



# The use of ICT for learning

1

- The group has not used ICT significantly - either for collaboration or product.

2

- The group has used ICT in a very traditional way. They have not explored new programs or technologies or used well-known programs in a new way, either in terms of collaboration or product. They reproduce information and practices basic skills.

3

- The students have used several aspects of ICT for products, collaboration and presentation. It carries a little touch of routine, but is well and thoroughly worked out.
- The students have used ICT, but they could have achieved the same goals without using ICT. ICT or other technologies have not made the big difference, but ICT support their product.

4

- The students have made a nice presentation and product using ICT. However, the product shows more signs of hard work than innovation.
- They have used ICT to collaborate and the use of ICT has supported their learning and process well. The use of ICT has made a difference.
- The students have worked as targeted and creative producers, but their product or prototype is not yet ready to be used by authentic users.

5

- The students have used ICT to support their knowledge construction and with this knowledge, they have developed and designed a creative and innovative prototype for authentic users.
- Their collaboration and presentation is supported by ICT in an efficient and clever way
- The students have worked as targeted and creative producers, and their product or prototype is ready , or almost ready, to be used by authentic users.

## Information

In order to score high in this category it requires, that students think new in relation to ICT programs and technologies - well-known as new. Therefore, there is also an element of innovation in the ICT category. In addition, the group must show, that they have used ICT to support knowledge construction, collaboration and to pitch their idea creatively. Good ICT products, which are not entirely innovative, but very well worked out, do not score top points.

Well-known digital programs are typically Microsoft Office or Google Docs and most used apps from e.g. Skoletube.dk or App Store. Technologies include: 3d print, coding (all forms), circuit technologies, video production, laser-cut among others.



# Collaboration

1

- There is no sign of collaboration
- The team do not mention collaboration in their presentation. Not all team members is a part of the presentation.

2

- Students do work together, but there is none- or only a few signs of collaboration between the students
- Students are speaking about their work, but no shared responsibility.

3

- The group has no tangible signs of collaboration, but their presentation is characterized by collaboration. Their work is connected.

4

- The group has, to some extent, evidence of their collaboration in the form of documents, pictures, videos or the like
- They can explain, that their main decisions have involved the whole group, but their work is not interdependent.

5

- The group shows tangible evidence of their collaboration and their process and products shows clearly, that their work is interdependent
- Their presentation is characterized by the fact, that everyone knows exactly what has been worked on and they know each other's tasks. They have made substantive decisions together.

## Information

Tangible evidence of collaboration could be work in e.g OneNote / Evernote, video, padlet, SCRUM models or videos, etc. The presentation must show, that the whole group work as a team. The presentation must show, that the students are working together in a learning activity, with joint responsibility for their work. It should not be a single student, who presents it all.

Good collaboration is, when the elements are interdependent and decided together. The team members must negotiate and agree on the process, design, and conclusions of their work. The role of each student in the team is essential.



# Problem-solving and innovation

1

- Problem solving has not been a central part of the the students project

2

- Problem solving is part of the students' project, but the problem is not a real problem, and the students' solution is not viable.
- Students have not had a real study of the problem.

3

- The problem is a real-world problem, but the students solution is not particularly innovative and possibly to implement. The solution is seen many times before.
- The students only show a little knowledge of the problem and have not studied it thoroughly.

4

- The problem is a real-world problem. The solution is innovative, but difficult to implement. Or maybe the solution is too obvious.
- They have examined the problem thoroughly and communicated their ideas to someone related to the problem to receive feedback.
- The students show how they have refined their solution and improved it through their process.
- The pupils have considered how the solution could possibly be implemented

5

- The problem is a real-world problem and the students solution is innovative, creative and feasible.
- They have examined the problem thoroughly both by talking to experts and people related to the problem.
- The students have thought about possibly ways of implementation in the real world, e.g. via feedback from people who can actually implement their solution.

## Information

The problem must be a real problem from the real world. It may be a small problem. Students must have thoroughly examined their problem. It involves eg interviews, statistics, questionnaires, etc.

A good process of problem solving must be innovative and possible to implement. The students should have thought through an implementation plan. They may have contacted stakeholders in relation to their solution. The more their solution meets these points, the higher the score. It is very positive if they have included empirical data from stakeholders in their solution. Experts, users connected to the problem etc.