Supporting Educational Change Teams through SoTL

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Two Centres for Excellence in Education in Norway, bioCEED and iEarth, designed a cross-institutional, cross-STEM course "Leading Educational Change – through Scholarship of Teaching and Learning (SoTL)", to support faculty and staff developing skills and competences relevant for leading large-scale change in higher education.

Here we present the course and one of the seven projects completed in the course as an example.

The course "Leading Educational Change – through SoTL"

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– Course facts: 5 ECTS over 6 months, literature reading, scholarly group projects, peer feedback. The course introduces current concepts of teaching and learning in higher education and educational leadership in a very broad sense – all in order to develop ability to lead educational change and improve student learning. The focus is on teams leading educational change and development, rather than only those in formal leadership positions. The main course component is a group project addressing a developmental task anchored in the participants' current role in leadership of educational change. Most change initiatives in STEM show no coherent reflection in choice and use of change approaches and use them in an uncritical (unscholarly) way (Reinholz et al. 2021).

Theoretical perspectives and change approaches (Kezar 2018):

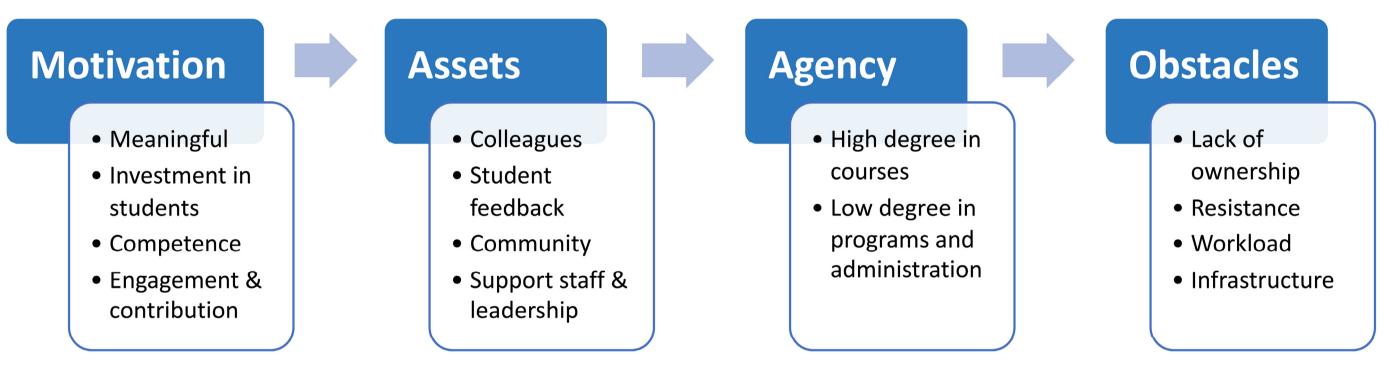
Change approach	Change tactics	Change metaphor
Scientific management	Planned top down Assemble expertise - Decide on way forward - Showcase early successes Plan – Implement - Evaluate	Change master and their organisation
Evolutionary	Processes on the outside leak into the organisation (e.g. employers, government, technical development, future students) Find and utilise external demands	Ecosystem among other ecosystems
Political	Bring likeminded people together, support their connections Ally with grassroot leaders Elevate new champions and groups (e.g. students, excellent teachers)	Social movement Power/status
Cognition	Provide professional development opportunities Make data available and work on increasing the exchange of knowledge Send people to conferences	A self-learning organism
Cultural	Appeal to values and core principles (ethos), Increase discursive pressure Create or reinterpret organisational Saga, bring life to old aspects and myths Put forward relevant heroes	Social movement

The *project* "STEM Teachers and Heads of Education as partners in change"

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This course project explore some critical conditions and strategies (Kezar, 2018) of bottom-up educational leaders (change agents), specifically related to change:

- What motivates change agents? What assets and agency do they have? What obstacles do they face?



How can **Heads of Education** support and work with **change agents** to create a change - which is **meaningful** for the institution as well as the individual agents?

There is clearly a lot to be gained if local change agents share their practice and ideas with more people, although this require that Heads of Education are able to identify change agents within their departments. They must manage the difficult balancing act of acknowledging and harnessing the potential of the change agents, without comprising their motivation, autonomy and time.

We conclude a good place to start is to create and support meeting places for teachers, where engaged individuals can meet and have informed conversations and discussions about teaching and learning.

Key references:

Kezar, A. (2018): *How colleges change. Understanding, leading, and enacting change,* Routledge, 2.ed. Reinholz, D.L., White, I. & Andrews, T. (2021) Change theory in STEM higher education: a systematic review. *IJ STEM Ed* 8, 37.

CONCLUSIONS AND TAKE HOME MESSAGES:

- Support change agents by creating a community and focus on the change teams and not only on the formal leaders
- Use a combination of change approaches depending on the change you wish to accomplish, and sensitive to the context
- A better understanding of change allows for a much needed scholarly approach to leading educational change

