

## **DunE-BB-EU Parent Dialog**

March 24, 2021



### **"How should regional digitally-enabled and sustainability-oriented centers of excellence in vocational education be designed from the parents' perspective?"**

In 2018, the Free State of Bavaria provided around five million euros in funding for technical equipment at 43 vocational schools throughout Bavaria as part of the **"Centers of Excellence at Vocational Schools" program**. This funding covered the procurement of technical equipment ranging from Industry 4.0 project workstations to high-tech production lines.

The centers of excellence are intended to provide new impetus for high-performance and future-oriented vocational education. This also included appropriate further training for teachers at the vocational schools. They received specially designed advanced training at the Academy for Teacher Training and Personnel Management (ALP) in Dillingen and at so-called ALP partner schools in the individual regions. The Institute for School Quality and Educational Research has, among other things, developed suitable teaching units for the corresponding training occupations.

As part of the "Centers of Excellence at Vocational Schools" project, the Free State of Bavaria bears 50 percent of the total eligible costs for the technical equipment, while the other half is covered by the respective independent cities or districts as the sponsors of the vocational schools. This means that a total of around ten million euros has been made available for new technical equipment for the schools.

Addressing the impact of digitization on professional activities is a central educational mission of vocational schools. Vocational schools in Bavaria have actively taken on the challenges of a digital professional world. For this reason, the Free State of Bavaria invested in vocational education even before this program just mentioned, **the funding program "Industry 4.0" and the funding program "Integrated subject classrooms at vocational schools" as part of the master plan BAYERN DIGITAL II.**

17 model schools took part. With a total of 2 million euros, they were supported in bringing the technical equipment of the schools into line with real industry standards and in the targeted further training of teaching staff. The multi-year support program "Budget for integrated specialist rooms at vocationally qualifying schools" comprised a volume of 35 million euros in 2018. Integrated subject rooms are classrooms at vocationally qualifying schools with call-specific hardware and software equipment.

All of these programs aimed for a digitally supported center of excellence. In terms of sustainable development, however, there is still a lot of room for improvement, even though models already exist, e.g., the climate school concept.

The climate school concept is not based on one-off actions, but is a multi-year, mandatory path in all CO<sub>2</sub>-relevant areas (communication and networking, purchasing and procurement, nutrition, digitization, mobility, waste, heat, electricity) in a school operation, just as it is in the working world.

The Burkhart-Grob-Schule, Mindelheim Technical School <https://www.bsmn.de/technikerschule-mindelheim/south-cheshire-college-england/> was awarded with its comprehensive commitment during the European Vocational Skills Week by the EU Commission in the school year 2020/21 as the best in the category Green Erasmus. The internationalization project of the vocational school was built up and constantly refined within 5 years. Its basic idea is derived directly from the UN's 17 Sustainable Development Goals and the meaning of vocational education:

(This is just one example of a model vocational school on sustainable teaching and learning).

## **What are the ideas of digitally supported and sustainability-oriented centers of excellence in vocational education and training, and what goals are we striving for from the parents' point of view?**

First and foremost, I would like to point out that the foundations for learning in a world dominated by digital technology and the demand for sustainability must be laid in early childhood, in elementary school and in secondary schools. Then we can continue to work on a solid basis in the area of vocational training.

**Let's start with the school buildings:** What is the energetic and technical condition? Can the building technology be used for teaching purposes? Is the energy consumption data of the school used for teaching purposes? Could one possibly make a school project out of it on the basis of the respective situation?

Education at vocational schools must be more sustainability-oriented than any other, because that is where the levers are greatest. Even if sustainable education is more than just energy or environmental education, on the one hand the deficits already start with the former. The vocational school sector, for example, probably requires the most energy and emits the most CO<sub>2</sub>.

We would also have to look at the school construction programs of the municipalities and states: How are they designed?

What does the **initial and in-service training** of teachers look like with regard to sustainable development? This applies to the initial training at the university as well as to the 2nd phase in the seminar or in the traineeship. Is there a consumer-oriented basic

education in the energy sector for every field of study? The energy sector should be seen in a broad sense, e.g. energy and agriculture, energy and nutrition, energy and house construction, energy and mobility, energy and waste, etc.

At every professional center of excellence, there must be **sustainability officers or environmental officers**, or better yet, an entire team. Just as it is self-evident that there are, for example, safety or fire protection officers.

Sustainable development must be prescribed in the **QM program of vocational schools** and in the **evaluations**, there must be questions about sustainable orientation and sustainable action.

Sustainability officers or environmental officers must be given **time allotments** for their work. On the one hand, because teachers cannot be constantly burdened with additional tasks without credit, and on the other hand, because without a commitment, it is not possible to demand that they take care of and perform the corresponding tasks.

Specialized staff positions for sustainability education must exist **at governments or school boards**. These positions simply have to be created.

What is the situation in the **ministries of education**? Do they have staff explicitly responsible for sustainable development? Structures that have now been created for digitization must also be created for sustainable development.

### **Back to the lessons, the essential factor at school:**

Sustainability education is more than environmental education. The UN has formulated 17 goals for sustainable development. These goals may not be well known at vocational schools. Accordingly, teaching is not oriented towards them. But at a digitally supported and sustainability-oriented center of excellence for vocational education, this must be the case!

If sustainability is also to be thought of globally - and actually it only makes sense in this way - comprehensive, sustainability-oriented **internationalization measures** would be necessary, as was and is practiced at the Mindelheim vocational school with the foreign projects mentioned at the beginning. Own knowledge acquisition in a sustainability area takes place at the same time when using a foreign language to communicate with foreign partners and produce problem solutions. This promotes social competence and self-esteem in equal measure. Let's not forget: vocational schools are not only good at theory, they are also good at practice. And presenting lessons as a problem-solving method also appeals to students!

Of course, digital support and digital networking with foreign partners is very helpful here. Even if personal contacts are still important and correct in many respects, not every trip always has to be made in person; some things can also be solved digitally. Some teaching projects on a sustainability topic could perhaps be carried out digitally with suitable foreign school partners.

## What conclusion do we draw?

Digitization (digital education, media education) includes a variety of digital possibilities, it is more than just technical equipment and it is a central task. Digitization in schools is not a substitute, but a supplement to and in the classroom. Nevertheless, it **MUST** be used in the teaching and learning process, especially in vocational schools. This must be a matter of course.

However, **digitization is not an end in itself**, but must pursue clear goals and bring added value. Data use, algorithms and artificial intelligence are enormous fields of knowledge for which a deep understanding is needed and which must be understood.

**Responsible decision makers in education and politics** have to act and decide according to these findings. Above all, thinking in the direction of sustainable development **MUST** start as soon as possible and then be acted upon decisively. Equally important is the **interaction between the vocational centers of excellence and the companies and training centers**. It would be confusing if different digitalization and/or sustainability directions were taken at schools and in training companies.

**Sustainability** makes the most sense when **thought globally!** We do not live in an ivory tower, nature, climate and weather events act in a global interplay. For example, the rampant burning of the rainforest is also of concern to us and affects all of humanity.

And last but not least: **VALUE TRAINING is indispensable** for this!

If we want to act, work, teach and learn in a digitally supported and sustainability-oriented way, we have to live and stand up for our standards and **VALUES** defined in the Basic Law and the constitutions. Because regardless of whether we are dealing with material things, nature or people, we can only live together in the long term and secure a future worth living for future generations if we are able to deal with everything in a careful and appreciative manner.

**Therefore, be motivated and let's help together to tackle our sustainability goals and digital transformation and demand them everywhere.**

There is no claim to completeness in the above list.

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