



Co-funded by the
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Manual for evaluation of students' vocational international projects

In Erasmus+ projects – Key activity 2



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Introduction

Project under Erasmus+ programme called „Project Learning for better Establishment on Labor market“ was focused on students from 5 vocational schools with lack of soft skills that are crucial for future industry.

In the beginning of project all involved schools made survey with their partner companies (employers) about key skills that are expected from graduates, they want to employ. They identified couple of soft- and hard-skills that are most mentioned in this survey. Nearly 70% of employers prefer graduates with good soft-skills to graduates with good hard-skills.

Most valued soft-skills

Responsibility

Teamwork

Communication skills

Interpersonal relationships

Following rules

Independent work

Most valued hard-skills

Basic computer skills

Programming

Using internet and e-mail

Manual work with basic tools

Working with CAD software

Automation

Complex evaluation of student projects

To evaluate students' projects partners agreed on evaluation scheme that consists of different criteria. Each criterion was given specific number of points (mostly 0-3) and weight that determines importance of this criterion in whole score.

1. Complexity of project

Each project assignment was built respect to school technical equipment, involved students and tutors, involved grades etc. Due to this specific parameters, some of project required more knowledge, spent time and effort than another one. This criterion has been recognized as very important and has **weight of 6**.

Each project can earn 3 point in this criterion:

- **3 points** - project that requires lot of knowledge, time and manual or psychic work, all work was done by students
- **2 points** - project that requires some knowledge, with moderate time and effort spent while working on this project, some existing technologies (frameworks, libraries, parts) was used, but most of work was made by students
- **1 point** - project that mostly uses knowledge gained at school, with small time and effort spent, more of existing technologies was used, but students made some effort to interconnect them
- **0 points** - no new knowledge had to be learned, project was very simple, just compilation of some existing technologies

Maximum points that can be eared in this criterion is **18 (3x6)**.

2. Functionality of project

Main goal of project was to create functional (working) product or service. In project assignment success criteria was set up to state, what is considered as functional/successful product. This criterion has been recognized as very important and has **weight of 6**.

Each project can earn 3 points in this criterion:

- **3 points** - project is fully functional as described in project assignment and success criteria, all described functions are implemented
- **2 points** - project is almost fully functional, most of the success criteria was met, just some (not crucial) functions wasn't implemented
- **1 point** - project has just basic functionality, only half of success criteria was met, lot of useful functions wasn't implemented
- **0 points** - project is not functional

Maximum points that can be eared in this criterion is **18 (3x6)**.

3. Added value

Added value is described as functionalities that was not described but students added them to their project and make the project usable more easily or solves another problems. This criterion has been recognized as less important and has **weight of 5**.

Each project can earn 1 point in this criterion:

- **1 point** – project has more functions as described in project assignment
- **0 points** – project has only functions described in project assignment

Maximum points that can be eared in this criterion is **5 (1x5)**.

4. Improvement of hard-skills

Students involved in project were supposed to gain new hard-skills related to their occupation and study area. Some students gained new hard-skills like working with tools and equipment, programming, troubleshooting, etc. Other just used skills learned at school and did not need to learn new things. This criterion has its **weight set to 5**.

Each student can earn 3 points in this criterion:

- **3 points** – students needed to learn lot of new hard-skills to finish this project, new technologies and modern working procedures was used
- **2 points** – students needed to learn some new hard-skills to finish this project
- **1 point** – students learned just few new hard-skills, traditional technologies and working procedures was used
- **0 points** – no new hard-skills was learned

Maximum points that can be eared in this criterion is **15 (3x5)**.

5. Improvement of soft-skills

Students involved in project were supposed to gain new soft-skills that can be used in each occupation. Soft-skills that we focused on in this project was teamwork, time-planning and respecting deadlines, responsibility for own work, communication and negotiation, independence in assigned tasks, maintaining good interpersonal relationships. This criterion has its **weight set to 5**.

Each student can earn 3 points in this criterion:

- **3 points** – student improved a lot in his soft-skills, developed new positive attitudes that also affect his school performance in other subjects or aspects

- **2 points** – student improved his soft-skills, but the improvement was bind to this project
- **1 point** – students improved his soft-skills just a little
- **0 points** – no improvement in soft-skills was visible

Maximum points that can be eared in this criterion is **15 (3x5)**.

6. User experience and design

Not the most, but very important part of product is its design and user-friendliness. How the product looks can affects its price and how easily it is used affects the feedback and reviews of users and can help product to spread on market. This criterion has its **weight set to 4**.

Each student can earn 3 points in this criterion:

- **3 points** – product looks nice, it's easily used, all(most) of possible misapplication/misuse is treated, good safety of product
- **2 points** – product looks nice, but with affected user-friendliness (not all mistakes are treated) or product has some safety issues
- **1 point** – product has not very good look, has some bigger issues with user-friendliness and safety
- **0 points** – product looks very poor, very user-unfriendly, not safe or dangerous

Maximum points that can be eared in this criterion is **12 (3x4)**.

7. Quality of documentation

Crucial part of each project is documentation. Students had template for documentation in which they had to write the analysis, theoretical and practical part of project. Documentation can be evaluated in terms of typography, grammar, completion of all parts and professional level. This criterion has its **weight set to 4** and each student can earn 2 points:

- **2 points** – high quality of documentation, consistent in typographical and professional level, with good grammar
- **1 point** – average quality of documentation, some flaws in grammar, typography, professional level of documentation is lesser, some parts are not described well
- **0 points** – poor quality of documentation, poor grammar and typography, low professional level

Maximum points that can be eared in this criterion is **12 (3x4)**.

8. Originality and uniqueness

It's important to bring new and fresh ideas on the table. From students, we expected not to use existing solutions but invent something new that can help people to solve everyday problems. This criterion has its **weight set to 3** and each student can earn 3 points:

- **3 points** – project is completely original, no similar solution exists in the market
- **2 points** – lot of new ideas brought to existing solutions and products, lot of original work with just a few external technologies
- **1 point** – some new ideas, existing technologies used but has some original job done
- **0 points** – not very original project, just copying existing product on market

Maximum points that can be eared in this criterion is **9 (3x3)**.

All evaluation criteria have 100 points in sum. Project will be evaluated by summing score of both students working on this project. Each project can earn 200 points. Practical evaluation chart can be found in attachment.

Attachment - Template of project assignment

Criteria	Description	Points	Weight	Earned points
Complexity of project	What was the amount of knowledge, work effort and time that was used in this project (very low - 0, low - 1, quite a bit - 2, very much - 3)	3	6	___/18
Functionality of project	Is project functional as described in assignment? (0 - not functional, 1 - somehow functional, 2 - mostly functional, 3-fully functional)	3	6	___/18
Added value	Does project have any other functions above the requirements described in assignment? (0 - no, 1 - yes)	1	5	___/5
Improvement of hardskills	Does student improve his/her hard skills or learn something new? (0 - none, 1 - just a few, 2 - several, 3 - a lot)	3	5	___/15
Improvement of softskills	Does student improve his/her soft skills or learn something new? (0 - none, 1 - just a few, 2 - several, 3 - a lot)	3	5	___/15
User experience and design	How does project look from outside? What is user experience while working with project? (0 - poor, 1 - somehow good, 2 - very nice with few details, 3 - excellent)	3	4	___/12
Quality of documentation	What is quality of documentation (0 - poor, 1 - average, 2 - good)	2	4	___/8
Originality and Uniqueness	Was the project original or did students use some prepared circuits, programs, frameworks ...? (0 - not very original, just scissors-and-paste)	3	3	___/9

Attachment – Template of student auto-evaluation form

Student name: _____

Project name: _____

Hard-skills:

What hard-skills did you use in your project? _____

Which known hard-skills did you improve? _____

Which new hard-skills did you learn? _____

Was the new hard skills related to your specialization? yes no

How did you evaluate improvement of your hard skills?

improved a lot somehow improved improved a little didn't improve

How confident are you with these hard-skills?

Mechanical work (drilling, cutting, painting,...) completely somehow none

Electronics work (PCB design, soldering,...) completely somehow none

Electrotechnics (installation, connect circuits,...) completely somehow none

Programming (writing code, web, databases,...) completely somehow none

Automation (using sensors, actuators, control) completely somehow none

Soft-skills:

What soft-skills did you use in your project? _____

Which known soft-skills did you improve? _____

Which new soft-skills did you acquire? _____

How did you evaluate improvement of your soft skills?

improved a lot somehow improved improved a little didn't improve

How confident are you with these soft-skills?

Communication (speaking, reading, writing,...) completely somehow none

Planning (time managem., deadlines, budget...) completely somehow none

Team-work (dividing tasks, responsibilities,...) completely somehow none

Independence (making decisions, solving probl.) completely somehow none

Organization (sorting, prioritizing, tidiness...) completely somehow none

What was the hardest part of about working in a team? _____

What was the best part? _____

What else do you want to tell us? _____

Project:

Project Learning for better Establishment on Labor market (P.L.E.L.)
Erasmus+ KA2, Strategic partnerships

Partners:

Střední průmyslová škola elektrotechnická, Havířov, Czech Republic

Miskolci SZC Kandó Kálmán Szakgimnáziuma, Miskolc, Hungary

Zespół Szkół Technicznych, Mikołów, Poland

Stredná priemyselná škola elektrotechnická, Košice, Slovakia

Srednja poklicna in tehniška šola, Murska Sobota, Slovenia