Assessing transferable competencies in a real-world course setting with practice partners

Noëmi Brüggemann[1] & Anouk N'Guyen

Department of Environmental Systems Science (D-USYS), ETH Zurich

Abstract

Project-based education (PBE) has been increasingly adopted in various educational institutions to better prepare students for the complexities of the 'real world'. In this article, we present the course 'Applied Forest and Landscape Management Lab', highlighting its unique approach to project-based learning in collaboration with practice partners. In this course, students work in groups on a project such as developing a sustainable forest management plan in exchange with the cantonal authorities, local foresters and external experts. This experience enhances their understanding of theoretical concepts and prepares them for the challenges they may face in their future working environment.

In the course discussed in this article, student learning is assessed primarily through detailed written reports that are graded using rubrics that we revised to operationalise the ETH Competence Framework. Not all fostered competencies are well reflected in a written report, and we discuss other assessment forms such as oral presentations or peer feedback. While the project process is vital for learning, we concluded that for this course setting, grading only the final report aligns with real-world practices: students produce a comprehensive summary for the cantonal authority, similar to environmental consultants. This approach allows students to focus on creating a well-structured report and fosters an open environment for discussing group dynamics, cooperation, teamwork, and problem-solving with the supervising team, free from the stress of being graded on these aspects.

1. Introduction

Project-based education (PBE) has been widely adopted in higher education institutions because it effectively prepares students with the competencies needed to cope with the complexities of our modern world. At ETH Zurich, PBE has been strongly advocated through initiatives like PBLabs, which actively support and promote project-based learning throughout the institution (ETH Zurich, 2024a). PBE typically involves students working in teams on projects that address real-world challenges, thereby developing both subject-specific and transferable competencies. Core principles include integrating projects into the curriculum, situating them in real-world contexts, promoting student independence, and providing guidance through coaches and experts (ETH Zurich, 2024b).

In this article, we present the course 'Applied Forest and Landscape Management Lab'. A key aspect of the course is its emphasis on training students' subject-specific and transferable competencies (based on the ETH Competence Framework) in a real-world setting (La Cara et al., 2023a). Students work in small groups on a project in collaboration with cantonal authorities. This hands-on experience not only deepens their understanding of theoretical concepts but also equips them to handle the challenges they may encounter in their future careers.

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[1] Corresponding author; noemi.brueggemann@usys.ethz.ch

Overall, project-based courses are highly effective in fostering a wide range of competencies (Guo et al., 2020; Crespí et al., 2022). However, assessing and grading these diverse competencies can be challenging for lecturers. Currently, the course described in this article is assessed through detailed written reports. These are graded by the lecturers using specific rubrics that we have recently revised based on the ETH Competence Framework. In this article, we reflect on the experiences from revising the before mentioned rubrics to operationalise the ETH Competence Framework, the challenges of assessing transferable competencies, and discuss other forms of assessment such as oral presentations or peer feedback.

The course provides a playground to explore the following two questions:
1.) How can we operationalise the ETH Competence Framework using rubrics for a written report in PBE?
2.) What are the challenges in assessing transferable competencies with rubrics and what are alternative assessment formats in PBE?

2. Description of course setting

In the capstone course 'Applied Forest and Landscape Management Lab' of the Major Forest and Landscape Management (MSc Environmental Sciences), students take on the role of an environmental consulting office. Students work in groups of 2-7 people (usually 4-5) on projects that are of interest to the forest management or nature conservation authorities of a specific canton.

Course title	Applied Forest and Landscape Management Lab	Course number	701-1692-00L
Semester	spring semester, every year	Credits	5 CP
Typical number of students and staff	25 students 5 supervising teams 5 practice partners	Hours	5 days spread out during the semester, 2 block weeks after the semester on location / in the field
Offered in	Master's in Environmental Sciences, Major Forest and Landscape Management		
Offered by	Institute of Terrestrial Ecosystems (ITES), Department of Environmental Systems Science (D-USYS), ETH Zurich		

Table 1: Course Overview.

2.1 Practice partners

A key aspect of this course is the practical work with cantonal authorities. We rotate our lab collaboration every 3-4 years. This approach ensures a continuous flow of relevant topics for the course that are up to date with current practice. As the course has been running for many years, we now have the comfortable situation that some staff members within these cantonal authorities have attended the course themselves during their studies and already know what to expect and how it is organised. This familiarity not only facilitates smoother collaboration but also enhances the learning experience for current students, as alumni can provide valuable insights and guidance based on their first-hand experience as course participants.

2.2 Search for project topics

The project topics are proposed by different employees of the canton, who then also act as the responsible client for the student group that chooses this topic. The project topics can range from agriculture or forestry-related questions to biodiversity or challenges related to natural hazards. Once the canton has sent their topic suggestions, we start the search for professors and lecturers within the Institute of Terrestrial Ecosystems (ITES) who could supervise the different topics according to their field of expertise. There is always a tandem of a professor or lecturer and an assistant or doctoral student who supervises the project from the ETH-side.

Although the topics are distributed according to the respective fields of expertise of the supervising team, the specific questions from the cantonal authorities within this field of expertise may not exactly match the specialisation of the supervising team. This requires a certain flexibility of the supervising team and at the same time, it requires the students to take ownership of their project.

2.3 Time frame

There are 5 days during the semester (mid-March to the end of May) which are reserved for working on the project, two weeks immediately after the end of the semester in the field, and one week of individual work (see Figure 1). The two weeks after the semester take place in the respective canton to facilitate field work and exchange with the cantonal authorities. The students have considerable freedom in organising themselves to deliver the defined project results. This leads to the first learning objective of the course:
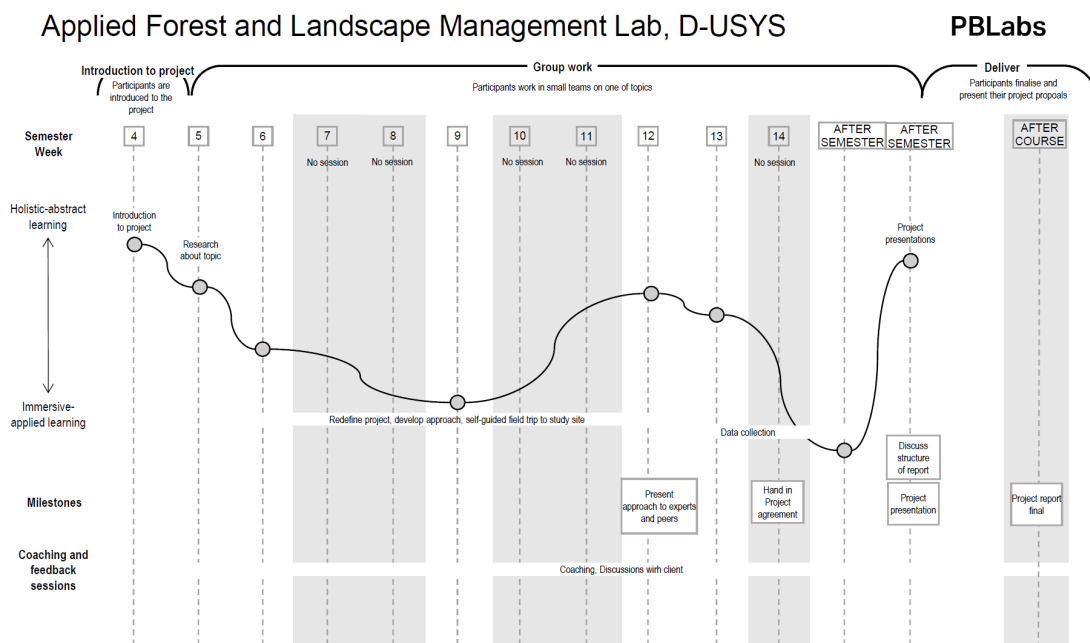

Figure 1: Action learning journey of the course 'Applied Forest and Landscape Management lab'
(adapted Project-based education template of UTL).

2.4 Project definition

Before the students get to choose their project, a project description is developed in an iterative process between the lecturer team from ETH and the client from the cantonal authorities. The projects must require group discussion and have a 'think-tank' character. Cookbook projects are not suitable. The students will most likely have to adjust the initial research questions defined in the project description. This is the link to the second learning objective of this course:

- Learning objective 1: *Analyse, streamline and structure a real-world problem*

2.5 Project work

The student groups research, adapt and apply established methods to their project. Because the projects are so diverse, this process is different and unique for each group. Examples of methods applied include analysing spatial data using GIS, modelling habitat suitability, conducting fieldwork, or interviewing different stakeholders to collect data.

- Learning objective 2: *Adapt and apply known methods in a new context and deduct relevant suggestions for the client*

2.6 Presentation and report

On the last day of the two field weeks the students present their results to the cantonal authorities, the supervising teams from ETH and other interested partners. This is an opportunity to get some last feedback for the discussion and conclusion part of the report. The report must be handed in by the end of August and is graded by the supervising team from ETH.

- Learning objective 3: *Write a complete, concise and comprehensible report for your client following scientific requirements*

2.7 In the context of practice

As introduced before, this course emphasizes the real-world setting and lets students step into the role of an environmental consulting office. Aspects that differ from standard educational exercise are especially the following:

- The questions that need to be answered are co-created and redefined together with the client.
- The projects are of direct interest to the client and are used for the further development of projects and strategies.
- Students are responsible for project management and have to coordinate and communicate with their supervising team from ETH, their client and other relevant stakeholders from practice.

Compared to the role in an environmental consulting office, the only missing component is the acquisition process. Students do not have to write an offer to win the project, but they do have to specify what they can deliver within the time frame of this course. From experience, we can say that students usually overestimate what can be achieved in four working weeks. Most of the readers here can probably confirm that time estimations for projects are a very important, but also a lifelong learning process.

- Learning objective 4: *Deliver defined project results within the given time frame and appropriate communication with clients and other relevant partner*

For the client, currently the Canton of Zug, this course is an opportunity to ask questions that they are interested in but do not get a chance to address because other tasks are more urgent. This includes for example researching the effects of new forest management methods, how to cope with future challenges brought by climate change, or how to improve habitat suitability for rare species. The results from this course provide new inputs for the staff members of the cantonal authorities (Brüggemann et al., 2024). Inputs from past courses included implementation approaches and challenges of ecological infrastructure, analysis of forest inventories and management suggestions derived from this analysis, management suggestions to improve habitat suitability and connectivity for bats, new approaches for the cantonal forest development plan or the development of a concept for the renaturation of a landfill.
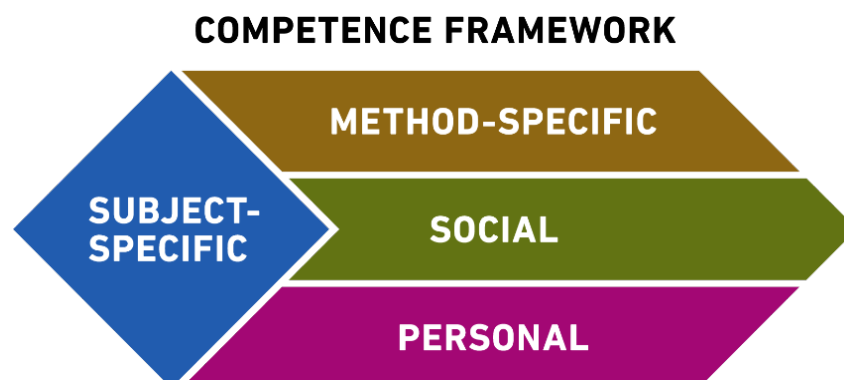

Figure 2: ETH Competence Framework. Copyright of ETH Zurich (ETH Zurich, 2024c). Full framework accessible via ETH Website: https://ethz.ch/en/the-eth-zurich/education/policy/eth-competencies-teaching.html

3. Operationalising the ETH Competence Framework in project-based courses using rubrics

The course has been running successfully for many years, consistently providing valuable practical experience to students. To further enhance its effectiveness and to align the course more closely with the latest educational developments at ETH, we decided to explicitly integrate the ETH Competence Framework (La Cara et al., 2023a), see Figure 2. We adapted the rubrics of the report evaluation and applied the ETH Competence Framework through discussion with experts from different fields (see acknowledgments).

The learning objectives are described in the course setting section (Chapter 2) of this article and form the basis for the report assessment rubrics (see Appendix, Figure A2). We developed them according to the main steps within the course, which need to be completed to deliver a successful result. To each learning objective, we assigned one or a maximum of two key competencies from the ETH Competence Framework which will be visible in the course catalogue (La Cara et al., 2023b). To achieve the reduction of all the competencies assessed to a maximum of three to five competencies 'assessed' for the course catalogue, we defined a hierarchy of the ETH Competence Framework specific to this course. The hierarchy is given by:
1. the learning objectives 1-4, which define the key competencies (marked as 'assessed' in the course catalogue)
2. the subcriteria needed to fulfil the learning objectives, that may include additional competencies

For the subcriteria, we developed text rubrics to grade the reports. The report assessment rubrics we developed are structured as follows (for detailed text assessment rubrics see Appendix):

- Learning objective 1: Analyse, streamline and structure a real-world project
  Key competence: Analytical competence
    - Define the project with a focus on the interest of the cantonal authorities
      Competencies: Problem-solving, Customer Orientation
    - Identify and formulate answerable goals and research questions.
      Competence: Analytical competence

- Learning objective 2: Adapt and apply known methods in a new context and deduct relevant suggestions for the client
  Key competence: Problem-solving
    - Question and adapt known ideas or methods
      Competencies: Subject-specific competencies, Creative Thinking, Critical Thinking
    - Make necessary assumptions: 1) where data is missing or not obtainable, 2) for comparison, 3) to define system boundaries
      Competence: Analytical competence
    - Deduct suggestions/recommendations including advantages, disadvantages and limitations
      Competence: Problem-solving
    - Describe limitations of project results
      Competence: Critical Thinking

- Learning objective 3: Write a complete, concise and comprehensible report for the client following scientific requirements
  Key competencies: Subject-specific competencies, Communication
    o Structure of report
      Competence: Subject-specific competencies, Communication
    o Quality of report parts
      Competencies: Subject-specific competencies, Analytical competencies, Decision-making, Problem solving
    o Formal quality of the report
      Competence: not applicable

- Learning objective 4: Deliver defined project results within the given time frame and appropriate communication with clients and other relevant partners
  Key competence: Project Management
    o Work independently and creatively (e.g. prepare and bring own ideas / suggestions to meetings)
      Competencies: Creative Thinking, Self-direction and Self-management
    o Plan and organize your project
      Competence: Project management
    o Communicate actively with coaches, experts, cantonal authorities and external experts
      Competence: Communication

Only the written report is graded and counts as a summative assessment; for the other learning objectives, students receive formative feedback during meetings with their supervising team and in discussions following the oral presentation.

However, we argue that especially in project-based learning, many more competencies are assessed (directly and/or indirectly) and even more are fostered. In the context of this course, this is supported by the subcriteria of the defined learning objective. In addition, some competencies are not directly assessed by the report assessment rubrics but are still fostered in the course:

- *Media and Digital Technology:* Students need to research literature as well as data and often use AI to get ahead in their projects. Some basic data is available, but most data has to be acquired by the students and is not pre-processed.
- *Cooperation and Teamwork:* Students work in groups of 2-7 people (usually 4-5) and need to organise themselves.
- *Sensitivity to Diversity:* Students need to interact with different stakeholders which they need to approach appropriately to successfully work with them.
- *Negotiation:* Students need to negotiate with different stakeholders and find solutions that are not necessarily the most efficient in a scientific sense, but that are applicable to the situation at hand.
- *Adaptability and Flexibility:* The basic idea of the project is given but needs to be adjusted based on the preparation and exchange with stakeholders.
- *Self-awareness and Self-reflection:* This is only implicitly fostered. The group must divide tasks within the project themselves. Well-performing groups are likely to have distributed tasks according to the strengths and weaknesses of individuals.

The ETH Competence Framework is divided into 20 different competencies (see Figure A1 in Appendix), from which 17 are assessed or fostered in this course (marked in yellow).

4. Challenges and alternative assessment formats for PBE

A particular challenge for the revision of the report assessment rubrics was the overlap between the different criteria assessed. One example is the adaptation and application of methods (learning objective 2) and the description of these in the report (learning objective 3). Although the application of methods and their documentation are distinct aspects, distinguishing between them for report assessment is not straightforward. While from a theoretical point of view, the application and the description of methods used are two separate things, in practice, they often are difficult to detangle because the understanding and the detail of the application of the methods by the student group are also reflected in the description thereof. For a thorough assessment, the supervising team has to be aware of possible overlaps and try to disentangle as much as possible to give the appropriate feedback.

Overall, relying solely on a graded final written report may be too limiting for appropriately assessing students' competencies in project-based courses. Exploring alternative assessment formats can provide a more holistic evaluation of students' competency development.

One alternative is grading intermediate steps of the project, such as through learning diaries, status meetings, or project management documentation. This approach allows competencies to be assessed on a finer scale, and the grade reflects not only the final product (i.e., summative assessment) but also the process (i.e., formative assessment). However, the intermediary steps may not be discussed as openly with the supervising teams if they are graded, preventing students from asking questions, receiving support, and constructive feedback (UZH, 2024). Additionally, this method requires more resources from the supervising team (Preiss et al., 2023).

Another option is grading the oral presentation. Presenting the project to the cantonal authorities provides practice for real-world situations and is resource-efficient for project partners and the supervising team. The current ungraded format allows for open discussion and feedback from cantonal authorities and the supervising team to be incorporated into the final report. Like grading the intermediate steps, we think that grading the oral presentation would put more pressure on students and prevent these fruitful, open discussions. For example, we encourage students to present critical points of their work to get input from cantonal authorities, lecturers and their peers.

Overall, while the process of working on the project is crucial for learning, it makes sense from a 'real-world perspective' to grade only the final report. This approach ensures that students focus on producing a comprehensive and well-structured report that summarises their findings for the cantonal authority in a concise manner, as they would do if they were working as environmental consultants for a canton. Since the group's journey through the project is so important, it is essential to create an environment where students can openly discuss group dynamics, cooperation, teamwork, and problem-solving strategies with their supervising team without the added stress of being graded on these aspects.

To further enhance the learning experience in future iterations of the course, incorporating a peer assessment component could be beneficial. This method would allow students to evaluate each other's contributions, thereby emphasising the importance of social competencies such as communication, cooperation, and teamwork, as well as personal competencies like self and group reflection (Topping, 2017). However, it requires even more resources from students in an already intense course setting and needs to be carefully designed and introduced by the supervising team.

5. Reflections and outlook

We revised the report assessment rubrics for the 'Applied Forest and Landscape Management Lab' through an iterative process to clearly define the primary learning objectives and main competencies. By focusing on these competencies, the course provides a transparent and structured evaluation process that aligns with the ETH Competence Framework. Subcriteria within the rubrics allow us to assess additional competencies needed to fulfill the learning objectives. Communicating these rubrics to students raises awareness about the competencies they are developing, especially social and personal competencies, which are often overlooked.

Reflecting on the process of defining the report assessment rubrics requires significant time and resources. While the benefits of transparency are evident, other advantages may not be immediately obvious. Importantly, the rubrics serve as a valuable learning opportunity for students, making key competencies more visible. Additionally, the rubric text can be used as a reference for written feedback by the supervising team.

The report assessment rubrics have undergone multiple feedback rounds within the course team, educational developers, and competency experts. The most important feedback round will be when different supervising teams apply them to this year's reports. Preliminary feedback from the supervising team indicated that while the rubrics enhanced clarity and transparency, their initial application was time-consuming. Some feedback noted that the rubrics were not suitably adapted for reports scoring below grade 4.75. In response, we will conduct a comprehensive feedback session and make necessary adjustments to the rubrics for the spring semester of 2025. Minor refinements will continue in the coming years, but the feedback suggests that the developed rubrics provide a solid foundation for report evaluation.

Given that written reports are the main product of various courses, we hope that the assessment rubrics we have created can also serve as a framework for assessing reports in other courses, as well as bachelor's and master's theses.

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Acknowledgments

Appendix

SUBJECT-SPECIFIC COMPETENCIES (to be specified by individual degree programmes)
Knowledge of theories, concepts, and techniques and its application to specific fields

Concepts and Theories	**Techniques and Technologies**
Ability to understand and apply the basic concepts and definitions that are relevant for a scientific subject or a field	Ability to understand and apply techniques and technologies in use within a specific scientific subject or field

METHOD-SPECIFIC COMPETENCIES
Knowledge and application of methods to make sense of, and operate in, any context

Analytical Competencies	**Decision-making**	**Media and Digital Technologies**	**Problem-solving**	**Project Management**
Ability to break down processes and systems into parts while understanding their interaction	Ability to define a decision and a set of alternative actions from which to choose	Ability to access, evaluate, and use media and digital technology	Ability to define a problem and find solutions for it	Ability to manage projects and produce results

SOCIAL COMPETENCIES
Competencies applied in the interaction with others

Communication	**Cooperation and Teamwork**	**Customer Orientation**	**Leadership and Responsibility**	**Self-presentation and Social Influence**	**Sensitivity to Diversity**	**Negotiation**
Ability to communicate with others in different contexts and forms	Ability to build relationships with others to pursue common goals and achieve results in a constructive atmosphere	Ability to approach relationships with others and society in terms of what you have to offer rather than what you need or want	Ability to motivate and inspire others and support others' achievements	Ability to present an authentic and professional image of self to others and motivate others to the adoption of a specific behaviour	Ability to recognise differences among people and work with them	Ability to advocate positions with an open mind and try to synthesise ideas from all viewpoints best

PERSONAL COMPETENCIES
Competencies concerning self-management in the context of own work

Adaptability and Flexibility	**Creative Thinking**	**Critical Thinking**	**Integrity and Work Ethics**	**Self-awareness and Self-reflection**	**Self-direction and Self-management**
Ability to adjust effectively to a changing environment and deal well with changes	Ability to produce and implement novel and useful ideas	Ability to analyse and evaluate situations and recommend courses of action	Adherence to moral and ethical principles in the conduct of own work and in the relationship with others	Ability to understand own strengths and weaknesses and enhance self-development	Ability to motivate oneself and organise own work in order to achieve results

Figure A1: The ETH Competence Framework (Copyright of ETH Zurich) with competencies assessed or fostered in the course presented marked in yellow ((ETH 2024), marked).

Criteria	Competencies assessed / fostered	6	5.5	5	4.5	4	<4
Task Interpretation & Problem Analysis							
Learning objective: Analyze, streamline and structure a real-world problem							
Key competence: Analytical competence							
Define the project with a focus on the interest of the Cantonal authorities	Problem solving, Customer Orientation	Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less-explored aspects of the topic, which are of interest to the cantonal authorities.		Identifies a focused and manageable/doable topic that appropriately addresses relevant aspects of the topic, which are of interest to the cantonal authorities.		Identifies a topic that, while manageable/doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide-ranging as to be manageable and doable.
Identify and formulate answerable goals and research questions	Analytical competence	All goals / research questions indicate a deep comprehension (e.g. system boundaries defined) of the problem and are concisly formulated		All goals / research questions indicate comprehension a of the problem. Formulation is non-ambiguous.	Goals / research questions indicate comprehension a of the problem but the formulation could be clearer.		Goal research questions do not show deep comprehension of the problem. Formulation is not concise enough
Scientific Competence & Argumentation (grade counts double)							
Learning objective: Adapt and apply known methods in a new context and deduct relevant suggestions for their "employer"							
Key competence: Problem solving							
Question and adapt known ideas or methods	Subject specific competencies, Creative Thinking, Critical thinking	All common, relevant approaches were considered, critically reviewed and adapted to serve the goals/question defined	relevant approaches were considered, critically reviewed and adapted to the goals/question defined	relevant approaches were considered, and adapted to the goals/question defined	relevant approaches were considered, and mostly fruitfully adapted to the goals/question defined	relevant approaches were considered, but not fruitfully adapted to the goals/question defined or most approaches are relevant but some are not	relevant approaches were NOT considered
Make necessary assumptions 1) where data is missing or not obtainable 2) for comparison 3) to define system boundary	Analytical competence	All assumptions make sense, are appropriately chosen for the questions at hand and are clearly separated from scientific facts	All assumptions make sense and are clearly separated from scientific facts		Most assumptions make sense and are separated from scientific facts		Assumptions do not always make sense and/or are not clearly separated from scientific facts
Deduct suggestions/recommendations including advantages, disadvantages and limitations	Problem solving	The suggestions, which are most promising for the employer are concisely and prominatley described, inlcuding reference to possible limitations, advantages and disadvanteges	The suggestions are concisely and prominatley described, systematically inlcuding reference to possible limitations, advantages and disadvanteges	Suggestions are deduced from the results of the project and prominatley described. Limitations, advantages and disavantages are generally mentioned.	Most of the suggestions relevant to the target audience, deduced from the results and are prominatley described.	Suggestions are made but are not always relevant or deducible from the results of the project.	The suggestions are hard to find and/or are not helpful
Describe limitations of project results	Critical Thinking	All limitations of the project results are discussed. It is made clear under which circumstances the results are valid and applicable. Possible solutions for the limitations are provided (e.g. outlook, experiments)	you could add for grade 6 that potential solutions to limitations are discussed, e.g. by providing an outlook, ideas for next experiments, interventions, etc.	All limitations of the project results are discussed.	Most important limitations of the project are discussed.	Limitations of the project results can be found in the report	Limitiations are missing or Some important limitations of the project results are missing.
Quality of report (grade counts threefold)							
Learning objective: Write a complete, concise and comprehensible report for employer following scientific requirements							
Key competence: Subject-specific competencies, Communication							
Quality of content (counts double)							
Structure of report	Subject-specific competencies, Communication	The structure of the report is always logical and makes finding specific information easy. The structure supports the story line and the key messages are clearly convey.	The structure of the report is logical and makes finding specific information easy. The structure support the story line. Key messages can be found.	The structure of the report is logical and makes finding specific information easy. The story line and key messages are not always easily found	The structure of the report is mostly logical and finding specific information is mostly possible.		The structure of the report is not very logical and information sometimes hard to find.
Quality of report parts (see criteria below)	Subject-specific competencies, Analytical competencies, Decision-making, Problem solving	All criteria for the different report parts exceed expectations: no flaws, no mixture of chapters, every sentence/paragraph in the right place (or at least 95-98% of the time :-))	All criteria for the different report parts are met	All criteria for the different report parts are met with very few minor flaws	Max. 2 sections contain flaws		Obvious flaws regarding the different report parts
Executive summary: respects it's form and conveys the most important findings and recommendations							
Introduction part: points out the relevance of the topic and builds up to the leading questions							
Methods: description is comprehensaible and relevant information is there							
Results: answer the questions introduced, description is concise, illustration supports key findings, no mixture with discussion part							
Discussion: covers relevant aspects, goes into depth, logically structured, comprehensible							
Conclusion/Suggestions: recommendations concise, logical and adapted to employer/settting							
The defined goals are the "red thread" throughout the report							
Formal quality (counts single)							
Formal quality of the report (see criteria below)		There are no flaws regarding formal criteria whatsoever	Formal criteria are met with very few exceptions	Formal criteria are met with only minor flaws	Formal criteria are mostly met with some obvious flaws in max. 1 criterium	Formal criteria are mostly met with some obvious flaws for several criteria	Formal quality has major flaws
The language used is appropriate, the terms are used correctly and precisely							
Correct citation, labels & indexes							
All maps, graphics and tables are correctly titled and numerated							
Appropriate and clean layouting							
The orthography is good. There are no careless mistakes (Flüchtigkeitsfehler)							
Project Managment: Working process, independence, organization, communication							
Learning objective: deliver defined project results within the given time frame and appropriate communication with employers and other relevant partners							
Key competence: Project management							
Work independently and creatively (e.g. prepare and bring own ideas / suggestions to meetings)	Self-direction and Self-management, Creative Thinking	The group showed a lot of self-initiative, worked independently and creatively	The group worked independently and creatively	The group worked mostly independently and showed creativity	The group often worked independently and showed some creativity	The group only partly worked independently and/or showed little creativity	The group only partly worked independently and showed little creativity
Plan and organize your project	Project management	The group constantly took initiative on planning and organization of the project. The time scheduling was always done with foresight.	The group took initiative on planning and organization of the project. The time scheduling was done with foresight.		The group often took initiative on planning and organization of the project. The time scheduling was usually done with foresight.	The group took some initiative on planning and organization of the project. The time scheduling was rather improvised	The group did not take initiative on planning and organization of the project. The time scheduling was rather improvised
Communicate actively with coaches, experts, cantonal authorities and external experts	Communication	Communication was always deliberately chosen, concise and balanced (not unnecessary, not too little)	Communication was deliberately chosen, concise and balanced		Communication was mostly deliberately chosen, concise and balanced	Communication was sometimes deliberately chosen, concise and balanced	Communication was not deliberately chosen, concise and balanced

Figure A2: Report assessment rubrics.