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DEVELOPING COLLABORATIVE SKILLS IN TEACHER EDUCATION THROUGH CHALLENGE BASED LEARNING

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Abstract

The ability to collaborate is a crucial prerequisite for successful, sustainable, and meaningful work. Collaborative skills embrace much more than simply working together to achieve a common goal. They involve a person's ability to build relationships, listen to others, learn from them, and to be inclusive and respectful. Collaborative skills in education are also identified as one of eight key competencies in UNESCO's definition of education for sustainable development (UNESCO, 2017). To facilitate students' socialization into the professional expectations, namely, the need to collaborate with peers and with other professional groups, it is important to provide the conditions necessary for developing this critical competency early in education. Challenge based learning (CBL) can be seen both as an approach and method for inclusive students active and sustainable lifelong learning. CBL embraces diversity and inclusion; emphasizes co-creation and collaboration and engages students as change agents in contextual challenges (Christersson et al., 2022). CBL presented here, has been developed as a project idea within the framework of the higher education teaching of the same name at Malmö University in 2023. The idea is to use CBL as a method, bridging higher education-based courses and practice-based courses, to promote learning and early development of professional collaboration in teacher education at Malmö University. The aim is to give students the opportunity to start developing collaborative professional skills during the first year of their teacher education, addressing one important aspect of sustainable education in a rapidly changing society.

Keywords: Challenge Based Learning, collaborative skills, diversity, inclusion, sustainable education

Sammanfattning

Förmågan att samarbeta är en avgörande förutsättning för framgångsrikt, hållbart och meningsfullt arbete. Samarbetsförmåga omfattar mycket mer än att bara arbeta tillsammans för att uppnå ett gemensamt mål. Den involverar en persons förmåga att bygga relationer, lyssna på andra, lära av dem samt vara inkluderande och respektfull. Samarbetsförmåga inom utbildning identifieras också som en av åtta nyckelkompetenser i UNESCO:s definition av utbildning för hållbar utveckling (UNESCO, 2017). För att underlätta studenternas socialisering in i den förväntade professionen, avseende behovet av att samarbeta med både kollegor och andra yrkesgrupper, är det viktigt att skapa förutsättningar för att utveckla denna avgörande förmåga tidigt under utbildningen. Utmaningsbaserat lärande (UBL) kan både ses som ett förhållningssätt och en metod att använda för studenters aktiva och livslånga lärande. UBL omfattar mångfald och inkludering, betonar skapande och samarbete med andra och engagerar studenter som förändringsagenter i kontextuella utmaningar (Christersson et al., 2022). UBL som presenteras här har utvecklats inom ramen för den högskolepedagogiska kursen med samma namn på Malmö universitet 2023. Tanken är att använda UBL som metod, som överbryggar högskolebaserade kurser och praktikbaserade kurser, för att främja lärande och tidig utveckling av professionellt samarbete inom lärarutbildningen vid Malmö universitet. Syftet är att ge studenterna möjlighet att utveckla professionell samarbetsförmåga redan under det första året av sin lärarutbildning, då detta är en viktig aspekt av hållbar utbildning i ett snabbt föränderligt samhälle.

Nyckelord: utmaningsbaserat lärande, samarbetsförmåga, mångfald, inkludering, hållbar utbildning

Introduction

The ability to collaborate requires recognition of differences between individuals, including differences between their knowledge, experiences, and areas of expertise, as well as viewing these differences as assets for both personal and collective development. Furthermore, this ability implies that one is attuned to the needs of others and accepts that people due to a plethora of unknown circumstances can contribute in various ways and to varying degrees. Hence, working in teams requires social competence from the participants and one component of social competence is the ability to build relationships (Sewerin, 2012). Collegial relationships and a working environment characterized by respect and collaboration are essential conditions for progress in most workplaces. In the realm of education, where peer learning is a vital prerequisite for successful work, these factors can be crucial. Peer learning, or learning from one another, refers to the exchange between colleagues and is an important part of teachers' professional development. The experience of receiving support from one another in team work as well as learning from and complementing each other, is important to address in all educational environments. The ability to collaborate is also one of eight key competencies that together define what is meant by sustainability in education (UNESCO, 2017).

As the new generation increasingly interacts via social media and has significantly less physical contact compared to their parents' generation, it is crucial to provide prospective teacher students with the opportunity to develop collaborations skills during their education (Udovic, 2017). Additionally, the

broadened recruitment of students at Malmö university places new challenges on education, on how to be inclusive and how to benefit from the fact that our students come from diverse cultural and socio-economic backgrounds. University teachers need to acknowledge each student's previous experiences and knowledge as valuable learning resources (Christersson et al., 2022). With students' varying backgrounds in mind, university teachers need to consider how they organize activities that enable students to develop an appreciation of different ways of thinking and learning, rather than seeing one person, the teacher, as the "knower", which characterizes some other cultures (Tezci et al., 2016).

As teacher educators, we have a responsibility to ensure that our students are socialized into the norms and values that they, as future teachers and citizens, need to relate to, in order to meet the current and future demands of society. This responsibility includes helping students recognize their own and each other's competencies, something rooted in our democratic values. Handal and Lauvås (2015) have studied group processes and various guidance strategies. They refer to socialization as the process in which "people, during their development, acquire knowledge, rules, values and ideas that are valid in the society to which the individual belongs" (p. 100).

Already in the 1970s, Schön highlighted the need of providing a learning society where different social actors work together to adapt to needs of the changing society (Schön, 1973). CBL as an approach that Malmö University encourages, is an example of how education, research, and social innovation can be linked together, and through collaboration with societal partners provide meaningful learning for sustainability in society (Christersson et al., 2022). With student learning at the centre and the challenges of the school education context in focus, the CBL method, implemented during the first year of prospective teacher education, could help students develop professional collaborative skills and reach sustainable goals both in education and in a society at transformation (Inner Development Goals, 2021).

Development of Collaborative Skills by Using CBL in Prospective Teacher Education

CBL could be successfully implemented in the introductory course Swedish and Learning: Language, Development and Learning (SL207C) at Malmö University. This is the first course that prospective teachers of Swedish Language and Education take in the teacher program. The course aims to help students develop fundamental knowledge about language development and learning, as well as an understanding of how the interaction between linguistic and social variation can impact teaching (Educational Information, Malmö University, 2024). In this course, students are introduced to theories of learning and language development, as well as basic concepts and models in general didactics. They also reflect on how the conditions of young people and adults regarding gender and social, cultural, and ethnic backgrounds, can influence their development and learning.

The structure of the course is today based on students participating in joint co-creation with their team members and university teachers. Students are expected to work together on various tasks, both during scheduled class time and at times agreed upon by the team itself. Additionally, students are expected to reflect in the written part of the examination on how working in the team has contributed to their development in writing and speaking. These critical reflections should be connected to one or more of the learning theories addressed during the course. As noted above, effective collaboration within the team is a key prerequisite for learning, development and achieving the course's learning objectives.

For collaboration within the teams to be successful, a team contract is established at the beginning of the course. The purpose of the contract is to draw students' attention to factors that are important for effective team collaboration. This document, which is created by course teachers, defines several agreements that are crucial for maintaining team cohesion. These include setting goals for the team's work, reflecting on previous experiences of teamwork that may benefit the team's development and establishing the foundation for a functioning work environment. Additionally, the contract clarifies how meetings should be conducted, including content, organization, roles and the importance of respecting time and work ethic, as well as clarifying how responsibilities for the work should be distributed. Practical agreements are also expected to be made within the team regarding meeting times, locations, preparation, handling absences and similar matters.

Once students have agreed on these points, they sign the contract. Course teachers periodically check that the work in the teams is functioning satisfactorily for all members. However, resources are limited in relation to student's needs. Course evaluations indicate that students are generally dissatisfied with how the teamwork has functioned. According to these evaluations, collaboration sometimes fails because the team does not adhere to the contract. Other times, it fails because students' expectations regarding the knowledge and ambitions of team members are not met.

In all educational contexts, respect for the needs of those involved should be of utmost importance. Whether it concerns young students or adult learners, respectful treatment within a trusting environment is essential for creating the right conditions for learning and development (Sewerin, 2012). Furthermore, it is important to create conditions for students to take responsibility for their own learning and development as well as to recognize the development of other team members. Given that, during their teacher education, prospective teachers need to develop certain universal competencies, including the ability to collaborate. If we accept that teacher education at Malmö University, like some other programs, seeks to highlight the importance of collaborative learning, we must actively work to create learning environment in which students, alongside acquiring knowledge, develop their collaborative skills. In this regard, the implementation of the CBL method could contribute to creating the conditions for systematically and purposefully developing these skills during the first year of prospective teacher's education.

Implementation of the CBL Method in Prospective Teacher Education – Task 1

Handal and Lauvås (2015) argue that socialization occurring through observing how key individuals act, strengthens the understanding of what we aim to convey through teaching. For this reason, it is important both to provide students with the opportunity to observe how different actors collaborate in our schools and to review the courses offered during the first year.

CBL could be applied during the first two semesters of the teacher education program. Already in the first course, students participate in their work placement – the school as a contextual challenge (VFU – Teacher-supervised Placement). Experiences from the VFU are processed and deepened in various ways throughout the course. Currently, there is an examination task related to the students' work placement. The task for the students is to select a Swedish lesson to observe. They then choose one or a couple of observations that they find interesting to analyze and describe them in detail. These observations are then analyzed using the didactic questions and a selection of the general and subject-specific didactic

concepts they have acquired during the course. The focus, therefore, is on *observing and analyzing a teaching situation*.

In addition to the task described above, which has a clear focus on teaching, students will also be asked to *observe various forms of collaboration that occur*. It can be the collaboration of teachers within a team, interactions that occur during a class meeting, a pupil welfare meeting or any other meeting they participate in during their work placement. The task would involve identifying which competencies that are recognized and how these interact and complement each other in different contexts. The aim of the task would also be to investigate in which situations collaboration with others is expected, what this collaboration can contribute with and how it benefits the learning and development of those involved.

Since CBL should be curiosity - driven, students would first in teams be asked to discuss and argue what aspects to observe and how they want to report their observations. Based on the students' decisions on scenarios to be observed in the school, a follow-up seminar would be held once they return to campus. Because students are choosing the different interactions to explore, it is important to allow for discussions and analyses on their observations and the choices they made, as this will provide a broader perspective of what the individual students identify as significant. The approach, characterized by participatory teaching methods and respectful learning environments, invites students to be curious while the reporting format encourages creativity, allowing them to choose what they want to address and how they wish to do so. The only requirement is that it involves collaboration between people within a school context.

By presenting their own observations in various ways and learning from others' experiences, students would be challenged during the seminar to reflect on the multifaceted role of the teacher and on what they themselves consider important when collaborating with others. The students' observations from their work placement could thus be more clearly connected to theoretical approaches and the learning theories introduced in the course. In this way, students would be provided with the conditions to participate in learning activities in which, supported by a theoretical approach, they can develop profession-relevant knowledge, skills and abilities (The way to Collaborative Secured Education – Methods and Strategies, 2016).

In connection to professional development, it is also useful to consider how we can promote critical reflection and creative thinking throughout the entirety of the introductory courses. We need to ask ourselves how the teaching we organize affects students' socialization and what message we wish to convey through the content of our teaching. When we talk about learning theories and their significance for individual development, we also need to ensure that students are provided learning activities and practices that give them the opportunity to discover how they learn best and how to take responsibility for their own learning and that of others. The focus should be on collective learning and on helping students develop the ability to understand differences between their own and others' capabilities, leverage each other's experiences, and recognize each other's diverse learning styles as assets (Kolb and Fry, 1975). In this regard, even challenging situations can be analysed to identify strategies that allow one to accept things that cannot be changed, without causing frustration. By posing questions that stimulate reflection and critical thinking, we can help students analyse and understand the knowledge, previous experiences and values underlying their actions when collaborating with others.

It is important to consciously and systematically engage students in reflection on practices that connect what they observe during their work placement courses with the learning activities university teachers organize and the goals we wish to achieve. Theory, practice, reflection, critical thinking and action are thus interconnected, while the constructive linking and guidance provided throughout the process, strengthen students' ability to face new challenging situations, both during their education and in their future professional lives (Dewey, 1899; Schön, 1987, Christersson et al., 2022).

Implementation of the CBL Method in Prospective Teacher Education – Task 2

The purpose of the second task would be to complement the student's understanding of observing collaboration. During their work placement, students would be tasked with identifying a challenge that occurs in situations where people are expected to collaborate. On this occasion, students would need to make a deeper analysis of how someone at the school who is responsible for leading a team of people—such as a team leader, discussion leader, principal or similar—addresses challenges that arise in various contexts in which people are supposed to collaborate with others.

Instead of discussing their observations with other students during a seminar, students would this time be tasked with writing an inquiring text in which they present and discuss the challenges identified during their work placement, as well as create a digital presentation of the identified challenge. The students' inquiring texts could be linked to one of the existing examination tasks. In this regard, early in their education students would learn how to investigate, observe, define a problem area, analyse and discuss challenges they have identified. The connection between theory and practice, between the learning theories taught during the first year and the tasks assigned to students, would presumably become clear. Systematically discussing challenges encountered in the professional context, promotes a deeper understanding of team processes and their dynamics, while also highlighting one's own responsibility in ensuring that team work functions satisfactorily for everyone involved (Handal and Lauvås, 2015).

University teachers in the course would have the opportunity to evaluate the students' ability to identify a problem area, explain and discuss different ways of addressing the challenges and draw conclusions from these new experiences. The written individual text could also provide an indication of the progression students are expected to make as they compare their expectations and understanding of challenges with their conclusions. In both Task 1 and Task 2, students would have the opportunity to interact with each other, discuss their findings and present the challenges they have identified. In that way the relationship between different social practices and individual action, constitute each other (Säljö, 2000).

Desired Effects and Intended Learning Outcomes

CBL, by its nature, is collaborative and practical. By using the CBL method in teacher education, students would be encouraged to interact with various actors, to be curious about how collaboration between those functions, what is required of teachers in the profession, the challenges they face in different situations and how to address these challenges. Furthermore, the method could help strengthen the quality and relevance of the education, as it prepares students for lifelong learning and facilitates the transition from education to working life (The way to Collaborative Secured Education – Methods and Strategies, 2016). Considering that the goal is to develop a universal competence, such as collaborative

skills, the CBL could be helpful in achieving this goal (2016). Since there are no conditions or resources in the introductory courses for prospective teachers to actively work on developing collaborative skills, this way students would be given the opportunity to understand the needs of others in teams, while recognizing one another's competencies.

By clarifying connections between theory and practice and emphasizing the importance of developing the ability to collaborate with others to learn and grow, we can strive to achieve effective work in student teams throughout their education. Following up on students' observations and discussing them can be seen as a learning practice where various collaboration challenges are brought forward, discussed and analysed in a non-judgmental and respectful environment. For the course teachers, these activities would provide a clearer picture of how students view their own and others' responsibility in ensuring that the teamwork functions well.

Since the CBL leads to important transformation of everyone involved - students, teachers and stakeholders - it could potentially help identify the need for further professional development among the external actors at the students' partner schools. By discussing the various collaboration challenges, team leaders or school principals are encouraged to articulate what works well or less well in the organization, and why. This occurs in a practice where time for reflection is often quite limited. It is important to create conditions that allow different professional roles at the school to develop their competencies based on the identified needs. This is something that Malmö University, with its wide range of courses aimed at practicing teachers and school leaders, could support.

In the Guide to Challenge Based Education, it is emphasized that "how we teach and educate future generations is of utmost importance for both the individuals at our universities and the development of our societies" (2014, p.7). CBL can help students learn to appreciate and benefit from each other's knowledge and experiences during their education, while also giving them the opportunity to develop the ability to collaborate with others during their education. Increased collaboration between the partner schools and Malmö university could lead to greater knowledge and understanding of the various roles and responsibilities teachers face in their profession.

Connections can be made to sustainable development since the collaborative skills students can develop during the first year of their studies could lead to improved teamwork in the subsequent stages of their education. Furthermore, it could contribute to sustainability within the teaching profession. According to a report from the Swedish teachers' union, approximately 35,000 teachers have left the profession for other career paths (Sveriges lärare, 2017). According to the same source, while there are numerous factors influencing these decisions, the primary reason is the heavy workload. By systematically supporting prospective teachers in recognizing that collaboration with others can enhance efficiency and reduce strain, we create more favourable conditions for retaining teachers within the profession. In this regard, we have an obligation to reverse the negative trend present in society today.

Challenges Associated with CBL

There are several challenges that require careful consideration. The most significant one is ensuring that all course teachers are committed to the initiative. The course changes required during the first year of teacher education need not be extensive, but adequate resources must be allocated and those involved must become familiar with the CBL approach and understand the goals we wish to accomplish in higher

education. University teachers involved in a students' first year of education would need to collaborate in revising syllabi, designing various types of learning activities and reviewing the learning objectives that must be addressed. To encourage broader engagement among teachers, it is essential that the CBL approach in higher education is not perceived as an additional burden but rather as an enhancement of existing learning practices, where students are offered greater opportunities for inclusive, active and lifelong learning. The *new role* of the university teachers must also be discussed as the work process involves evaluating one's own practice being open to alternative approaches to teaching and mentoring.

The actors at the students' partner schools, the principals, the mentors and the school teachers should not only be informed about the tasks students are expected to work with during their work placement, but also partners in the learning process. This to involve the school teachers early with a more targeted focus on collaboration skills in various school contexts.

Another challenge may involve developing existing forms of assessment in university-based courses so that students are allowed to be creative while ensuring that the learning objectives remain concrete, measurable and aligned with a clear progression between the courses. Course evaluation templates need to be revised as it is important that students are given the opportunity to evaluate their new experiences of CBL during their education. These necessary revisions require resources that prospective teacher educators seldom have and that can hinder the successful implementation of the method.

Concluding Remarks

CBL in prospective teacher education can provide teacher educators with the opportunity to collaborate with students in an innovative, creative, and dynamic manner. The aim is to give students the opportunity to develop collaborative skills during the first year of their teacher education, addressing one important aspect of sustainable education in a changing society. Furthermore, the aim is to become inclusive, building on teachers and students' own experiences and knowledge to strengthen diversity in perspectives and strategies and reach sustainable goals (UNESCO, 2017). The constructive alignment that would serve as a common thread enables students to engage in meaningful learning, while the learning practices and revised forms of assessment are understood as learning opportunities for all participants.

One of the intended learning outcomes includes enabling students to draw on one another's competencies, facilitating the transition between education and working life and strengthening prospective teachers through increased collaboration. By fostering a collaborative environment in both schools and universities, teachers may become more attractive in a society where collaborative skills are highly valued. Another learning outcome includes the mind shift where individuals finally start focusing on what their own contribution to a sustainable development can be. In that way an inside perspective would finally become an important complement to that of the outside. Furthermore, it would be gratifying to read course evaluations in which students, rather than expressing dissatisfaction with how teamwork has functioned, highlight the importance of collaborative skills and learning from one another, emphasizing the positive effects of teamwork on their own and others' development and learning (Inner Development Goals, 2021). After all, the teaching profession is and should remain to be, one of society's most vital professions.

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