Pedagogical group end report

Project title: **Humanoid robots for a future world**

Project number: **2019-1-AT01-KA229-051196**

Working group: **Pedagogical**

date: **20.08.2022**

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content:

1. The tasks of pedagogical group

1.1. Pedagogical concept for students with learning problems

One of the core objectives of the project is to integrate students with learning disabilities, to provide strategies for improving learning behavior, and to improve students' performance. In this context, the project group "Pedagogy" has the task to offer and document possible courses or student project tasks.

The goal

In the project application, the educational goal was defined as follows:
"A concept for students with learning problems – create a common concept with ideas and strategies to support students with learning problems and lead them to a successful graduation. The success of these strategies will be tested by suiting indicators."

Products
According to the target description in the project application, two products were defined for the working group "Pedagogy".

Product 1
Develop strategies to involve students with learning difficulties in the project and to help the pupils.

Product 2
To record the development of students with learning disabilities in their documentation.

Strategies for Product 1
At the first transnational meeting, the group members set a total of three strategies to achieve the desired goal.

Opportunities
Students with learning difficulties often have insufficient opportunities to actually be involved in such projects and to learn in a different, more practical style. We have tried to give pupils with learning difficulties the opportunity to participate in our project.

Allow errors
The particular form of the project makes it possible to choose a more open approach than the one with which the student often confronts with learning difficulties. While they are accustomed to being mistaken for mistakes in traditional learning environments, we have focused on ways to give them a new approach, to learn (and learn from) mistakes, and then to explore other, hopefully better solutions find.

Organisation of workshops
As a special support for students with learning difficulties, we organized transnational workshops in the past meetings, where students with learning difficulties of the various participating countries could get involved in a controlled learning environment of the project within the framework of the error-tolerant approach described above. Two students with learning difficulties from each country were taken to the workshops to monitor their development.
In order to capture the development of the less-educated pupils, the working group has defined the following indicators.

Indicators for Product 2 (Documentation)

Learning Motivation
- Including learning strategies
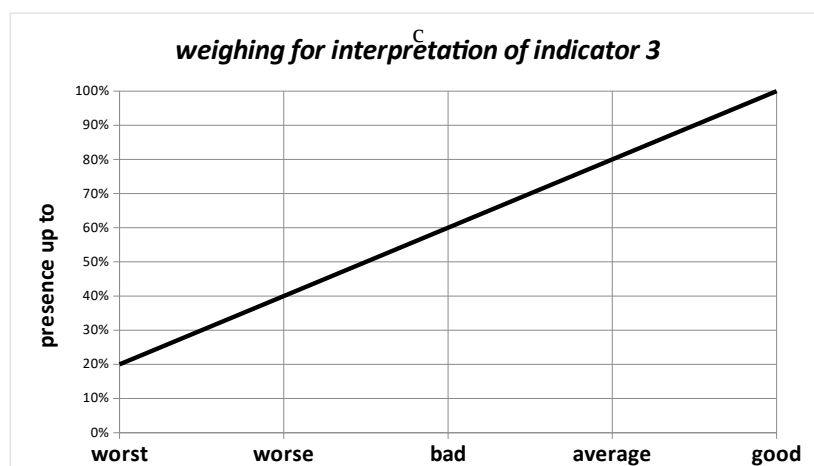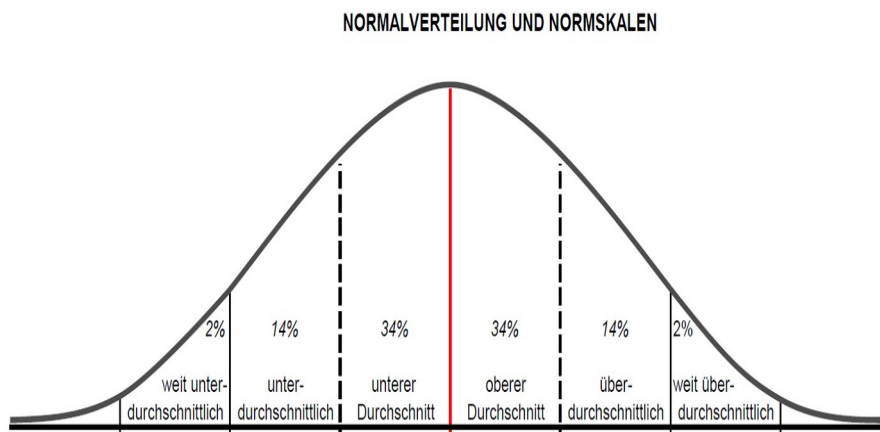- Including working behaviour
- Including stress accomplishment

Learning Success
- Annual reports
  - Language grade
  - Technical grade
  - Social (behavioural) grade
- certificates (apart from compulsory certificates)

Presence at school

These indicators have been examined at the beginning, in the middle and at the end of the project. The development of the individual pupils is checked in quantitative and qualitative ways. In order to record these indicators, a table has been developed which is illustrated and explained on the following page.

weighing for interpretation of indicator 3

NORMALVERTEILUNG UND NORMSKALEN

2%	14%	34%	34%	14%	2%
weit unter-durchschnittlich	unter-durchschnittlich	unterer Durchschnitt	oberer Durchschnitt	über-durchschnittlich	weit über-durchschnittlich

weighing for interpretation of indicator 3

1.2. Documentation „Development of learning students"

The indicator 1 "Learning motivation" is divided into the three areas of stress accomplishment, learning strategies and working behavior and was determined by the use or by the use of a test questionnaire. A learning and work behavior inventory, also called LAVI test, was used.

NORMALVERTEILUNG UND NORMSKALEN

2%	14%	34%	34%	14%	2%	
weit unter-durchschnittlich	unter-durchschnittlich	unterer Durchschnitt	oberer Durchschnitt	über-durchschnittlich	weit über-durchschnittlich	
		16	50	84	98	%
20	30	40	50	60	70	80	T
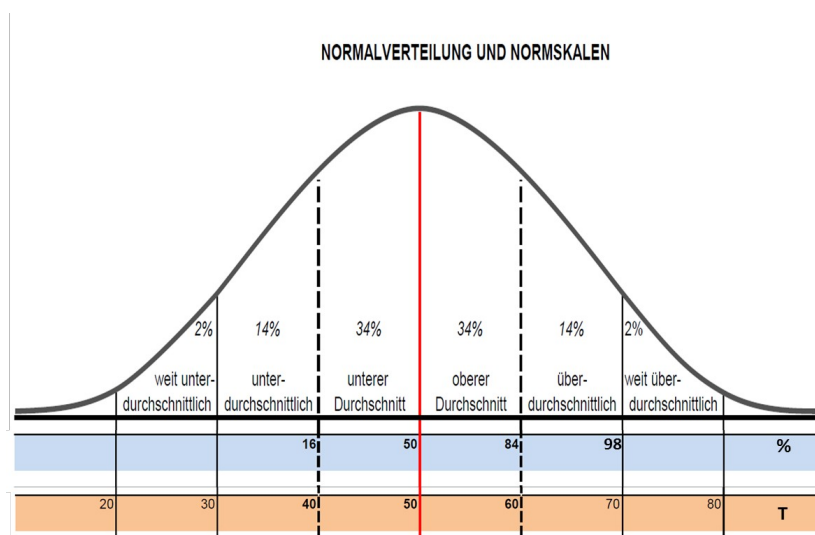
The LAVI serves the different recording of the learning and working behavior. Each item describes a typical learning and working situation. The 58 items are divided into the following topics
- analytical scales: workload (the student 's basic willingness to practice compulsive, thorough and thorough learning and problem solving),
stress management (the student' s ability to cope with learning disabilities) and
- learning techniques (the student 's ability to effectively handle the learning process) Learning material).

The manual contains specific instructions on funding forms in which the change process of the learning and working behavior can take place, as well as change methods which can be used in various learning and working behaviors.

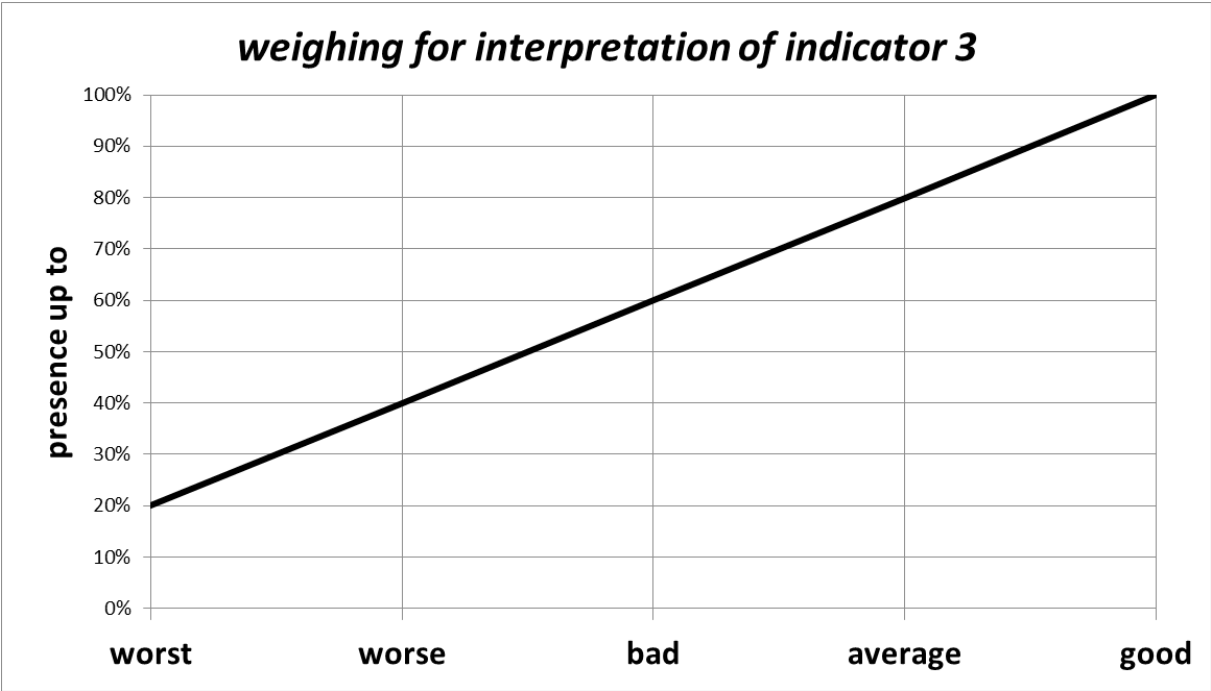The LAVI test was provided by HOGREFE Verlag for this Erasmus project.

Indicator 2 "learning success" divided into the areas of
- language grade,
- technical grade and
- social grade
was determined on the basis of the credentials. As a foreign language, English is introduced to the school.

Indicator 3 "Presence at School" was determined using the presence lists in the class book. No apologized absenteeism was taken into account, it was determined exclusively whether the student was present or not.

weighing for interpretation of indicator 3

presence up to

| 100% | 90% | 80% | 70% | 60% | 50% | 40% | 30% | 20% | 10% | 0% |

worst   worse   bad   average   good

Find below the results of the 2 students per country. Names of the students are not shown in the report due to data protection laws.

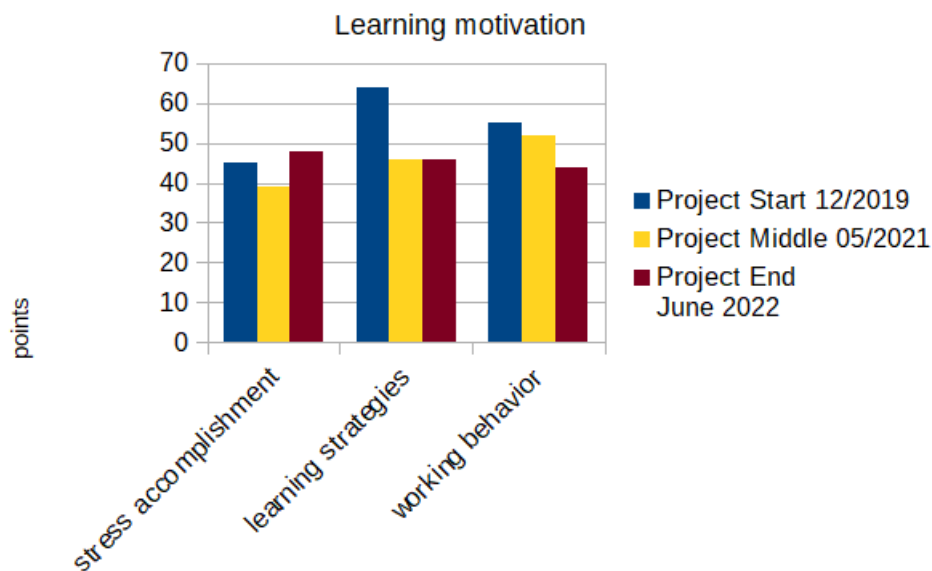# 2. Documentation of the results

2.1. HTL Weiz, Austria

Name: N.N.1	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	45	64	55	4	3,6	1	102	3	97
Project Middle 05/2021	39	46	52	4	3,8	1	169	15	92
Project End June 2022	48	46	44	4	3,9	1	92	9	91

Name: N.N.2	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	52	29	53	2	3,3	1	101	4	96 %
Project Middle 05/2021	48	31	50	2	3,4	1	171	12	93 %
Project End June 2022	49	30	49	2,5	3,8	1	98	3	97 %

Indicator 1 — Learning motivation

Indicator 2

Learning success

Legend:
- Project Start 12/2019
- Project Middle 05/2021
- Project End June 2022

Indicator 3

Presence in school

Legend:
- presence in %

project duration
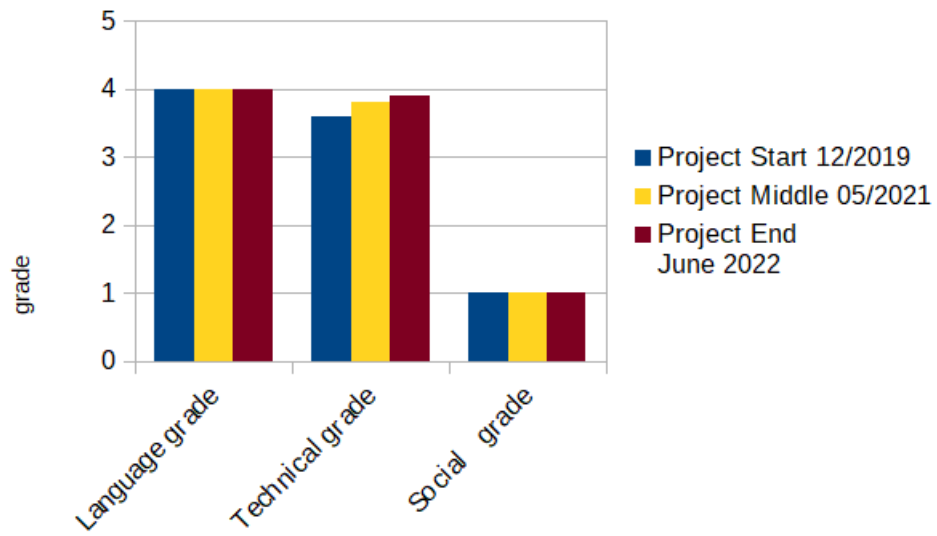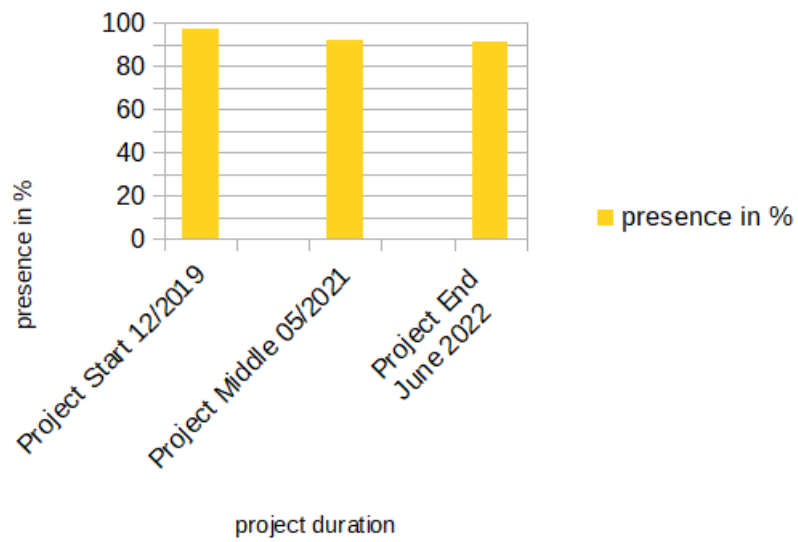
2.2. 2nd General Lyceum of Ierapetra, Greece

Name: N.N.1	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	25	88	59	1	4	4	88	17	84
Project Middle 05/2021	50	74	87	1	4	5	162	8	95
Project End June 2022	79	26	76	5	3	5	94	7	93

Name: N.N.2	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	53	89	32	4	3	3	102	3	97 %
Project Middle 05/2021	80	21	27	4	3	1	182	2	99 %
Project End June 2022	42	67	34	3	4	5	82	19	81 %

Indicator 1
Learning motivation

Indicator 2
Learning success

grade

Language grade · Technical grade · Social grade

- Project Start 12/2019
- Project Middle 05/2021
- Project End June 2022

Indicator 3
Presence in school

presence in %

Project Start 12/2019 · Project Middle 05/2021 · Project End June 2022

project duration
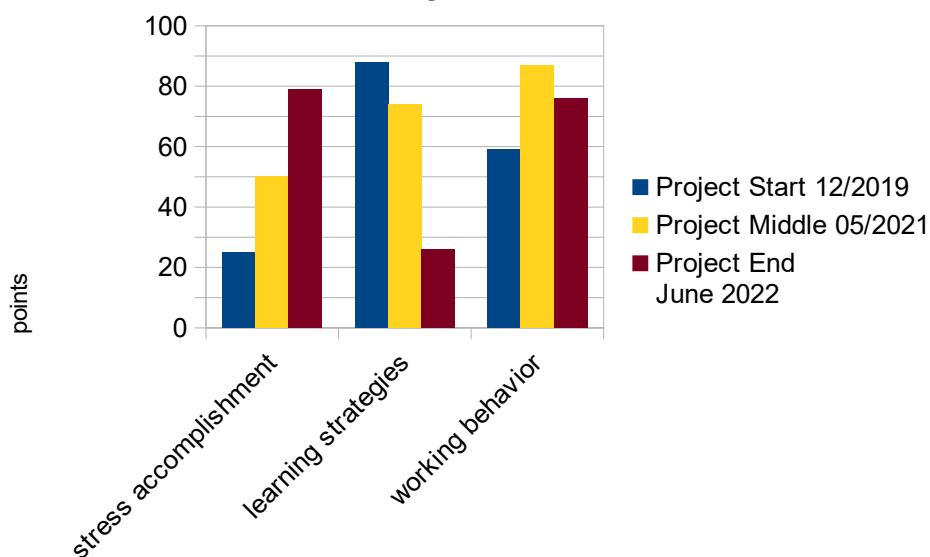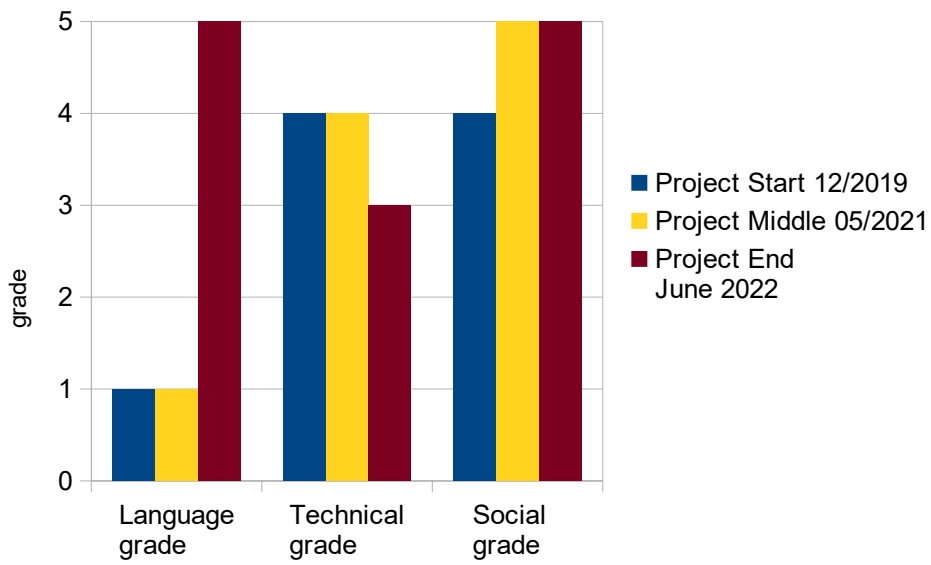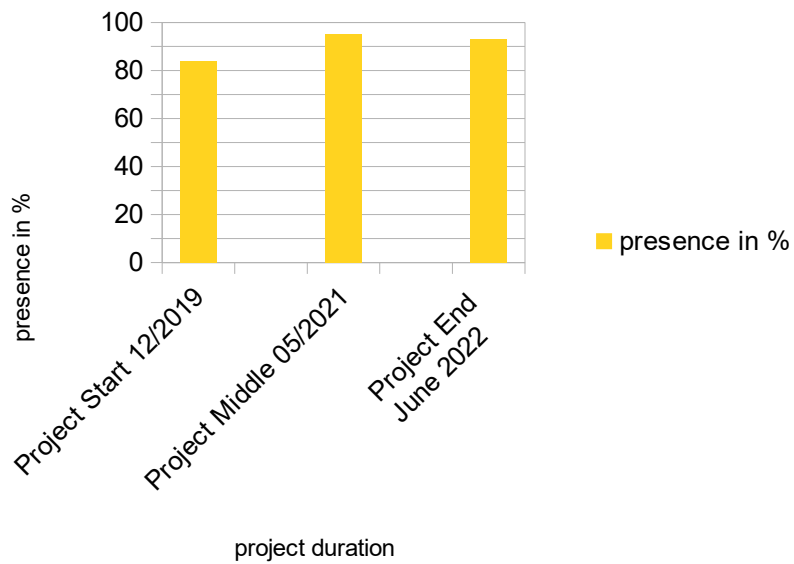
- presence in %
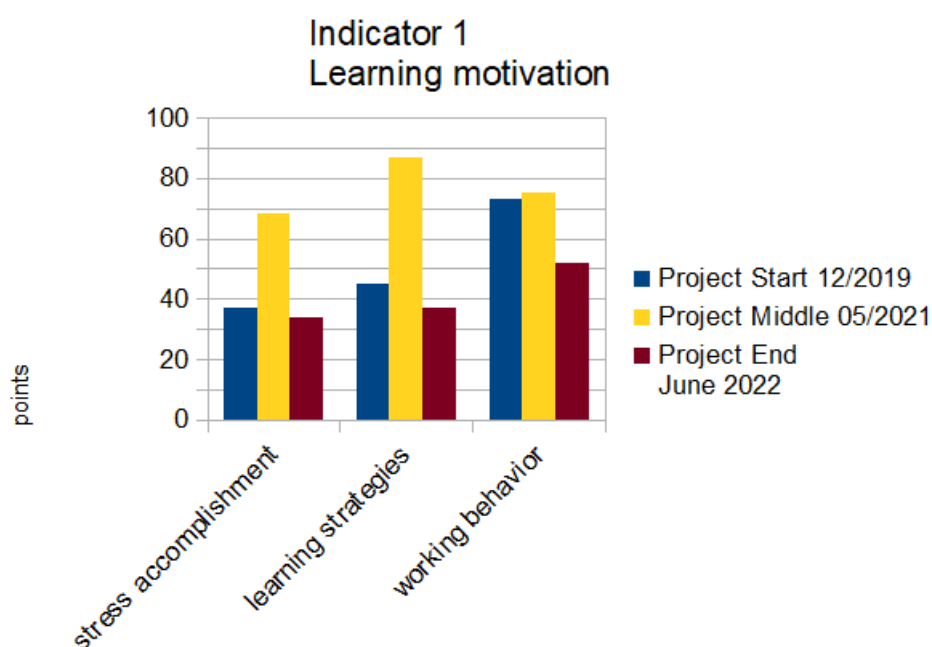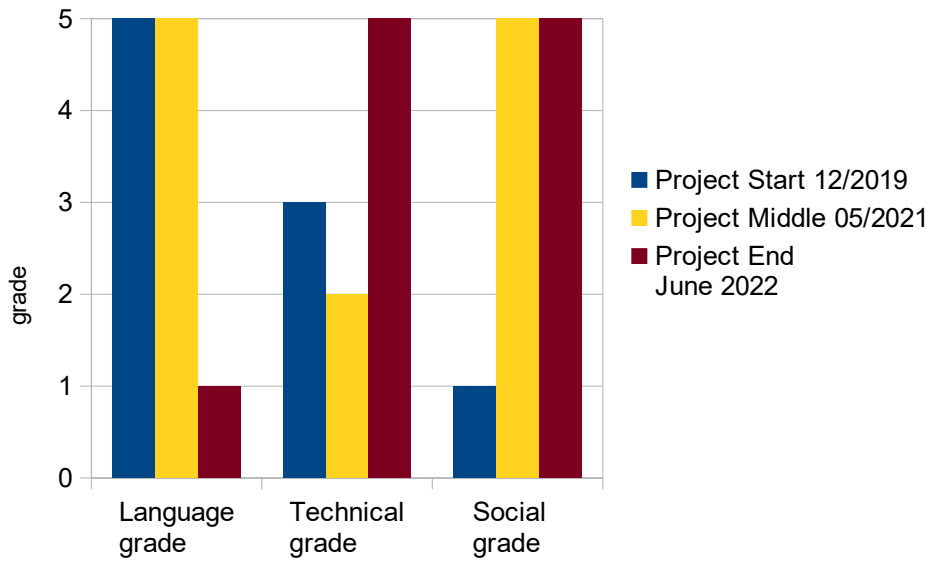
2.3. Liceo Statale "Carlo Urbani"

Liceo Statale "Carlo Urbani", Italy

Name: N.N.1	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	37	45	73	5	3	1	95	10	90
Project Middle 05/2021	68	87	75	5	2	5	157	20	89
Project End June 2022	34	37	52	1	5	5	86	15	85

Name: N.N.2	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	20	58	70	5	4	2	99	6	94 %
Project Middle 05/2021	27	37	72	3	3	1	179	2	99 %
Project End June 2022	68	28	72	5	2	5	88	13	87 %

Indicator 1
Learning motivation

Indicator 2
Learning success

Legend:
- Project Start 12/2019
- Project Middle 05/2021
- Project End June 2022

Y-axis: grade (0–5)
X-axis categories: Language grade, Technical grade, Social grade

Indicator 3
Presence in school

Legend: presence in %

Y-axis: presence in % (0–100)
X-axis categories: Project Start 12/2019, Project Middle 05/2021, Project End June 2022
X-axis label: project duration
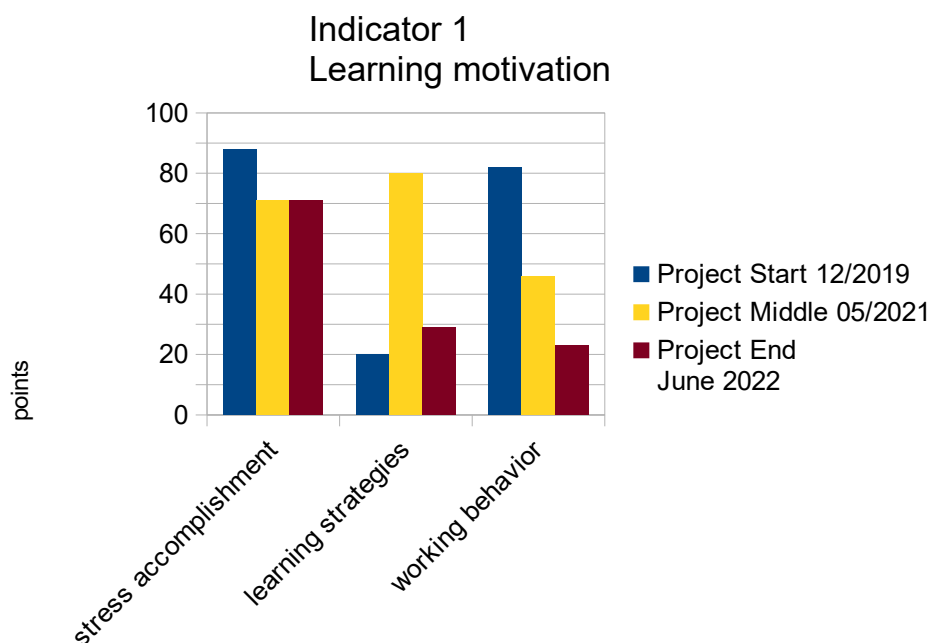
Funded by
the European Union
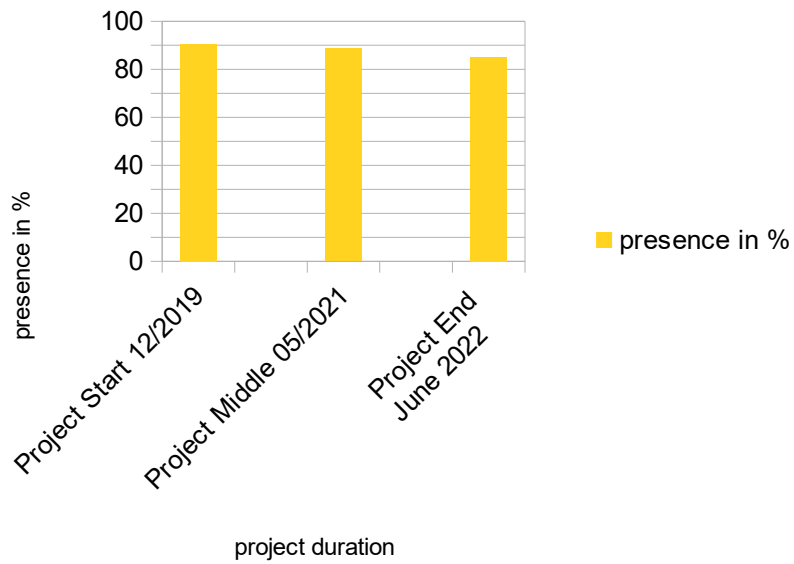
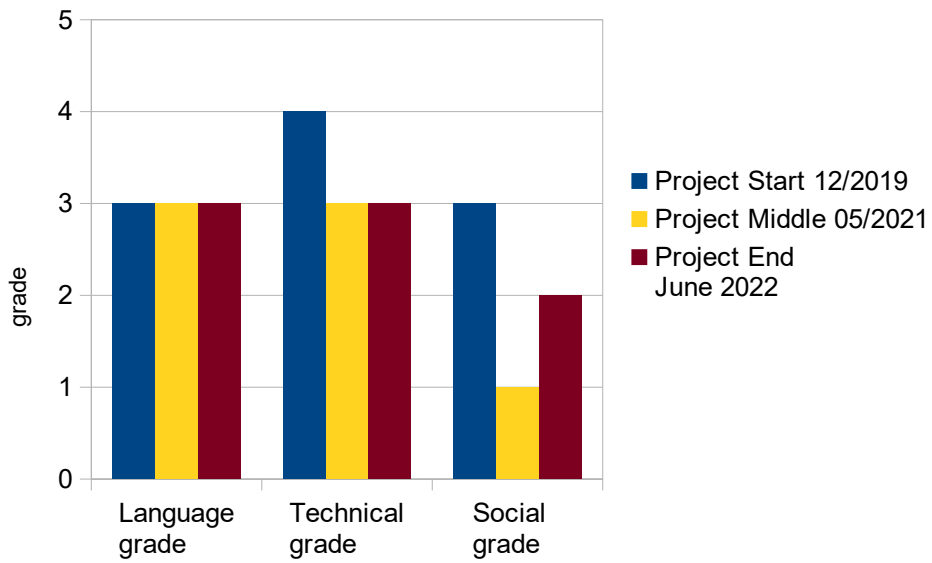## 2.4. Sehit mustafa yaman anadolu imam hatip lisesi, Turkey

Sehit mustafa yaman anadolu imam hatip lisesi, Turkey

Name: N.N.1	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	88	20	82	3	4	3	95	10	90
Project Middle 05/2021	71	80	46	3	3	1	158	19	89
Project End June 2022	71	29	23	3	3	2	97	4	96

Name: N.N.2	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	79	98	92	2	4	2	89	16	85 %
Project Middle 05/2021	60	47	97	2	1	3	157	14	92 %
Project End June 2022	69	57	59	5	4	4	97	4	96 %

Indicator 1
Learning motivation

Indicator 2
Learning success

Indicator 3
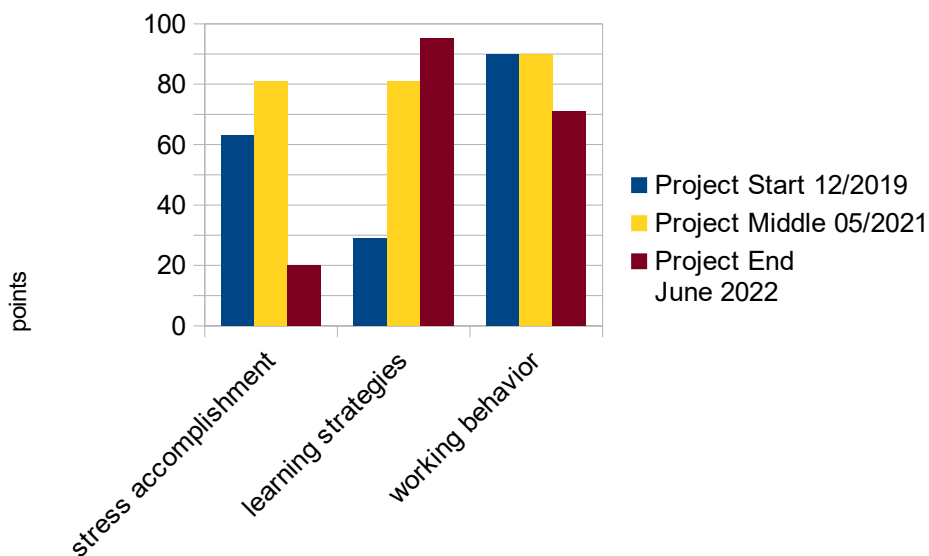# Presence in school

Funded by
the European Union
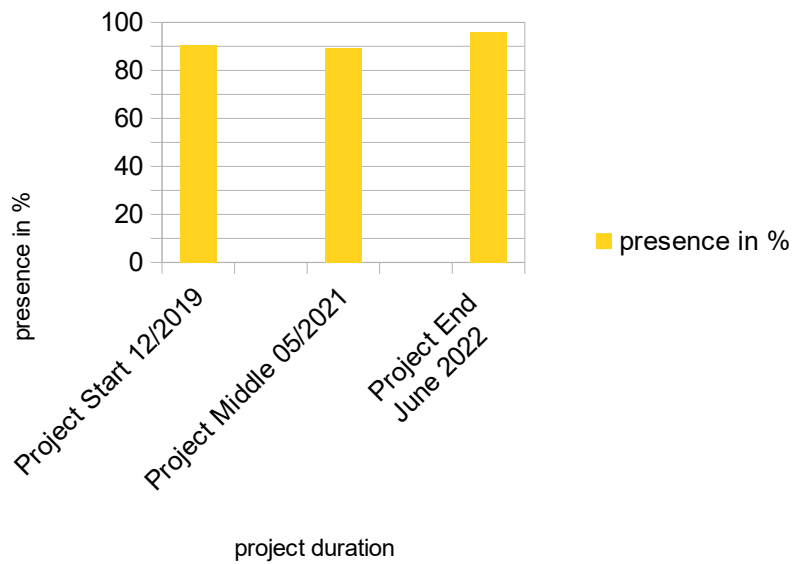
2.5. Escola Secundária/3 de Barcelinhos, Portugal

Escola Secundária/3 de Barcelinhos, Portugal

Name: N.N.1	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	73	61	55	3	4	2	95	10	90
Project Middle 05/2021	59	53	48	4	3	4	164	13	93
Project End June 2022	44	58	75	1	2	1	99	2	98

Name: N.N.2	Indicator 1 Learning motivation			Indicator 2 Learning success			Indicator 3 Presence at school		
	stress accomplishment	learning strategies	working behavior	Language grade	Technical grade	Social grade	presence (in days)	missing (part or days)	presence in %
Project Start 12/2019	43	94	43	3	5	4	91	14	87 %
Project Middle 05/2021	90	96	74	5	2	2	153	20	88 %
Project End June 2022	75	30	71	1	4	3	85	16	84 %

Indicator 1
Learning motivation

Indicator 2
Learning success

Legend:
- Project Start 12/2019
- Project Middle 05/2021
- Project End June 2022

Indicator 3
Presence in school

presence in %

project duration

Funded by
the European Union
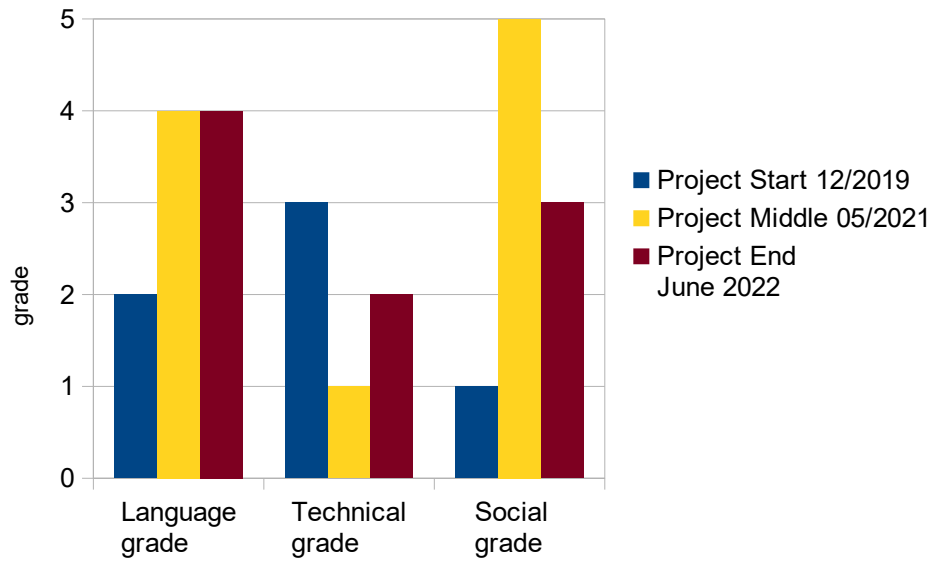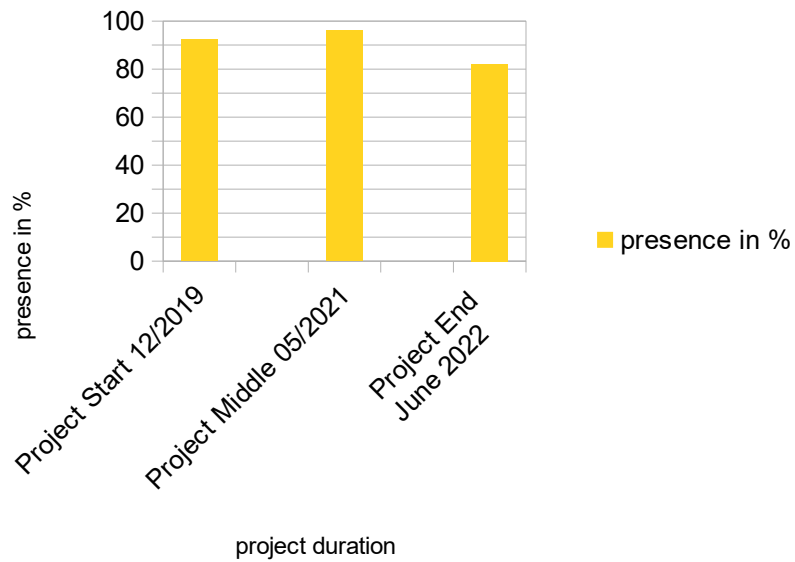
3. Conclusion

The documentation shows that most student have improved with regard to his / her learning performance. The acquired indicators Learning motivation, school notes as well as attendance in the classroom have developed positively during the project lifetime.

The integration into our project, combined with the targeted support of the low-learning pupils, has partly contributed to this. However, it should be borne in mind that during the three-year project period, the students themselves have undergone a maturation process. The learning performance can change, for example, by family, friends, profession, hobbies or examples. The improvement in student performance can therefore not be attributable solely to participation in the project.

In addition, it is important to mention that only two selected students with learning difficulties can not be expected to have any scientific outcome for this study. For this, more than 30 students would have to be observed in their learning performance. Overall, we consider the pedagogical project implementation to be successful. The learning support, the learning opportunities and, above all, the project as a whole have been accepted by the students with learning disabilities.

The cultural impact of the different pupils and the joint meetings in the participating countries have left a special impression to the pupils. The participants' feedback suggests that the performance of the Pedagogical Working Group is meaningful and sustainable.

4. Annex

4.1. *LAVI-Test english*

4.2. *LAVI-Test german*