Iceland Liechtenstein Norway grants

Action plan for the preparation of a pedagogical innovation "Motor vehicles using a renewable energy source"

Entry:

Complex of Technical and Vocational Schools named after Jana Pawła II in Żuromin is an educational institution in the Żuromin district with extensive achievements in the field of vocational education. Over the years, the school has evaluated and aspired to become a local leader in the implementation of educational, pro-professional, social and pro-ecological projects.

Focusing on a new quality of education, it systematically conducts activities aimed at:

- improving the quality of vocational education
- increasing teaching effectiveness
- expanding the offer of educational fields in the context of the needs of the local, national and European labor market.
- the use of modern work tools in line with the tendency to protect natural environmental resources
- establishing cooperation with partner institutions supporting vocational education
- using the experience of other schools, including foreign ones, operating in modern educational systems to develop vocational education in ZSTZ.
- developing attitudes of openness to new, safe technologies among students and the local community, strategies for environmental protection.

I. Analysis of needs and goals:

1. **Problem identification:**
   - Conducting a detailed analysis of the state of education in the field of vehicles using renewable energy sources. Assessment of curricula, teaching resources and students' awareness of mobility.
2. **Application of pedagogical innovation:**
   - Specifying short- and long-term goals, such as: applying natural science research, developing existing engineering research, promoting pro-ecological attitudes and preparing students for use in the field of technologies related to renewable energy sources.

Iceland Liechtenstein Norway grants

II. Development of the curriculum:

1. **Creating a team:**
    - Nomination of teachers from various fields, industry experts and mentors who will originate and implement the curriculum.
2. **Formulation of the teaching plan:**
    - Preparation of a detailed plan for the theoretical module (e.g. principles of operation of electric vehicles, renewable energy technologies), practical workshops, research projects, internships, as well as cross-curricular connections with mathematics, physics and ecology.
3. **Adapting the program to different age groups:**
    - Individual adaptation of content to the needs of students at various educational levels, physiological learning goals for specific age groups.

III. Resource Acquisition:

1. **Obtaining financial resources:**
    - Developing a comprehensive fundraising plan, applying for grants, persuading business partners to cooperate and provide funding, organizing fundraisers and crowdfunding campaigns.
2. **securing access to technology:**
    - Linking cooperation with industry enterprises in order to gain access to the latest technologies, laboratory equipment, as well as organizing study visits to companies producing electric vehicles.

IV. Infrastructure preparation:

1. **Purchase of necessary equipment:**
    - Conducting an analysis of the needs and use of necessary equipment, products such as kits for building prototypes, laboratory equipment, tools, as well as the purchase of electronics.
2. **Establishment of laboratory workshops:**
    - Designing a workshop that enables practical experience in creating, testing and improving devices powered by renewable energy sources.

V. Organization of guides for teachers:

1. **Training of the teaching team:**
    - Organizing classes not only for children, not only technical issues, but also teaching methods, motivational strategies and developing educational materials.
2. **Upgrading qualifications:**
    - Creating development opportunities for teachers, their participation in industry conferences, professional development courses, as well as enabling the exchange of experiences with other educators.

Iceland Liechtenstein Norway grants

VI. Implementation of the teaching program:

1. **Lesson implementation:**
    - Gradual introduction of the curriculum, taking into account teaching methods resulting from students' achievements and the resulting individual needs.
2. **Organization of educational activities:**
    - Organization of educational activities, such as science fairs, innovation competitions, student presentations, which enable the presentation of results to the school community.

VII. Assessment and improvement:

1. **Monitoring student progress:**
    - Systematic assessment of students' progress using this tool, such as exams, projects, as well as analysis of data from regulatory bodies.
2. **Feedback from students and teachers:**
    - Conducting regular surveys and meetings with students and teachers to collect feedback, analyze results and make adjustments to the curriculum.
3. **Program improvement:**
    - The repeatability of the cycle leads to improvement of the curriculum based on assessment results, participant feedback, technological updates and developments to keep the program always current and effective.

Conclusions:

Working on the basis of our own activities and experiences of the Norwegian partner, we noticed the need and possibility of changes in the way vocational education is conducted at our school. The entire project work and all the obtained results were used to set a direction for modern education, which we can develop through participation in international projects. One of the most important effects of such cooperation is the creation of a plan for future pedagogical innovation entitled "Motor vehicles using renewable energy sources".

This innovation is part of the global trend of ecological transport, which is particularly close to Norwegians. Currently, Oslo is one of the European cities with the largest fleet of electric buses. The field dealing with ecological solutions in passenger car drives is also highly developed. The development of this pro-ecological trend in transport is an opportunity for the emergence of new technologies and new branches of the automotive industry also in other European countries.

As a school, we would like our innovation in the field of motor vehicle technology to provide our students with the opportunity to acquire valuable professional skills and find a good job in the future, if not locally, then throughout the EU. We see here an opportunity to continue cooperation with Norwegians and we are ready to prepare and submit another project as part of obtaining Norwegian funds for this purpose.


Iceland
Liechtenstein
Norway grants