

ERES 2021 Education Seminar, Delft

Blending a bachelor real estate campus course by integrating online MOOC-based learning activities

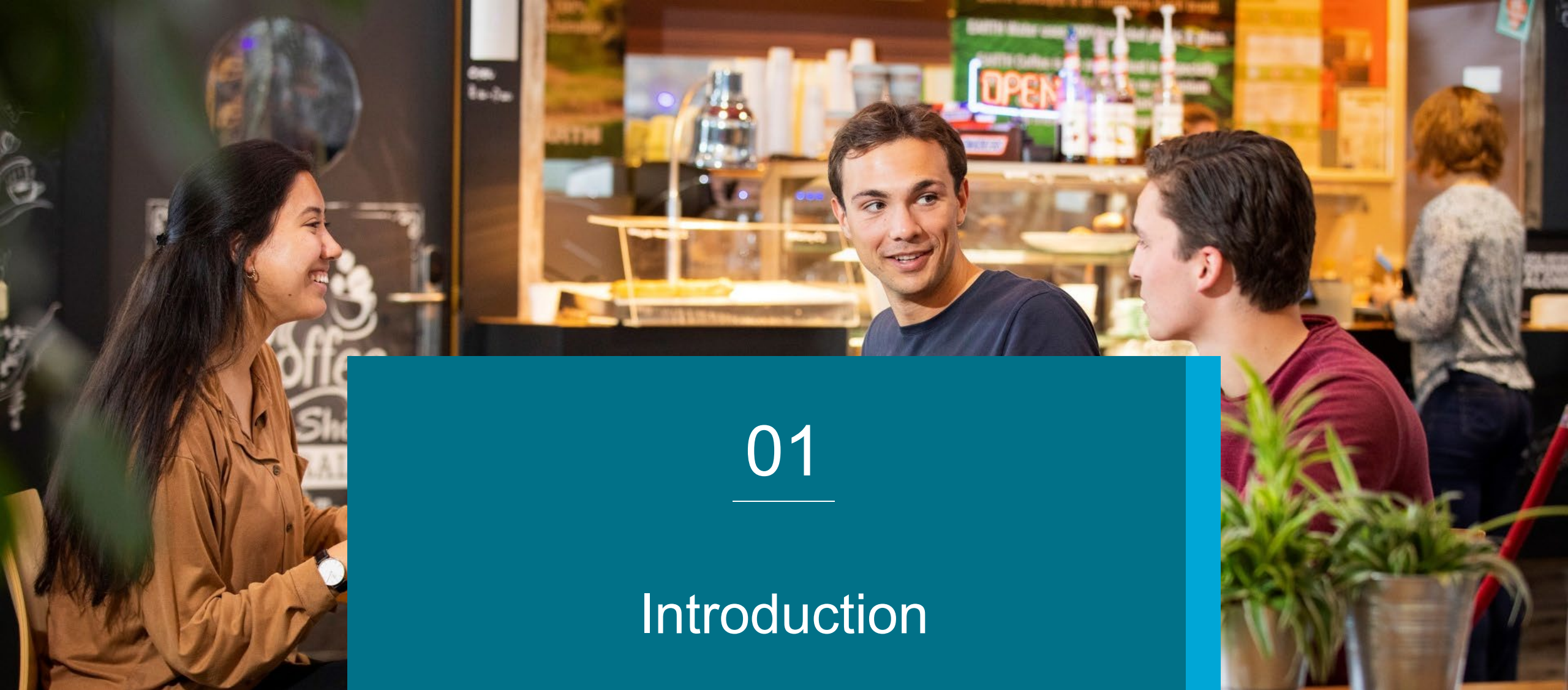
Dr Erwin Heurkens MSc | 4 Dec 2021





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01

Introduction

Introduction to blended learning

- Deliberate **‘blending’ of face-to-face (F2F) and online instructional activities**, with the goal of stimulating and supporting learning (Boelens et al., 2017).
- Blended learning environments offer several **new opportunities for optimizing learning** (Spanjers et al., 2015).
- In the last decade, the concept of blended learning has been **widely adopted across especially higher education**.
- Some scholars referring to it as the **‘new traditional model’** (Ross & Gage, 2006, p. 167) or the **‘new normal’** in course delivery (Norberg et al., 2011; Dziuban et al., 2018).
- In a broader sense, blended and other forms of online learning, by many academic institutions are integrated within **university and faculty’s education policies** aimed at **establishing education innovation**.
- Associated **benefits of blended learning** (cf. Bonk et al., 2006; Graham, 2006; Graham et al., 2005; Joosten et al., 2014), such as:
 - more **effective pedagogy**,
 - **enhanced cost-effectiveness**, and
 - **increased flexibility** for learners



02

Challenges in blended learning: a literature review

Challenges in blended learning

1. Incorporating flexibility

- **Learners having control** over the content, learning sequence, pace, time, place, and path (Bonk et al., 2006; Ruiz et al., 2006).
- In blended learning environments it is often impossible to let students randomly choose and study a topic and follow their own '**learning path**'. Especially true for structured blended campus courses offered with a **limited time period**.
- A way to deal with this inflexibility is to enable students themselves to choose between **weekly or topical participation online and F2F modes** (Beatty, 2014).
- Flexibility can best be implemented and achieved (Kineo & The Oxford Group, 2013; Ma'Arop & Embi, 2016) by **giving students the flexibility to choose learning activities in a more random order**.

Challenges in blended learning

2. Stimulating interaction

- Both **student-student and student-teacher interactions** in blended courses are somewhat difficult to organize in the online component of blended learning environments (Owston et al., 2013; Okzan & Koseler, 2009).
- Online learning environments can lead to enlarged psychological and communication space, called the '**transactional distance**' (Moore, 1993; Chen et al., 2014).
- Social interaction is therefore generally stimulated through **introducing face-to-face meetings** (Boelens et al., 2017), and to a lesser degree in the online learning environment.
- Nortvig et al.(2018) indicate that **educator presence in all online learning activities is paramount**, and particularly useful in videos for cultivating students' interest in the topic under study (Southard et al. (2015).
- Also **peer-to-peer online activities and individual instructor feedback** increases the satisfaction and **sense of community**, potentially decreasing transactional distance, and improving **learner engagement** (Halverson & Graham, 2019).

Challenges in blended learning

3. Facilitating students' learning processes

- Due to the increased flexibility and autonomy of learners in blended learning environments **self-regulation becomes a critical factor for study success** (Barnard et al., 2009).
- Participation in blended learning courses require **organization, discipline, time management, skills in using technology and self-efficacy** to control their own learning process (McDonald, 2014).
- This is naturally more found in '**high achievers**' than low achieving students that have difficulties with independent learning (Owston et al., 2013; Tsai & Shen, 2009).
- Vermunt and Verloop (1999) argue that this challenge can be dealt with by instructional activities that follow **four regulative strategies: orienting and planning, monitoring, adjusting and evaluating** (see Boelens et al., 2017).
- This for example involves instructors introducing the course, and **conducting regular tests** to assess students' competencies.
- **Student self-monitoring** their study progress can also **increase the ability and motivation for independent learning** amongst both high and low achievers.

Challenges in blended learning

4. Fostering an (inter)active learning climate

- Due to the increased transactional distance in the online part of blended courses characterized by **less spontaneous encounters** when compared to face-to-face communication (Osguthorpe & Graham, 2003) the learning climate gets negatively affected.
- It might cause **feelings of learner isolation** (McDonald, 2014), and **reduced motivation to learn** (Osguthorpe & Graham, 2003), and even **higher drop-out rates** (Angelino et al., 2007).
- **‘Flipped classroom’ forms**, where students engage with online lecture and textbook material at home, before participating in physical class interaction activities are particularly successful (Stockwell et al., 2015), when **compulsory online activities are further applied and assessed within F2F settings**.
- Bralić and Divjak (2018) argue that also **MOOCs can enrich traditionally taught courses** and act as a complementary resource in achieving learning goals.



03

Blending a real estate campus course

Introduction to the 'blend'

- Blended course **BK6MA3 Management and Redevelopment**:
 - **3rd year Bachelor** course Faculty of Architecture and the Built Environment (TU Delft).
 - **Traditional course** with lectures, readings, final exam.
 - **5 themes**: real estate management, urban development, spatial planning, building economics, building law.
- **Managing Building Adaptation**: A Sustainable Approach (edX TU Delft MOOC):
 - Deliberate idea from courses' coordinator (Erwin Heurkens) to **re-use MOOC material** for the BK6MA3 campus course.
- University-supported Blended Education Programme (**BLEAP**).
- **Goal presentation**: provide insight into didactical choices, and critically evaluate the choices, draw some key lessons.



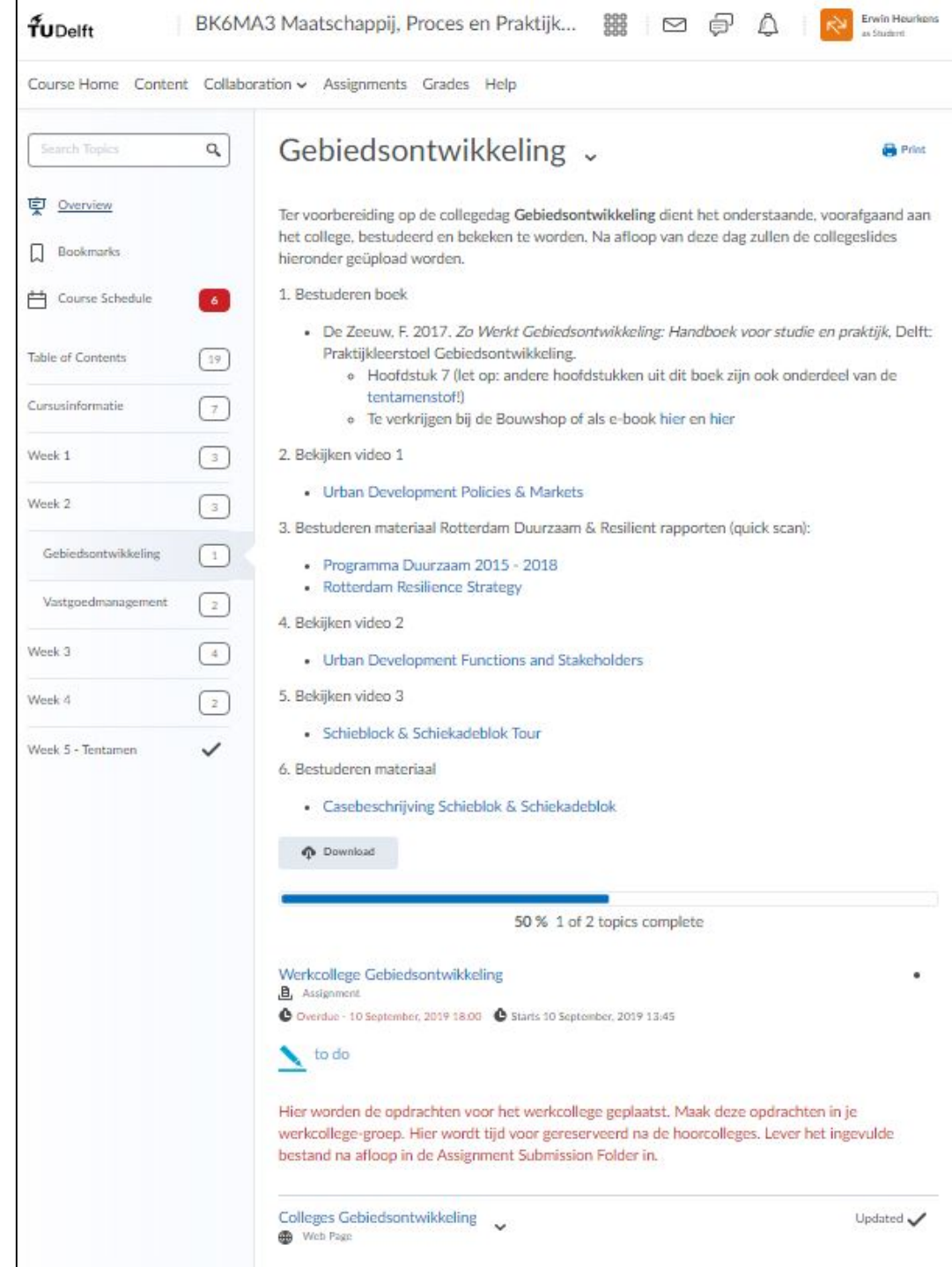
Blending the course: the story board

- Aim to provide **more (inter)active F2F learning activities for students** and to deliberately connect blended and F2F activities into assignments.
- **Various workshops** with course coordinator, university e-learning developer, faculty education quality coordinator, involved instructors, and student-assistant, to **design a story board**.
- Decision to design a **logical recognisable story board** for initially 3 themes.
- **Link between online and F2F activities**: knowledge gained during online activities provided a base for making F2F assignments.



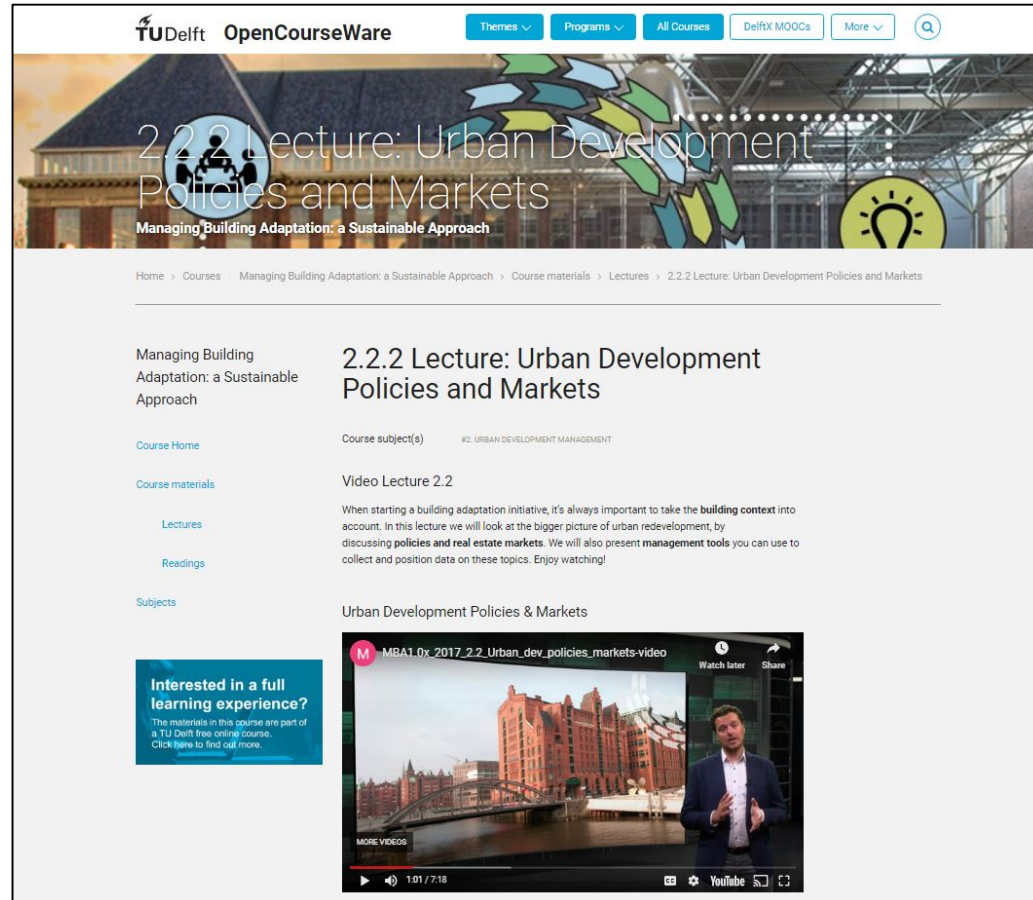
Online & F2F day structure/activities

- Online part (Brightspace) with specific reoccurring learning activities:
 - **reading part** of (mandatory) learning material;
 - **watching short videos** (taken from MOOCs);
 - **making short quizzes** (taken from MOOCs), and;
 - reading some **practice case stories** or articles.
- F2F part of the day included four interactive learning activities:
 - **short recap** of blended learning activities & introduction to the assignment by the teacher;
 - **assignment by groups** of 2 to 3 students (applied learning);
 - **practitioner lecture** (illustrative learning);
 - **professor lecture** (inspirational and reflective learning).



The screenshot shows the Brightspace interface for the course 'Gebiedsontwikkeling'. The top navigation bar includes 'TU Delft', 'BK6MA3 Maatschappij, Proces en Praktijk...', and user information 'Erwin Hoorikens as Student'. The course navigation menu on the left lists 'Overview', 'Bookmarks', 'Course Schedule', 'Table of Contents', 'Cursusinformatie', and a weekly breakdown from Week 1 to Week 5 - Tentamen. The main content area is titled 'Gebiedsontwikkeling' and contains a description of the course preparation, followed by a list of activities: 1. Bestuderen boek (with a reference to 'De Zeeuw, F. 2017. Zo Werkt Gebiedsontwikkeling'), 2. Bekijken video 1 (Urban Development Policies & Markets), 3. Bestuderen materiaal Rotterdam Duurzaam & Resilient rapporten, 4. Bekijken video 2 (Urban Development Functions and Stakeholders), 5. Bekijken video 3 (Schieblock & Schiekadeblok Tour), and 6. Bestuderen materiaal (Casebeschrijving Schieblock & Schiekadeblok). A progress bar indicates '50 % 1 of 2 topics complete'. Below this, an assignment section titled 'Werkcollege Gebiedsontwikkeling' shows an assignment due on 10 September 2019. The bottom of the page shows 'Colleges Gebiedsontwikkeling' and a 'Web Page' link.

Online material & F2F assignment



Werkcollege: Gebiedsontwikkeling

BK6MA3 Beheer en Herontwikkeling (2019/2020), Bachelor Bouwkunde

Datum: Dinsdag 9 september 2019

Inleverdeadline: 9 september 2019 18:00

Maak de werkcollege-opdracht in je werkcollege-groep waarin je bent ingeschreven bij Brightspace.

Vul de antwoorden in op de aangegeven plaatsen (**antwoord**).

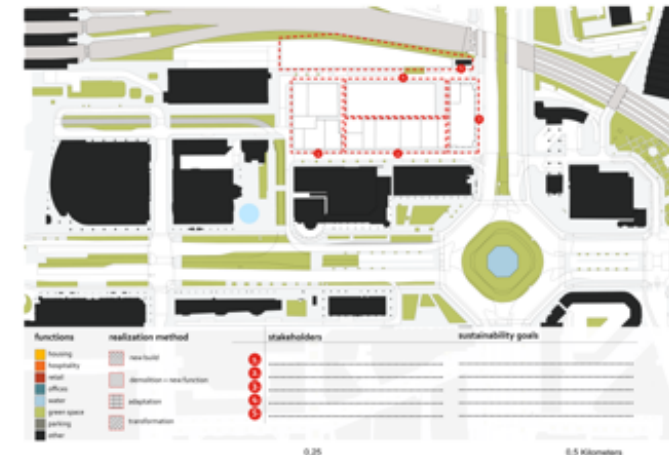
Upload per groep één ingevuld bestand in de *assignment submission folder* van "Werkcollege: Gebiedsontwikkeling" op Brightspace. Eén persoon uploadt het ingevulde bestand voor de rest van de groep op Brightspace.

Ontwikkeld door: Erwin Heurkens

Groepsnummer	antwoord	Studentnr. ↓
	Naam ↓	
1	antwoord	antwoord
2	antwoord	antwoord
3	antwoord	antwoord

Opdrachten

De werkcollege opdracht bestaat uit het definiëren en motiveren van een herontwikkelingsstrategie voor gebiedsontwikkeling Schiekadeblok in Rotterdam. Deel 1 bestaat uit het downloaden, tekenen en invullen van de herontwikkeling naar eigen inzicht, deel 2 bestaat uit een geschreven motivatie voor deze herontwikkelingsstrategie van maximaal 300 woorden.





04

Evaluation of the blended course

Learner perspective

- Quantitative results based on evaluation survey (n=32 15% response):
 - **Overall 6,39 grade** (out of 10 max), **0,5 points lower than average campus course grade** in previous years.
 - **Grade of 3,77** (out of 5 max) for **learning a lot** in this module.
 - **51,5% spend more or less the same amount of time** that is scheduled for the course (140h, 5 ECTS).
- Qualitative results based on evaluation survey (n=32 15% response):
 - **Positive** about the organisation, teachers, and combination of lectures and group assignments.
 - **Able to self-study** online learning activities in the Brightspace.
 - Recommend the coordinator to **indicate the expected time** students should spend on each activity.
 - **Schedule 'self-study mornings'** within student's official study timetable to ensure preparations.

Coordinator/teacher perspective

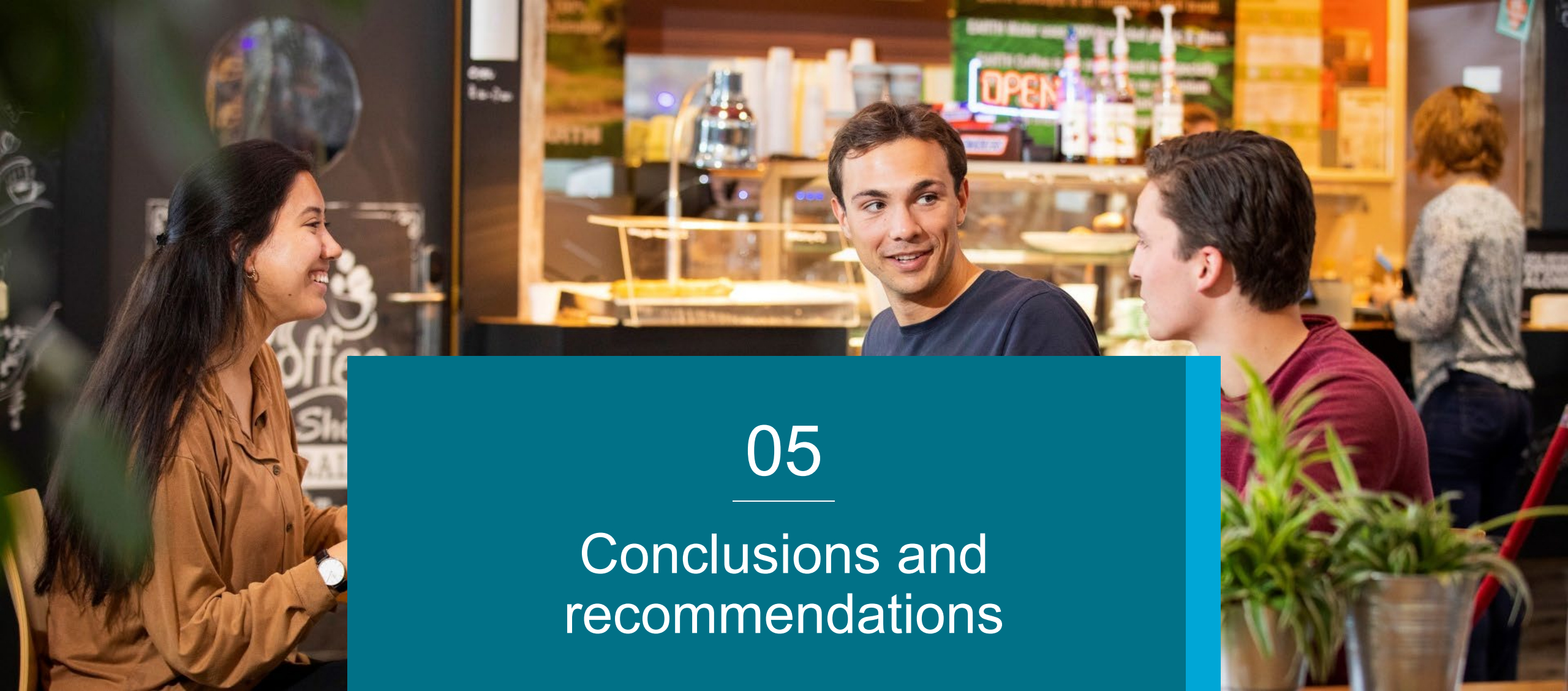
Interviewed both in the context of the BLEAP project, and separately, by the Faculty's education quality assurance staff.

My main evaluation points:

- Students in general proved to be able to perform the online self-study activities independently, **obtaining comparable grades** to previous years (passing rate 75%).
- The online self-study time **reduced the number of F2F learning activities** (amount of traditional lectures basically) slightly, and did contribute to **more effective learning** (not the tiresome lecture afternoons).
- The **F2F active learning** activities were very much valued and attended by students, which in general shows **quite some student motivation**.
- Teaching load: **significant additional preparation time** (about 60 hours) for the blended learning version, but it does not lead to higher overall student satisfaction (yet).
- Overall, I remain convinced of the **added value** of blended learning for students and staff, as the **course has become more dynamic** and interesting with various learning activities tailored at specific themes.

Literature-practice comparison

- Incorporating flexibility:
 - Students indicate that **flexibility was not so much of an issue**, despite the online learning activities being 'conditional' for the F2F assignments, the link between the two (less flexible) was appreciated.
- Stimulating interaction:
 - Social interaction was generally stimulated in F2F meetings, in both student-student discussions during group assignments, and tutor-student discussions in practice and professor lectures and debate, and basically **not at all in the online learning environment**, which corresponds to Boelens et al. (2017).
- Facilitating students' learning processes:
 - Students indicate that their **learning process was well enough facilitated**, the relatively **easy-to-use known Brightspace learning environment** has contributed to that, **both high and low achievers** were able to self-control their learning process.
- Fostering an affective learning climate:
 - Issues of potential **transactional distance**, **learner isolation**, and **reduced motivation** due to the online parts of the courses in my view have been largely **compensated by the biweekly F2F encounters between students and tutors**, in which social communication and interaction was paramount.



05

Conclusions and recommendations

Conclusions

- Pivotal to explain to students that **blended learning** is introduced **to stimulate active learning and what is expected** from them.
- Failing to do so, might create a **sense of demotivation**, as in general face-to-face contact between students and teachers is preferred over online activities.
- Good quality online learning activities **can enrich the learning experience and improve learner control**.
- A healthy mix and balance between online and face-to-face learning activities **for a theoretical course is achievable**
- **Integrating MOOC-based learning material** and activities in a traditional campus course can be an effective way to improve the quality and focus of the online learning activities.
- In comparison to for instance re-watching previously recorded campus lectures, **watching short theme-focused MOOC videos** is more appreciated, once purposefully integrated in the learning activities.

Recommendations

- For scholars, teachers and coordinators:
 - Do not underestimate the **amount and nature of the educational tasks** involved in blended learning courses.
 - **Follow educational courses** that provide the background for the do's and don'ts of blended education.
 - Read the (vast amount of) **literature on blended/online/hybrid learning and teaching** to recognize and change the way we design and teach courses, in addition to relying on your own experiences and observations.
- For faculty and university policy makers:
 - Carefully assess and choose '**receptive**' **campus courses** to be blended, as the **F2F social interaction** component in most courses, by students and teachers, are seen as very beneficial for the **quality level of education, higher-order academic learning**, and can't be **fully replicated in online learning environments**.
 - Reaping the success of online (MOOC) education efforts can best be achieved by a **predefined plan and strategy** of how such material could be used in campus education course.

Thank you for your attention!

Dr Erwin Heurkens MSc

Literature

- For the course: