

# UNITE & TRANSFORM

## Enriching the educational landscape with CBL

Teaching & Learning Fellows  
University of Twente

**Strategic plan**  
2021-2023

Cohort 2021

November 2021



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# COLOPHON

DATE

November, 2021

SUBJECT

Strategic Plan Teaching & Learning Fellows, Cohort 2021

VERSION

5.1

STATUS

Final

PROJECT

Teaching & Learning Fellows, Cohort 2021

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DOCUMENT NAME

Strategic Plan T&L Fellows Cohort 2021

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# PREFACE

This document presents the strategic plan that we –the team of Teaching & Learning Fellows—have developed for the next two years, including our mission, goals and intended outcomes. The strategic plan provides the overall direction for the team and aligns the plans and actions of the individual Fellows.

The Teaching & Learning Fellows (T&L Fellows) are:

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The Fellows are supported by:

- Cornelise Vreman-de Olde (coach), CES
- Eduardo Hermsen (CBL expert), CELT

# INTRODUCTION

Society, markets and businesses are changing rapidly and become increasingly complex. Consider for example the digital revolution, climate change, energy transition, and circular economy ambitions. These developments require students capable of handling complex problems and making a difference in transforming businesses, industries, and public domains. Challenge Based Learning (CBL) is a promising educational framework that offers an authentic learning environment. It allows students to develop knowledge, practical skills and social competences to work in complex and turbulent environments and deal with so-called wicked challenges.

The University of Twente already anticipates future changes in their vision document 'Shaping 2030' and in the new 'Master Vision'. In these documents, CBL is considered an important and promising educational framework. Currently, there are many CBL related initiatives at the UT already. Some address the re-design of existing courses and modules, whereas others apply CBL from scratch. In addition, CBL initiatives address different levels, varying from course level, to program level, and even up to Faculty and University level. For example, the ECIU-U, CELT, SEG (Shaping Expert Group) and the UT's educational policy are all supporting and facilitating CBL.

To complement the educational landscape with CBL at the UT, it is crucial that strategic ideas and policies on CBL are embedded more firmly in the daily practice of teaching and learning. This explorative and creative process is considered the key task for the newly appointed T&L Fellows. In other words, the Fellows aim to bridge the gap between the UT's strategic vision on CBL and the operational level.

The *senior* Fellows particularly focus on the goals beyond their own courses, that is at the level of programs and Faculties, or even UT level. They will also communicate to a broader set of stakeholders. Furthermore, the senior Fellows take the lead in coordinating and managing the entire Fellow project based on this strategic plan. They will support Fellows in their endeavour, and will synthesize the individual projects of the Fellows into a coherent whole.

# MISSION, GOALS AND OUTCOMES

## **The Big Idea - team mission**

The T&L Fellows have formulated their long-term mission as follows:

*To enrich the current educational landscape at the UT with CBL to help students develop critical, social and practical knowledge and competences necessary for their future careers in society.*

## **Essential questions**

The T&L Fellows have formulated three essential questions that need to be answered to contribute to the mission:

1. *What is known in-depth about the key features and design of CBL?* This question is about accumulating and sharing knowledge on key features of CBL and best practices that are used to support its design and implementation in education.
2. *Which conditions influence the effectiveness of CBL?* This question assesses the effectiveness of CBL and evaluates the implications for adding and embedding CBL in the educational landscape at the UT. This includes, for example, re-thinking and expanding skills and relating these to course and program intended learning outcomes.
3. *How to make the transition towards a CBL enriched educational landscape?* The answer to this question provides systemic guidance towards transitioning to CBL at four levels: course level, program level, faculty level, and institutional level.

## **Team goals**

The following goals are derived from the mission and the essential questions:

1. *In courses:* develop experience and collect evidence about CBL design and CBL implementation.
2. *In programs:* expand CBL from course level to program level. This means developing strategies to embed CBL at program level through sharing lessons learned and best practices with colleagues and by collaborating with Education Committees (ECs), and Examination Boards (EBs), Program Directors (PDs) and students.
3. *In Faculties:* help develop Faculty policies with regard to embedding CBL across educational programs. This includes collaboration with program specific stakeholders as listed above, as well as vice deans.
4. *Cross Faculty/UT-level:* communicate and share experiences with a broad range of stakeholders, for example with S&P, UCow, CvB, ECIU, SEG, 4TU, UTQ/SUTQ platforms, Teaching Community, etc.

## **Intended Outcomes**

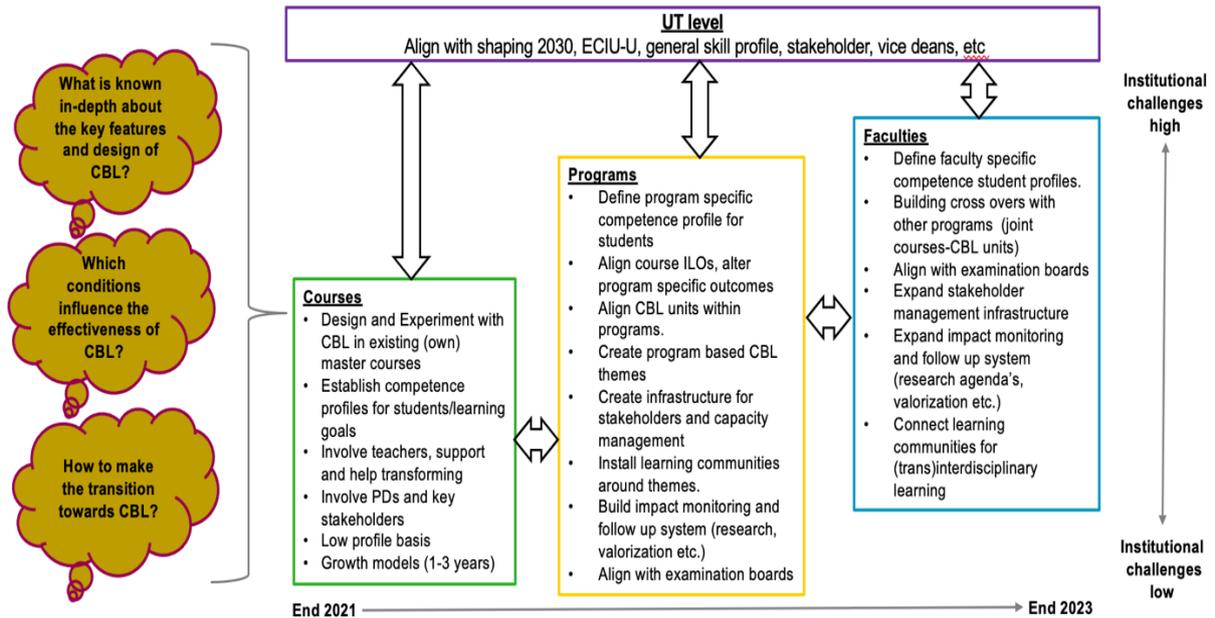
The T&L Fellows primarily focus on Master courses/programs, as well as on third-year minors (because of their interdisciplinary approach). This excludes Bachelor modules that are based on the TOM model.

When pursuing their individual plans, the Fellows strive to achieve the following outcomes:

1. Individual tools for evidence-based and responsible redesign of courses and curricula towards CBL (Van der Akker, 2003). This includes, for example, rubrics, coaching schemes, teacher guidelines, stakeholder management, and teaching infrastructure.
2. An overview of competence profiles for students, particularly related to the UT's perspective on the 21<sup>st</sup> century skills that UT students should possess.
3. An UT-wide overview of the CBL readiness and potential in courses and modules.
4. Sharing best practices on transitional strategies from current teaching practices to CBL practices in courses and modules.
5. Best practices on transition from course to program, from program to Faculty, and from Faculty to cross Faculty/UT-level. This concerns the dynamics of systemic and responsible change.
6. Increased awareness of CBL, including its meaning, design principles, effective transition at the UT for a variety of stakeholders, as well as linkages to teaching academies and teaching communities (i.e. SUTQ).
7. Sharing expertise and tools on a digital platform for educators. This platform is part of the centrally positioned CELT site.

# PATH TO ENRICHING THE EDUCATIONAL LANDSCAPE

The mission, essential questions, goals and expected outcomes are tied together into one conceptual framework.



## Philosophy

The T&L Fellows base their way of working on the following principles:

- **Position:** Fellows are considered a team of thought leaders in CBL (re)-design, effects and educational transition at the course, program, faculty and university level.
- **Bottom-up:** our transitional efforts are bottom-up oriented and in line with the educational vision of the University.
- **Context specific:** given the specific context of Faculties, Fellows pursue their own CBL agenda, taking into account the structure and culture of their faculty.
- **Community-based:** Fellows work stakeholder-oriented. This means that they involve stakeholders directly involved in education, such a teachers and students, as well as educational management at program, Faculty and UT level (policy), including educational experts and policy makers.
- **Evidence-informed:** responsible design and transition implies an evidence-informed way of working, because innovations that are not supported by research most likely fade away. This means taking into account literature on CBL, proven methods and tools, as well as data and experience for re-design and transition.

# ROLES AND RESPONSIBILITIES OF THE FELLOWS

The individual Fellows address different goals and outcomes. Some Fellows concentrate on developing and sharing knowledge on CBL from their own courses, whereas others concentrate on the dissemination of CBL at the program and/or Faculty level. Altogether, as a team we contribute to the goals and outcomes in this strategic plan. Below we indicate how individual goals relate to team goals and outcomes outlined earlier.

Fellow	Individual goal	Outcome	Team goal
Robin de Graaf	Study effectiveness of CBL at course level; develop an implementation guideline for CBL; implement CBL at program level; help develop CBL policy at Faculty level; Fellows team project management.	1, 4, 6, 7	1, 2, 3, 4
Raymond Loohuis	Support the transition process from course to UT level; communicate, align with stakeholders in UT context.	2, 3, 4, 5, 7	3, 4
Anna Bos-Nehles	Design of self-regulated peer-feedback mechanisms for CBL projects. In what way can we implement peer-feedback approaches in CBL projects to gain self-regulated learning behaviours?	2, 4, 6, 7	1, 2, 3, 4
Tracy Craig	Pivot an existing course to CBL framework; communicate within faculty on CBL; identify existing CBL within faculty, possibly not explicitly called CBL at the moment.	1, 3, 4, 6, 7	1, 3
Janneke Ettema	To enhance students' learning process, by providing tools for (self-)assessment in line with the course learning outcomes and CBL skills; to help students establish a shared interdisciplinary and intercultural language, building self-awareness and learning to have productive conversations with other experts (alumni network).	1, 4, 7	1, 4
Anne Leferink	Investigate the role of the teacher in CBL; guiding tools on expectation management in the learning community; methods to realize pre-defined content-based (hard skills) learning objectives in a CBL context.	1, 4, 7	1, 4
Léon olde Scholtenhuis	Develop principles for operating a transdisciplinary Living Lab space that enables sustainable and authentic learning experiences for students and stakeholders.	1, 5, 7	1, 4

# ORGANIZATION AND WORK ROUTINES

The T&L Fellows established the following work routines to achieve the goals and outcomes:

- There will be a Fellow team meeting every two months in which issues and progress are discussed and further actions in terms of resources and support defined;
- Sub-team meetings to address specific tasks. Together with coach and expert, the Fellows decided to establish sub-teams to focus on the following areas in support of their aims and outcomes:
  1. *Literature sub-group*: focuses on background literature on CBL to build a solid foundation for CBL design and effect (Léon, Tracy, Janneke)
  2. *UT policy sub-group*: focuses on alignment with other UT CBL initiatives and documents (Cornelise, Raymond)
  3. *Dissemination sub-group*: addresses communicating progress and results (Tracy, Eduardo, Raymond)
  4. *Train the trainer sub-group*: focuses on developing guidelines for coaching, training and CBL course (re)design (Robin, Eduardo)

# FEEDBACK, REFLECTION AND DISSEMINATION

- The Fellows consider the student perspective very important. Therefore, they will organize meetings with an assigned student panel twice a year to receive feedback on progress and usefulness of the deliverables in the making. This is an addition to existing materials that also represent the 'voice' of the students, such as course evaluations, student panels, and informal talks with students.
- Official half yearly progress meeting and presenting to CEE.
- Ongoing workshops, paper presentations, course presentations to stakeholders interested.
- Efficient use of existing channels for gaining and sharing knowledge. For example, SEFI conference, the CEE innovation map, etc.
- Final T&L Fellow symposium for all stakeholders. Most likely linked to the SEFI conference.