Dakora - Supporting individual digital learning paths

The Oscar Paret school in Freiberg/Neckar is a typical community school. The teacher greets the class 9d
to the PEARL-session - the personal learning time – it is an open learning time for students during classroom work
where students workself-organized.

They work on different individual tasks at their own pace – they take up responsibility for their individual learning,
make themselves competent recognize that they „can do" something – this is the expression used in the digital competence grids in
open learning phases which are being planned and documented using DAKORA – the app which can be used for all school types.
Dakora stands for "working with digital competence grids".

For this, students collect their tablets this morning to work with the app Dakora at their learning space. Hannah is one of the students.
Using Dakora she finds an overview of „when do I have to do what and how?"

Hannah: „I am at the starting page of Dakora and now I click on the weekly schedule and then I have to choose which subject I want to work with and today I choose Math and I see all tasks in the left menu that I can work on and for planning a task I have to click on it and drag it to the weekly schedule.
Then I can define the end time of the task - for how long I would like to work on the task. I can to the same thing again with a second task. To work on the task itself I have to open it by selecting the task and holding it – this way the task is being opened and I can see additional information – for example the reference to the school book for this task".

In just a few steps Hannah sees which tasks the teacher has assigned to her and which materials she should work on.
Today it is a task from a book. Hannah can see the competences that are associated with the task.
Hannah fetches the book – it is about Pythagora's theorem. The task is not quite easy.

Hannah: *„Luca – can you help me please?"* Besides the teacher today Luca is the math expert in the open learning phase. Hannah uses
his help and receives an explanation about how to solve the task.
Hannah tears out the solution from the scrapbook and puts it in the post box of the teacher.
This is just one form of turning in a solution.

With Dakora all possibilities are opened and made available - a complete digital solution is also possible by uploading the results in a file
format using the app.
Now Hannah is giving feedback to her teacher Mrs. Sabine Sommer using the app Dakora. Hannah self-assesses herself.
Choosing the smiley in the middle signalizes that without help she would not have been able to solve the problem.
In the text field she gives the reflected feedback *„Trying to solve the task I had a few problems.*
Thanks to Lukas I was able to understand everything at the end." - submit solution and inform teacher.

A little while later, independent of the feedback given in class the teacher gives more detailed feedback using Dakora,
independent of place and time.

Sabine Sommer connects the dots and gets an overall idea of the performance of her students.
Notifications in Dakora can be accessed via the notification board and she specifically aims at the students which have signalized a
problem in their feedback.

Hannah is one of them. She clicks on the student and reads her self-assessment. Now she knows that without help she would not have
been able to solve the problem. Mrs. Sommer reviews the solution process and gives feedback related to the task:
at difficulty level „M" (medium) the objective was predominantly reached.
The teacher can give this feedback in her Dakora version individually to the student.
She writes to Hannah: *Dear Hannah, in order to improve your objective evidence I will put some more tasks in your weekly schedule.*
Cheers, Mrs. Sommer

Now Hannah opens her Dakora app and sees the comments and assessments of her teacher. Hannah now knows her level. Accessing
her weekly schedule she drags an additional task to work on to Thursday of the week.
She could also choose further tasks by herself.

Hannah: „There is this advantage that the teacher can better understand specifically on what I have worked on. It is of a great advantage that I don't have to wait let's say for a week for this feedback. I get this information right away while I am still in the topic and can continue working on this quickly.
This alone offers me a good overview. There are no loose sheets in the file folder. Something gets lost easily there – it is a lot better having it in a digital form and everything can also be accessed from home as well.
I don't have to carry many file folders back home."

Hannah talks with her teacher after she has solved the additional task given.
Counselling: *„Where did you have the problems with Pythagora's theorem?"* Hannah describes her current situation.
Dakora gives this information to both students and teachers in a differentiated way for counselling.

Sabine Sommer can now pin Hannahs child-competences down.
Sommer: "No need to give up and I can now feel that you are on the right way. You are secure and want to take the next step.
Based upon our talks now I am very confident that I have assessed you at the right level."
*A*nd this is done with Dakora.

Sabine Sommer is preparing the next lessons. She selects Hannahs competences grid on the tablet in the subject Math from the left
navigation.
On the left: the individual competence fields. "Space and form" is today's topic. On the horizontal navigation the individual learning
progress and competences can be seen.
Each competence consists of several child competences which are linked to tasks.

Take this as an example:
„Using Pythagora's theorem I can check if triangles are rectangular"

Sabine Sommer now evaluates the child competence: For the three difficulty levels she chooses the middle one selects „M"
and marks the child competence as fully achieved.

The teacher can review and decide: Has the competence been reached?
She draws a mental picture: first the help from Lukas, then the learning evidence and the additional task solved and counselling.
Dakora helps Sabine Sommer gain a pedagogical comprehensive assessment.
She selects the competence grid then the student.
In the top line the competence that is being worked on is displayed.

Sabine Sommer selects the difficulty level and enters the grade: 2.

Parents' conversation: with Dakora a precise picture can be drawn about how Hannah is performing, where are her strengths and
weaknesses. At the end of the term everything is discussed.
*„As we have communicated on during the parents' evening we have transferred the documentation into an electronical format.
The competence grid contains the competences of the state curriculum."*

Dakora – the key for individual advancement.

It is for Hannahs' benefit: *„I am on level "M" at the moment and I will try to improve to advance towards the "E" level. I realize that at the
moment I am on "M" level and still have to work hard to get to the next level. I will take my time."*

Parent: *"I am happy about the development. We will try to be supportive and help Hannah along her way."*

Sommer: *"Basically it was quite easy to introduce Dakora in class room work. Students are very motivated – they receive feedback
immediately after turning in their tasks and also get feedback not only related to the subject like Math but also related to soft skills and
interdisciplinary subjects which are necessary during learning support or in the observation phase during open learning time.
These are social competences and teachers can give feedback on process-related competences which can be addressed during
councelling to develop mutual goals.
Students really like to work with this new digital medium because they also network and communicate together. As a result the amount
of single students work decreases significantly but rathernew and very inspiring learning processes and learning arrangements are
created that match weaker students with high-performing students.
They support and empower each other through this process."*

The Commercial school in Backnang: here Dakora is also used and works well just as in any other school type – free and looked after.
With very heterogeneous pupils in the transition between school and vocational training an individual learning guidance is essential.

The professional group for German language in Dual Preparational Vocational Education meets for the preparation of the topic
 "business letter". Colleagues have decided to share their materials and work on them together.

*„What we have here are in printed for the criteria of a business letter. It is designed for levels A, B and C but we could differentiate on the
level more detailed. I would like to get your opinion on that. We could give some additional information beforehand which could be more
help to some and maybe less help for students on the C level.
Dakora covers everything that AV Dual (dual vocational education) brings along related to open learning times.
The competence grids are mapped in the app and teachers can add individual materials to competence fields.
And as soon as someone uses a tablet during class room work students are magically drawn to this – Dakora is a help for that."*
*„We have many different students - very heterogeneous students where each individual learns in his or her own pace in an individual
learning style.
Looking towards the student there is this great advantage that learning progress can be documented nice and easy.
It is also very helpful if we work on our materials together. In the end we can all work with the same materials, we can distribute them to
students so they can work self-organized."*

Which material is linked to which competence?
The teachers of the professional learning group have decided on this together. Markus Merk and Linda Hertweck add the worksheet to
the appropriate child competence with Dakora.
The criteria for a business letter are already available digitally. Markus Merk closes the file. Using the options menu of the app
he can now enable the edit mode for the competence grid clicks on the desired child competence and clicks on „add new material".
The window „add new material" opens and Markus Merk enters a title for the new material.
The document can be found by this title using the search function at a later time.
The difficulty level is correct, the file is uploaded.

In the material section the file is now accessible for all colleagues. Both have the choice:
the document can be linked to further child competences. This does not only work with text-files. During the next step an
assignment is added to the material database, also another link is added with the goal that students work on the topic independently.
The team adds materials to Dakora step-by-step and based on the teachers' specialization. Not everything has to happen at once and it
can happen anywhere.
Susanne Gropp works together with her colleague Frank Kaiser at her desk in the staff room. She logs in to the Dakora app using
the two-factor authentication.
A randomly generated number code entered using a second device provides data security – and she is logged in.

Susanne Gropp is preparing and reflects: which material should I use for which student and to which extent
should it be made available with Dakora.

This is how it works: the competence field on the left side is called „writing texts". Choose the child competence
on the upper row and click on the button „material". Now Susanne Gropp compiles a small temporary archive. She does this by
adding the four selected materials to the so-called pre-planning storage.
Out of this storage she can take and distribute. She now changes to the pre-planning storage.

The materials are located in the left column.
In the right column the students are listed.
The document with the characteristics of a private business letter is distributed to all students.
With a final click the teacher sends the assignment to the whole class.

Now she resets the selection and distributes additional material individually. These three documents are only distributed to Ayla and Kai. This way Susanne Gropp can assign tasks and materials specifically for an individual learning phase of one student or for all students. This is a central and flexible function of Dakora.

During the open learning phase in Backnang students also work on their assignments using tablets – so Dakora is a digital learning guidance - individual learning processes are made visible specific counselling becomes possible. Students realize the goals of the curriculum.

Using Dakora students regulate, document and plan their individual learning success. Dakora enhances learning partnerships between students and teachers.

Gropp: "You are showing initiative! Very good! Go ahead…"

Lilly: *"With Dakora it is very easy to get the weekly schedule that is on your learning agenda on your tablet so all learning materials are in the right place and not lost. Everything is on the tablet and it is also possible to watch videos - informational videos which are linked there so it is easier to understand. It is also possible to look in the competence grid – even from home if you have downloaded the app. I can see what my performance is at the moment in the different categories and where it is still possible to improve. And then it is possible to ask the teacher if I can have additional material through the app. This way it is easy to communicate with the teacher – even from home."*

Merk: *„At the beginning it is always a little difficult. You can ask yourself the question: Do I have to do this at my age? But if you see young people being excited and how they open up and how they embrace this medium it becomes clear that you have to do this as well. This way it is possible to guide and lead them on their way. You give advice and support in this phase - if you see it this way. And from this moment of consideration on it was no problem for me anymore. It is something for me as well – I am still learning and I can use it to my benefit as well. My lesson preparation becomes easier and even after my instructions it has become easier for me. I can concentrate more on the young individual which sits opposite to me."*