



PBL at Sport Science

PBL Academy 23/8 2019

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Sport Science

First semester

- ◆ **Module: Introduction på Problem-based learning and research methods**

- ◆ 5 ECTS
- ◆ Course: 16 lectures of 2x45 minutes
- ◆ 3 full dag (8 hours) workshops
- ◆ Written exam. 3 hours

- ◆ **Module: The many faces of sport science**

- ◆ 10 ECTS
- ◆ Project catalogue
- ◆ Project supervisors
- ◆ PBL consultants, with focus on problemanalysis and procesanalysis
- ◆ Project and procesanalysis is handed in and examed during the oral eksamen
- ◆ Supervisor and consultant conducts the oral group exam (3-4 hours)





The lectures

- ▶ 1 Introduction to PBL
- ▶ 5 'PBL lectures'
 - ▶ Problem analysis
 - ▶ Project management
 - ▶ Co-operation
 - ▶ Evaluation
 - ▶ Summary + exam preparation
- ▶ 2 Theory of science
- ▶ 4 Quantitative methods
- ▶ 4 Qualitative methods





Workshops

- ▶ Workshop 1: To learn, how to learn (September)
- ▶ Workshop 2: Problem analysis (October)
- ▶ Workshop 3: Arguments, IMRAD and scientific paradigms (November)





Literature

- ▶ Holgaard et. al. *Problembaseret læring og projektarbejde ved de videregående uddannelser*
- ▶ Thing & Ottesen (red.) *Metoder i idræts- og fysioterapiforskning*
- ▶ Krogh & Jensen *Visions, challenges and strategies - PBL principles and methodologies in a danish and global perspective*
- ▶ + articles and book chapters/sections





Consultants

- ▶ 4-6 meetings with the group
- ▶ Primarily focus is on the PBL process, and the 'production' of the problem analysis
- ▶ Highly integrated with the PBL course (crossover with VIP personal and literature)
- ▶ Co-examiner and an equal voice in the assessment



WHY HOLD ON TO PBL?

- ▶ Students learn best when they are actively participating and apply theory and research-based knowledge to problem solving
- ▶ This learning model supports the development of students' communication and collaboration skills
- ▶ Students learn to take an analytical and result-oriented approach to their work
- ▶ PBL provides students with tools for independent acquisition of knowledge at an advanced academic level
- ▶ PBL provides students with the opportunity to cooperate with external partners on solving specific problems





Aims

- ▶ Research-based, not just experience based!
- ▶ Replace the ‘tool-representation’, with conceptual comprehension
- ▶ Replace the ‘diary-representation’, with theoretical illumination
- ▶ Emerge theory of science with PBL, by being a PBL-student at university
- ▶ Focus on analysis, not slogans
- ▶ Focus on mindset, not data
- ▶ Focus on validation and justification, not on repetition and ‘what ever works’





Exemple

- ▶ What differences appear if we view our projectgroup through the lens of Belbins team-theory or through Wengers theory of 'community of practice'
- ▶ What appear if we view PBL principles through the lens of chapter 10 in Deweys 'How we think'
- ▶ What happens if we structure our reading of the literature based on the SOLO taksonomi
- ▶ In what way changes the belief (the trust and acknowledgement) in our studiedesign if my scientific paradigm is comprehended through the lens of 'the history of ideas', or 'socology', or 'theory of science'.



Thank you for your attention!

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