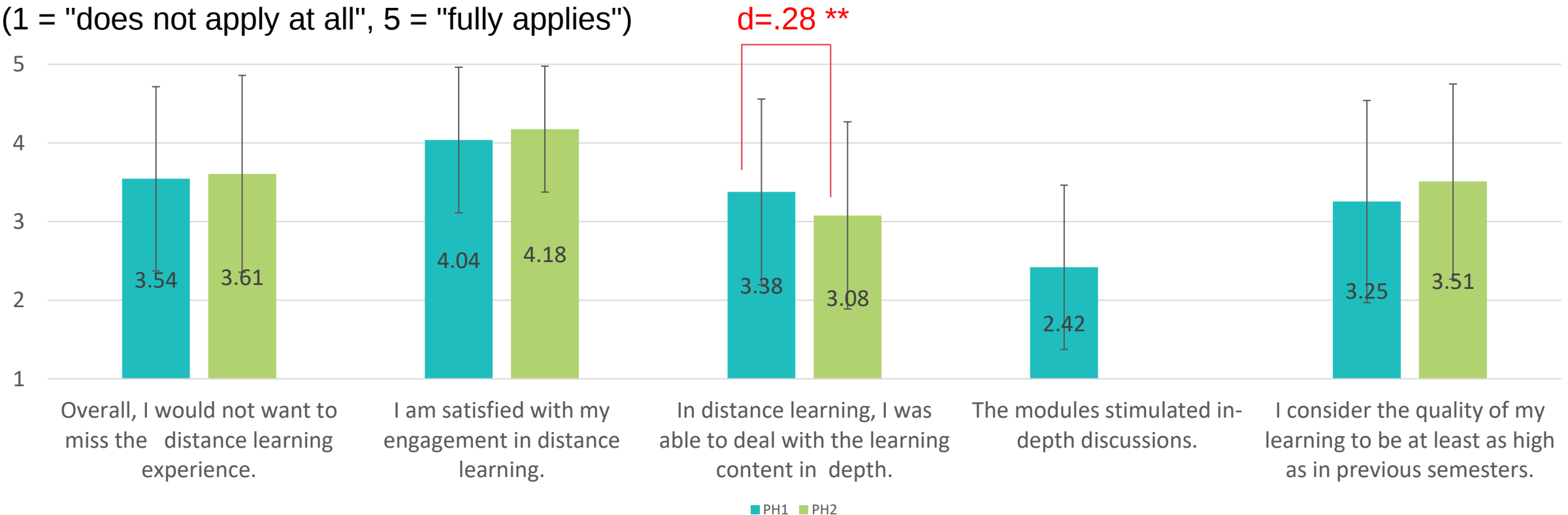
Literature

- Bond, M., Buntins, K., Bedenlier, S., Zawacki-Richter, O., & Kerres, M. (2020). Mapping research in student engagement and educational technology in higher education: A systematic evidence map. *International journal of educational technology in higher education*, 17(1), 1-30.
- Hawelka, B., & Hiltmann, S. (2018). Teaching Analysis Poll—ein Kodierleitfaden zur Analyse qualitativer Evaluationsdaten. *Gelingende Lehre: erkennen, entwickeln, etablieren: Beiträge der Jahrestagung der Deutschen Gesellschaft für Hochschuldidaktik (dghd) 2016*, 132, 73.
- Lizzio, A., & Wilson, K. (2009). Student participation in university governance: the role conceptions and sense of efficacy of student representatives on departmental committees. *Studies in Higher Education*, 34(1), 69-84.
- Pickford, R. (2016). Student engagement: Body, mind and heart—a proposal for an embedded multi-dimensional student engagement framework. *Journal of Perspectives in Applied Academic Practice*, 4(2).
- Lei, H., Cui, Y., & Zhou, W. (2018). Relationships between student engagement and academic achievement: A meta-analysis. *Social Behavior and Personality: an international journal*, 46(3), 517-528.
- Kahu, E. R., & Nelson, K. (2018). Student engagement in the educational interface: understanding the mechanisms of student success. *Higher education research & development*, 37(1), 58-71.

Anhang

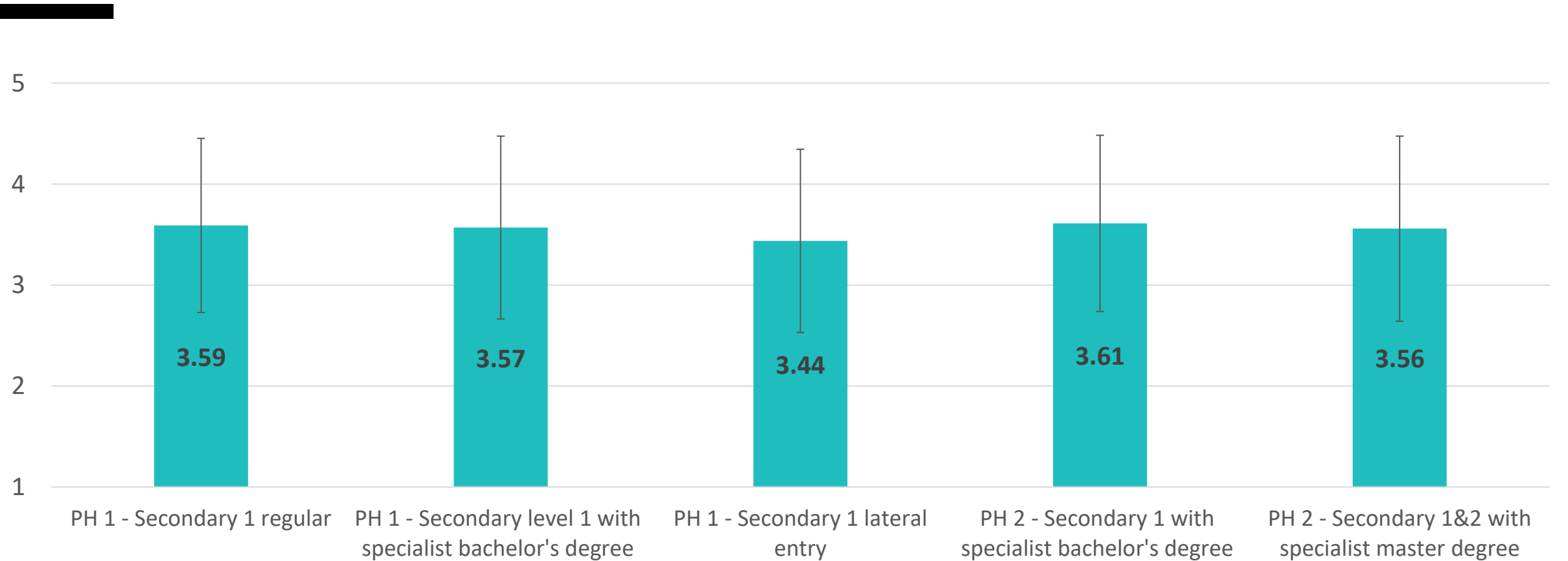
Student Engagement in Distance Learning

(1 = "does not apply at all", 5 = "fully applies")

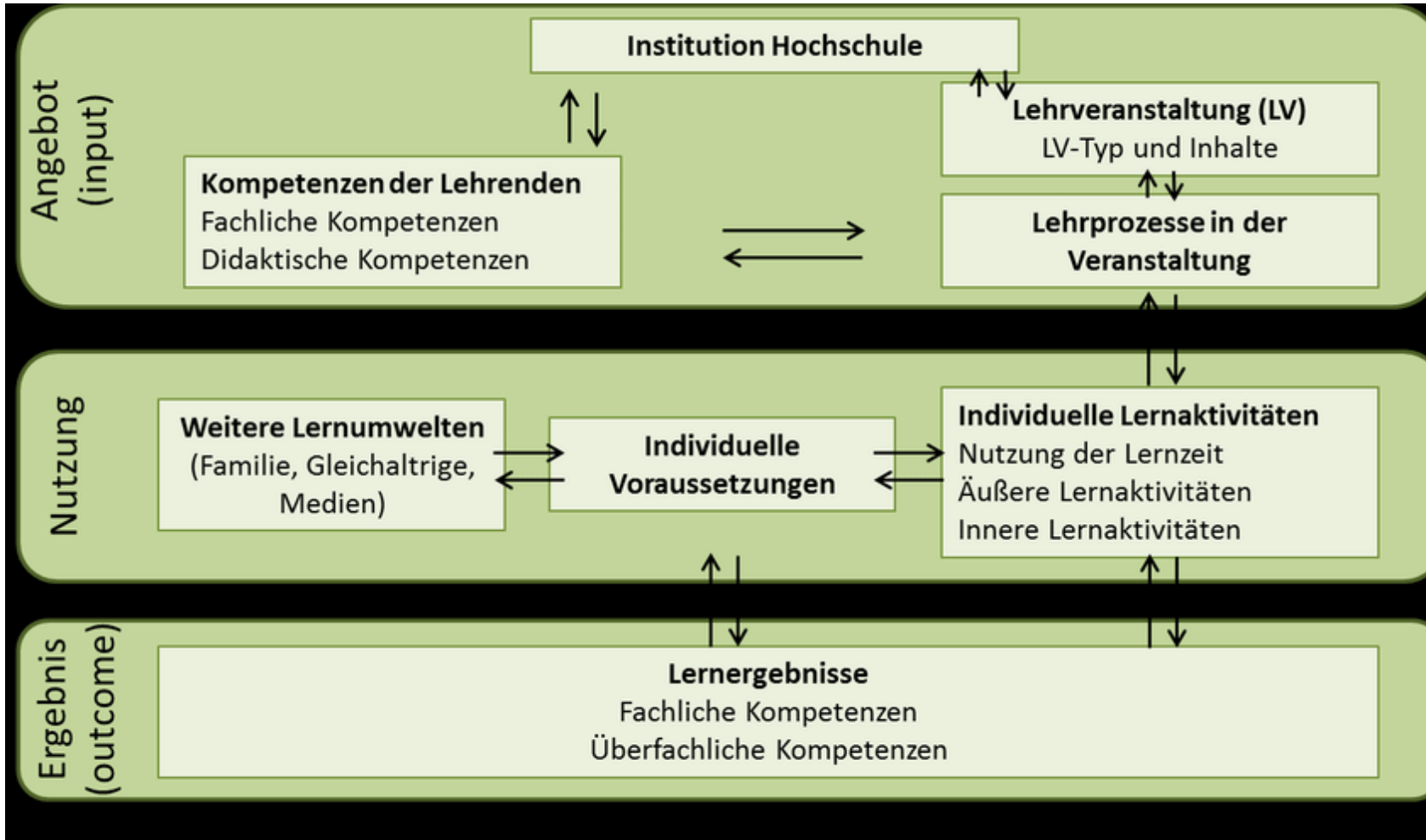


Scale value: Cronbach's alpha= .86

Student engagement in the different study programmes



Distance Learning in Emergency Remote Teaching



Angebots-Nutzen-Modell in Übertragung auf Hochschule (Braun, Weiß, Seidl 2014)

Veränderungen zu Distance Learning darin verankern

(Differences in) student engagement

- Definition student engagement
- With a reference to Fredricks, Blumenfeld, and Paris (2004), Bond, Bedenlier, Buntins, Kerres, and Zawacki-Richter (2020, p. 4) define student engagement as *“the energy and effort that students employ within their learning community, observable via any number of behavioral, cognitive or affective indicators across a continuum”*.
- Predictor for student success
- Deeper understanding of (inter-)actions
- Student engagement in phases of ERT / Distance Learning?
- Alignment to institutional conditions and areas of teaching (curriculum design, course and learning design, interaction)
 - Behavioral:** Effort, Aufmerksamkeit
 - Kognitive:** Deep Learning, kritisches Denken
 - Emotional:** Interesse, Zugehörigkeit
 - Geteilte Verantwortung, Fokus auf dem dynamischen Zusammenspiel zwischen Angebot und Nutzung (Kahu & Nelson, 2018)

Project

Teacher education as a profession-oriented academic study programm
– different approaches

**HEP
BEJUNE**

Quantitative Part at the 3 HE-Institutions

3x3 Interviews – half standardized
Transcripts

PH Zürich

Qualitative content analyses (deductive – inductive approach)

T1: Ende April, 6. Woche im Lockdown

T2: Mitte/Ende Mai, 10. Wo., 1 F2F Schulwoche

T3: Mitte Juni, 14. Wo., nach Prüfungen

**Uni
St. Gallen**

Interviews – 4 contrasting cases

Student-Faculty Interaction

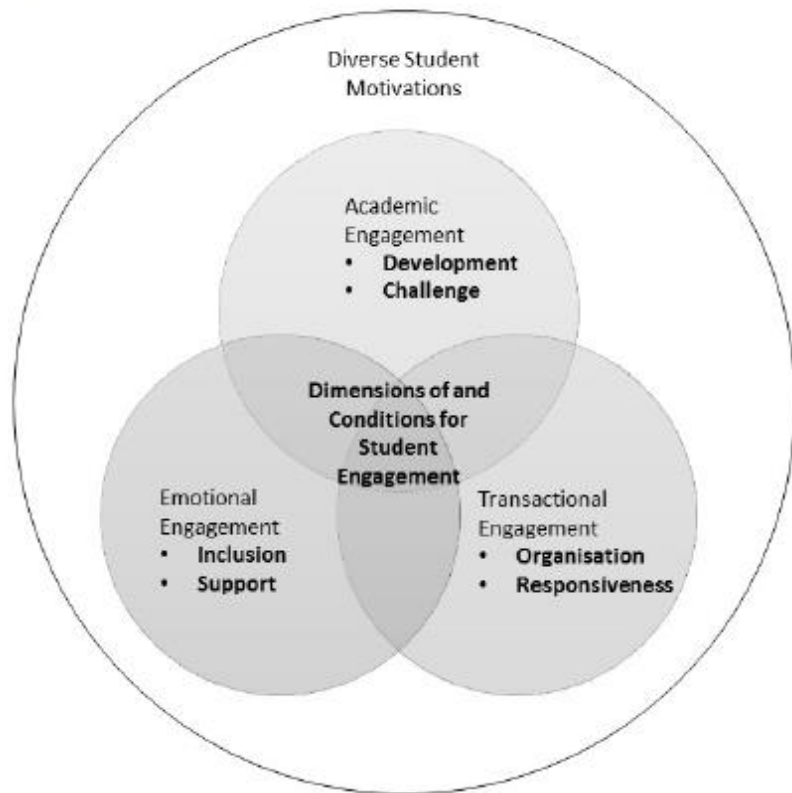
Anna	Sandra	Amélie	Hervé
Some of the lecturers were very eager and, in my opinion, took a good lead and told us what was important in the semester, what they were looking out for, and also sought contact with us. Some have done that less.	Yes. I think the lecturers are very concerned that they are also really socially accessible . So we had feedback conversations via MS Teams and the first thing was actually, "Yeah, how are you doing? How's the situation going? How are things in my course?", and so.	I would say the trust that they give to the pupils, there, they trust us. All of a sudden, we really found ourselves with emails, with online classes where we see that they trust us and where they see us more as, equals than as little students in fact.	Now we're online, we have a whole procedure to follow that is described on a sheet of paper and sometimes it's not at all clear and we have no one to, to ask questions to and we have to figure it out.

Interviews – 4 contrasting cases

	Anna	Sandra	Amélie	Hervé
Studyprogram	PH 1 - Secondary 1 regular	PH 1 - Secondary 1 regular	PH 2 - Secondary level 1 with subject bachelor	PH 2 - Secondary 1&2 with subject master
Semester of study	2/9	4/9	4/4	4/4
Age	34	23	Ca. 26	Ca. 26
Pathway to teacher education	High school degree, studies in fashion design, work experience	High school degree, 2 years studies in civil engineering (drop out)	High school degree, BA/MA degree in modern languages	High school degree, BA/MA degree in modern languages and sport
Employment	Visual merchandiser and sales assistant, tutoring	Temporary assignments for security company, tutoring	Teacher in two different secondary 1 schools (8 lessons per week)	Teacher in a secondary school 1 (4 lessons per week)
Employment during the lock down period	Suspended, partly compensated	Suspended, no compensation (parental support)	Remote teaching	Remote teaching

Student engagement and research questions

Pickford 2016



Student participation in university governance: the role conceptions and sense of efficacy of student representatives on departmental committees

Alf Lizzio* and Keithia Wilson

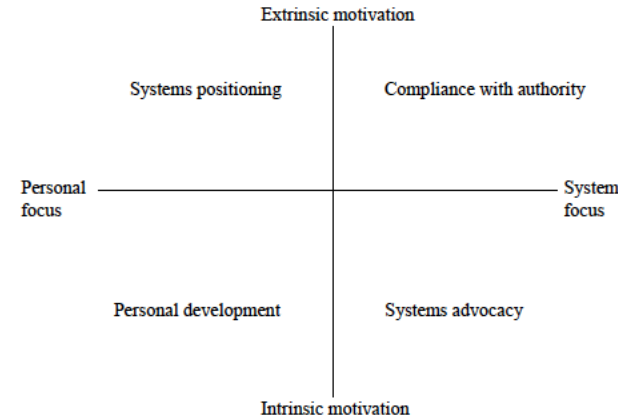


Figure 1. A typology of reasons or motivations for undertaking the student representative role.

Lizzio & Wilson 2009

- How do students address student engagement?
- Which dimensions of student engagement occur?
- Engagement from which perspective / motivation?
- Alignment of student engagement dimensions and conditions resp. roles?

Table 1: Examples of positive and negative engagement

	Positive engagement	Non-engagement	Negative engagement
Behavioural	Attends lectures, participates with enthusiasm	Skips lectures without excuse	Boycotts, pickets or disrupts lectures
Emotional	Interest	Boredom	Rejection
Cognitive	Meets or exceeds assignment requirements	Assignments late, rushed or absent	Redefines parameters for assignments

Trowler 2010