



Baden-Württemberg
MINISTERIUM FÜR KULTUS, JUGEND UND SPORT

With the Individual Student's Needs in Mind: Promoting Personalized Learning in All Types of School

**Third Strand of the OECD Innovative Learning Environments (ILE) Project:
"Implementation and Change" – Monitoring Note 1**

1. Context

In May 2011, a coalition of the Green Party and the Social Democratic Party took over the charge of governance in Baden-Württemberg from a coalition consisting of the Christian-Democratic Union (who had governed Baden-Württemberg with various coalition partners for nearly fifty years) and the Free Democratic Party. Education figured prominently in the coalition agreement between the two parties. They had realized that the education system in Baden-Württemberg – although often praised for its good quality when compared to the systems of other federal states in Germany – had some shortcomings. Traditionally, the education system on the level of secondary schools in Baden-Württemberg has a tripartite structure. After four years of elementary school, it branches off into three different types of secondary school: the *Hauptschule/Werkrealschule*¹ (for the students gifted in practical aspects), the *Realschule* (for the students equally gifted in theoretical and practical aspects) and the *Gymnasium* (for the students gifted in theoretical aspects who intend to go to university after school). This tripartite structure is complemented with a very elaborate sys-

¹ The difference between the *Hauptschule* and the *Werkrealschule* being that – while the *Hauptschule* only allows for a lower secondary school certificate (*Hauptschulabschluss*) at the end of year 9 – the *Werkrealschule* offers students the option to obtain a lower secondary school certificate at the end of year 9 or 10 and an intermediate secondary school certificate (*Werkrealschulabschluss*) at the end of year 10.

The opinions expressed and arguments employed herein are solely those of the authors and do not necessarily reflect the official views of the OECD or of its member countries.

tem of vocational education and traditionally also a whole range of different schools for students with special educational needs.

The shortcomings of the tripartite school system include the following aspects:

- First of all, once a child was assigned to a *Hauptschule/Werkrealschule* or *Realschule*, it was very difficult to move upwards due to the fact, for example, that the curricula of the different types of secondary school are not sufficiently synchronized.
- Second, there is considerable inequality of educational opportunity within the tripartite system, as for example teachers teaching in the *Hauptschule* are educated at universities for a shorter period of time than teachers teaching at the Gymnasium level. As a consequence of all these equity issues in education, there still is too much of a correlation between children's family backgrounds and the educational success they can achieve. This especially affects socially disadvantaged individuals and individuals with a foreign background – for example, children from immigrant families are often sent to the *Hauptschule/Werkrealschule* only because they are not yet proficient in the German language, with little or no consideration for the intellectual potential they might have.
- Third, the tripartite system is not sufficiently equipped to deal with the challenges of the future. Among these challenges are:
 - o the fact that in all types of schools the learning groups are becoming more and more diverse in terms of background and predispositions for learning
 - o the demographic development ensuing in a declining overall number of students – according to calculations of the Ministry of Education, Youth and Sports, the number of students will decrease by a considerable percentage within the next years. Were the tripartite school system to be held onto, this decrease in the total number of students would leave many schools, especially in rural areas, with fewer and fewer students to teach – resulting in considerable difficulties as far as reconciling a good quality of teaching with an efficient use of resources is concerned.²

² see also p. 4f.

- While the number of students is on the decline, Baden-Württemberg is threatened by a considerable skills shortage. According to calculations of the Chamber of Industry and Commerce, there will be a shortage of 220.000 skilled people in Baden-Württemberg each year until 2030. Therefore, Baden-Württemberg needs to increase the number of skilled workers and also of university graduates.

Therefore, in their coalition agreement, the Green Party and the Social Democratic Party claimed:

The education system in Baden-Württemberg is not up to date. It is socially unjust and based on the principle of selecting students. This is what we want to change, as educational opportunities must no longer depend on students' social backgrounds or their parents' bank accounts. Our goal is a socially fair education system where children do not have to adapt to the school, but where the school is adapted to the children – a school in which all children reach their personal educational aims, where their individual needs are paid attention to and where they can use their talents in the best possible way. Attending to students' individual needs, recognizing differences as values and the principle of equal opportunities are the guiding ideas of our education policy (Bündnis 90/Die Grünen/SPD Baden-Württemberg 2011, 5f.).³

In short, one of the central goals of the new government has been to improve the education system in a way that will guarantee each student – according to his or her individual abilities – the best possible educational success and to overcome as much as possible the tremendous influence of family background on educational outcome.

Two of the most significant steps the new government has taken in order to improve the education system in Baden-Württemberg are the following:

- As of academic year 2011/12, it is up to the parents to decide – after profound consultation with their child's elementary school teachers – at which type of school their son or daughter should receive their secondary education. Until then, this decision was made by a child's elementary school teachers. It was mandatory for parents to follow the teachers' written recommendation stating which type of school the respective student should move on to after four years of elementary school. This recommendation was based on the grades the respective students had achieved throughout year four.
- Via an amendment to the education law in April 2012, the *Gemeinschaftsschule* was introduced in Baden-Württemberg, a new type of school designed to allow students of all abilities to keep learning together after their four years

³ This and all subsequent quotations have been translated by Christoph Schüly (Ministry of Education, Youth and Sports).

of elementary school rather than placing them in different types of school on the basis of how they performed throughout their elementary education. The *Gemeinschaftsschule* thus puts heterogeneity among students to productive use and intends to provide every student with the chance to reach the best possible educational results – according to his or her individual abilities. Since the *Gemeinschaftsschule* is an inclusive school by definition, this also includes students with special educational needs.⁴ In a bottom-up process, all schools can become *Gemeinschaftsschulen*. Applications have to be submitted to the Ministry of Education, Youth and Sports by the councils of the towns where the schools are situated. An application has to contain a concept based on clearly defined criteria such as performance, strategies of dealing with diversity among students, quality of teaching, responsibility and accountability, school climate and school as a learning organisation. 42 schools started as *Gemeinschaftsschulen* at the beginning of academic year 2012/2013, another 87 followed in 2013/2014 – the majority of them being former *Hauptschulen/Werkrealschulen*. By October 2013, 108 schools had submitted their application to become *Gemeinschaftsschule* in 2014/15. This time, the number of *Realschulen* applying to turn into *Gemeinschaftsschulen* had increased from four to fifteen. In February 2014, the Ministry of Education, Youth and Sports announced that 81 of them (including 12 previous *Realschulen*) will start as *Gemeinschaftsschulen* as of academic year 2014/2015.

These innovations to the education system in Baden-Württemberg had the following effects in the academic year 2012/13:

- 60 % of the students enrolling in one of the first 42 *Gemeinschaftsschulen* in 2012/13 had a recommendation for the *Hauptrealschule/Werkrealschule*, 28% for the *Realschule*, 12% for the *Gymnasium*. Given the fact that at this stage most of the *Gemeinschaftsschulen* are former *Hauptschulen/Werkrealschulen*, this is a successful start.
- Unsurprisingly, the percentage of students enrolling in the *Hauptschule/Werkrealschule*, which had been on the decline for years, decreased even more from 24 to 16 per cent. In academic year 2013/14, it went further down to 11.9 per cent.

⁴ Structure and design of the *Gemeinschaftsschule* will be detailed in chapter 3.

- Classes at *Realschulen* became more heterogenous: While 60 per cent of the students attending year five at a *Realschule* in 2012/13 had been provided with a corresponding recommendation, 23 per cent had been recommended to move on to the *Hauptschule/Werkrealschule*, 17 per cent had even been seen fit by their elementary school teachers to succeed at the *Gymnasium*.
- Judging by the numbers, the *Gymnasium* is not affected by heterogeneity to the same extent: 89 per cent of students in year five at a *Gymnasium* had been recommended to go there, only 10 per cent should have moved on to a *Realschule* according to their elementary school teachers. Only one per cent of students enrolling at a *Gymnasium* had a recommendation for the *Hauptschule*.

These results point to the fact that the traditionally tripartite education system in Baden-Württemberg needs to be restructured considerably. The overall decline in the number of students along with changing preferences on the part of the parents as to which secondary school their children should graduate from has led to the fact that many secondary schools – especially *Hauptschulen/Werkrealschulen* – had to be closed, especially in the rural parts of Baden-Württemberg. While only a few years ago there were more than 1200 *Hauptschulen/Werkrealschulen* in Baden-Württemberg, only 862 were left in 2012/13 – the number is further decreasing. Many of them have become very small, which results in organizational as well as pedagogical difficulties. Even though these developments have been obvious since the turn of the millennium, the former government in Baden-Württemberg failed to adapt the education system to the changing circumstances.

2. Aims

The coalition parties have started to restructure the tripartite school system in a way which intends to guarantee each student the possibility to gain any school leaving certificate available in Baden-Württemberg within a reasonable distance. The aim is, in the long run, to develop the tripartite school system into a "system of two pillars" – with the *Gymnasium* as one pillar. The other pillar will offer an integrative educational path developing from the different types of school of the traditional tripartite system and offering a broad range of different school leaving certificates. The model for this second pillar is the *Gemeinschaftsschule*. It is expected and desired that *Haupt-*

Werkrealschulen and *Realschulen* will turn into *Gemeinschaftsschulen* in the future. A date by which this process should be completed, however, has not been set.

These developments within the education system in Baden-Württemberg have an impact on the quality of teaching in all types of school. In *Gemeinschaftsschulen* heterogeneity among students is regarded as desirable and therefore encouraged, and teachers working there are expected to be prepared to attend to students' individual needs. Other types of school have worked under the assumption of a fairly homogenous body of students for a long time. Due to the fact that heterogeneity has increased in the *Realschule* and – to a lesser degree – in the *Gymnasium* too, these types of school also have to think of ways to support students individually. Therefore, the government of Baden-Württemberg has taken various steps to establish personalized learning in all types of school.

3. Theoretical background

In its decision-making processes, the government of Baden-Württemberg and the Ministry of Education, Youth and Sports pay very close attention to the findings of education research and also enlist the advice of renowned researchers from the field of education theory.⁵ The aim of the following chapter is to provide the theoretical background for the development towards personalized learning that Baden-Württemberg is aspiring to and to detail what has to be adhered to for this transition to be accomplished successfully.

The chapter draws heavily on an expertise that was initiated by the German Education Union (GEW) Baden-Württemberg, but contains references to other sources too. The GEW has supported the idea of allowing students to learn together beyond their four years at elementary education in a school like the *Gemeinschaftsschule* for many years. The expertise, edited by Thorsten Bohl and Sibylle Meissner, in which seasoned experts from different disciplines in education theory clarify – on the basis of the current state of research – how a school where children of all abilities learn together can operate successfully and what difficulties it might have to overcome, was compiled to accompany and support the introduction of the *Gemein-*

⁵ For example in March 2014, the coalition partners Green Party and Social Democratic Party organized a hearing to discuss future perspectives for the type of school *Realschule*, which – as was pointed out in chapter 1, also has to find ways to successfully deal with groups of students becoming increasingly heterogeneous. The keynote speech was delivered by Prof. Dr. Anne Sliwka from Heidelberg University. The ideas she put forward in her speech are currently being discussed and taken into consideration for the future development of the *Realschule*.

schaftsschule in Baden-Württemberg. It intends to provide everybody involved in the introduction of the new type of school – especially the teaching staff in the schools themselves – with reliable guidelines with regard to the various pedagogical and organizational tasks the introduction of this new type of school calls for (see Bohl/Meissner 2013a: 7).

The results of the expertise were looked at closely by the Ministry of Education, Youth and Sports and thus feed into the work of the Ministry. One of the strengths of the publication lies in the way that it sums up the current state of research with regard to personalized learning in heterogeneous learning groups. Therefore, its results can also be adapted by teachers working in other types of school.

Matthias Trautmann and Beate Wischer (2013: 49) name three conditions that need to be fulfilled on the part of the teacher for him to successfully deal with heterogeneous learning groups. First of all, teachers need the right attitude: They should regard heterogeneity not as a burden, but as an enrichment and put it to productive use. Second, to plan their lessons, they should be well-informed about the different pre-conditions their students bring to the classroom. Therefore, their skills at diagnosing their students' competencies and needs have to be well-developed in order to make the right decisions with regard to which type of support and assistance each of their students' needs. Third, seeing as their teaching should no longer be geared at a supposed average, but should be adapted to students' different needs, teachers have to have a broad repertoire of teaching strategies at their disposal, they have to know the advantages and disadvantages of the different methods and they have to be able to use them in a way that adapts to their students' individual preconditions and needs. For the *Gemeinschaftsschule* to succeed, Ingrid Hesse and Brigitte Latzko (2013: 211) also emphasize the importance of "well-developed and differentiated diagnostic competencies" on the part of the teachers as well as their willingness "to permanently reflect on and to perfect them". According to them, well-developed diagnostic skills imply above all theoretical knowledge from the fields of teaching psychology, developmental psychology, pedagogical and psychological diagnostics and that this knowledge is made use of in a reflected, controlled and experimental manner. "As far as diagnosis goes, the tasks of the teachers lie in an exact analysis of the respective [student's] knowledge in order to develop differentiated, tiered and per-

sonalized tasks, solution aids and inputs from this knowledge" (Hesse/Latzko 2013: 222).⁶

As far as the actual teaching at the *Gemeinschaftsschule* is concerned, Erwin Beck (2013: 228) claims that it is characterized by regarding diversity and heterogeneity among students as a chance. According to him, a student's success in learning is connected with the performance of his teacher. It is the teacher's task to plan and conduct his lessons

and to initiate the individual learning processes on the part of the students, for which the students at a *Gemeinschaftsschule* bear a considerable amount of responsibility themselves. Students' learning and motivation depend to a significant extent on an efficient classroom management, an atmosphere conducive to learning, on the clarity and structuredness of the teaching and on how students are activated. The responsibility for these hallmarks of good teaching lies with the teachers (Beck 2013: 239).

However, Beck (2013:229) also clearly emphasizes the active role of students in a personalized process of teaching and learning. According to him, the challenge is to diagnose what stage a student has arrived at within this process and to enable him or her to acquire the competence aspired to on his/her own by providing the necessary guidance for him/her to solve appropriate problems and tasks. Trautmann/Wischer (2013: 56) regard it as a basic requirement "to establish a balance between types of cooperative learning and individual learning or – respectively – guiding students individually in their learning processes".

According to Ela Eckert (2004: 97), personalized learning involves

- (1) giving every student the chance to develop his/her motoric, intellectual, emotional and social potential completely
- (2) supporting him or her with suitable measures (by allowing him enough time to complete tasks [...], by adapting learning material to his needs and – if necessary – by offering him the support of other staff members with special competencies).

Among others, Eckert (2004: 99) lists the following indicators that show a high quality of personalized learning:

- Students work on different tasks and – in accordance with their individual pre-dispositions – make good progress.
- According to topics, focus of interest and abilities, there are different text books, learning material and study aids.

⁶ Beck (2013: 232) also regards a teacher's differentiated diagnostic competence enabling him to adapt his teaching to the individual needs of a student as a basic requirement for a type of teaching which challenges students and which is directed at dealing with heterogeneity in a competent way.

- Students with learning difficulties receive extra help.
- All students – that especially includes the weaker ones – are requested to reflect on their individual learning progress.
- Students with special needs have received an exact diagnosis of their learning progress. A plan of support has been developed.
- High-achieving students have the right and the option to leave routine tasks behind and to choose their own areas of focus.
- All students are aware of the fact that there are different levels of ability. They co-operate support each other.
- The teacher makes clear to every student individually what is expected of him and helps him/her to accomplish it.

Bohl (2013b: 250f.) explains how personalized learning is often organized by means of arrangements similar to individualized instruction ("*Freiarbeit*") based on suitable material or structured around learning plans.

Personalization is achieved by 1. systematic diagnosis; 2. by adapting the material more strictly to the learners' needs (not necessarily by individualizing it, but – in any case – by differentiating it; 3. by monitoring the processes by means of instruments like competence plans and 4. by organizing individual advising or coaching with clearly defined processes (ibid.).

Albert Bremerich-Vos (2013: 207ff.) shows how personalized learning can be put into practice by using the subject German as an example. He explains how differentiation can be achieved by means of tasks with different degrees of difficulty, how students can work with texts about different topics, how the degree of individual support students get can differ and how effective different types of feedback may be.

Bohl/Meissner (2013b: 325) summarize:

The basic idea of teaching heterogenous groups of students lies in [...] offering – within a framework of a demanding, differentiating, well-prepared and structured learning environment – learning contents which learners to some extent acquire themselves, which they practice and internalize – depending on their capabilities in the respective subject and also on their ability to organize their learning themselves. This does not mean in any way that students are left to their own devices, on the contrary: They need various forms of support by a structured learning environment (e.g. tasks structured by topics/levels of difficulty), prepared material (e.g. study aids), fellow students (e.g. tutoring system) and teaching staff (e.g. individual mentoring).

Beck (2013: 237) points to the necessity of checking what levels of competence students have arrived at on a regular basis: "Learners should have the possibility to be responsible themselves for assessing and evaluating their learning progress on a regular basis by means of formative tests." He regards grids of competencies or so-

called rubrics as an attractive tool for this purpose. They can be both used for developing competencies in the first place as well as for formal evaluation purposes. They provide criteria by means of which the knowledge and competencies students have gained can be evaluated.

Bohl (2013a: 104) sums up the current state of research as regards the effectiveness of learning in heterogenous groups. He arrives at the conclusion that – even though research results in this field are not completely consistent – education systems allowing students to keep learning together beyond elementary school rather than separating them after four years or the introduction of an integrative type of school such as the *Gemeinschaftsschule* contribute to more educational equality, since the effects of educational decisions which are not connected to how a student performs or which have to do with the sociocultural background of a student are reduced. Bohl (2013a: 108) also points out that, as far as the actual achievements of students go, the research results are not completely consistent either. In studies based on international data the results tend to be more positive with regard to integrative systems (with some exceptions, however), while in national surveys they tend to be more in favour of non-integrative systems. As regards heterogenous learning groups, Bohl (2013b: 247) suggests that it is especially low-achieving students who can benefit from them. According to him, two additional measures have to be taken: First, the school needs to ensure that high-achieving or the highest-achieving students respectively are sufficiently challenged, also in the form of temporarily being placed in homogenous groups. The group of high-achieving learners should not be too small, either. Second, in the light of the "reference group effect" (Bohl 2013b: 246), the school needs to strengthen the self-concept of low-achievers by introducing an individual benchmark, by providing them with individual support and by allowing them to gain a sense of achievement. Linda Wirthwein (2013: 91) also calls attention to the interests of intellectually highly gifted students: "For highly gifted students and their parents, attending a *Gemeinschaftsschule* has to be an attractive alternative to other types of school: Strategies to support highly gifted students should be advertised." Ute Kratzmeier (2013: 25) regards it as "essential for the acceptance of the *Gemeinschaftsschule* among the population that all other types of school – including *Realschulen* and *Gymnasien* – have to participate in this development. This is the only way to avoid the impression that the *Gemeinschaftsschule* only replaces former *Werkrealschulen*." Achim Albrecht (2013: 150) sums up that schools winning the

German School Award – a prize advertised by the Robert Bosch Foundation – illustrate that it is possible to work with heterogenous groups in a way that enables the students in these groups to obtain different school-leaving certificates.⁷

Albrecht (2013: 155) warns that the transformation from a teaching style centered more around the teacher, structured in slots of 45 minutes each, towards personalized learning is time-consuming. Bohl/Meissner (2013b: 326) explain that "[t]he requirements of teaching at the *Gemeinschaftsschule* cannot be met solely by means of isolated methodical innovations (e.g. by introducing grids of competencies and work plans). What is necessary is a systemic development on all levels." Andreas Müller (2013: 274) deems a paradigm shift necessary:

The point is to find an approach to learning at school from the perspective of the learners and to support them in designing their own learning successfully and with a target in mind. This calls for a corresponding learning culture. In this context – and only then – can instruments such as grids of competencies be helpful.

Albrecht (2013: 158) emphasizes the need for profound evaluation processes on the part of schools becoming *Gemeinschaftsschulen*:

The further development of the school in the following five or ten years requires a thorough analysis of the current situation and as precise a description as possible of the fields of development to be tackled in the future. The landmarks resulting from this process form the basis of a regular evaluation as to whether the school develops according to plan or whether adjustments are necessary.

It is not only the teachers at the *Gemeinschaftsschule* who will have to perform a paradigm shift towards more personalized learning in the foreseeable future. As Matthias Trautmann and Beate Wischer (2013: 50f.) point out, not only teachers at the *Gemeinschaftsschule* have to cope with a heterogenous body of students, teachers in the traditional (tripartite) education system are also confronted with heterogeneity. According to them (ibid.) even students who all received the same recommendation by their elementary school teachers – to move on to the *Hauptschule* or the *Realschule* respectively – still differ from each other in various respects. Along with Erwin Beck (2013: 230) they point to the fact that leading theorists from the field of education regard personalized learning as one of the hallmarks of good teaching in general. Moreover, as has been shown in chapter 1 of this paper, classes in *Realschulen* and – to a lesser extent – *Gymnasien* in Baden-Württemberg are becoming more and more heterogenous too. In order to be able not only to cope with this situa-

⁷ How heterogeneity among students is dealt with is one of the main criteria used to assess schools applying for the *German School Award* (cf. <http://schulpreis.bosch-stiftung.de>).

tion but to put it to productive use, teachers need to be trained accordingly – a necessity Trautmann/Wischer (2013: 57) and Albrecht (2013: 155) point to.

4. Strategies and activities

a. *Implementing personalized learning in all types of school*

One of the most significant steps the current government in Baden-Württemberg has taken in order to promote and spread the concept of personalized learning on a large scale was the introduction of the *Gemeinschaftsschule* as of academic year 2012/13.

This type of school revolves around the following principles:

- It is a school in which equality of opportunity is connected with a clear focus on and a commitment to learning.
- It is a school for everybody and therefore a school which is especially suitable for inclusive education.
- It is a school placing great value on the concept of personalized learning⁸ and cooperative learning in both heterogenous and homogenous groupings. Phases of instructive teacher input will typically alternate with times when students work on a task together with others or individually. The teachers see themselves as specialists in their respective fields, as experts at diagnosing students' individual level of skills and knowledge and as facilitators of a range of learning processes.⁹
- Teachers from all three traditional types of school and teachers for special educational needs teach and collaborate at this type of school, and the schools benefit from this mix of teacher expertise and specific skills.
- The *Gemeinschaftsschule* operates with an all-day concept, providing a structured space for learning from the morning until the afternoon (typically 3:30 pm or 4 pm)
- Different levels of degrees are offered at this school.
- The basic requirements of the *Gemeinschaftsschule* are:

⁸ The basic components of personalized learning are detailed in section 2 of this paper. The schools applying to become *Gemeinschaftsschule* are free to choose certain aspects to focus on. It is vital, however, that the concept that they submit along with their application contains strategies of how they intend to personalize learning.

⁹ The difference between the *Gemeinschaftsschule* and the *Gesamtschule* (another integrative type of school, "comprehensive school") is that, while the *Gesamtschule* separates students into different, supposedly homogenous classes, the idea behind the *Gemeinschaftsschule* is to let students work in heterogenous groups whenever this is possible and to form homogenous groups only on a temporary basis when this seems appropriate (as was outlined in chapter 3, this can be advisable in order to challenge the highest achieving students within a learning group).

- The central role of teachers in environments where personalized learning is to be implemented was emphasized in chapter 3. In accordance with these findings, the *Gemeinschaftsschule* requires teachers ready to work with students on different skill levels
 - who are interested in initiating and conducting learning processes for students and who are not entirely focused on “teaching” subjects
 - who are willing to spend time with students even when their “lessons” are over
- a school administration which considers providing professional supervision as its main task and which does not see itself as a centralist authority in charge of making final decisions. This implies that schools are provided with more autonomy and public accountability.¹⁰

However, as was also pointed out in chapter 3, the other types of school also have to develop their teaching towards more personalized learning. In Baden-Württemberg, it is not only the aforementioned increasing heterogeneity in all types of school which makes this necessary, but also the aim of the current government to establish an educational system of two columns with an integrative educational path alongside the *Gymnasium* (cf. chapter 1). In order to strengthen personalized learning in *Realschulen*, the Ministry of Education, Youth and Sports provided them for the first time ever with extra resources in the academic year 2012/13. A year later, additional resources were set aside for year eight in the *Realschule* for the purpose of analyzing students' individual interdisciplinary competencies to help them make a suitable career choice. With the fact in mind that heterogeneity is also increasing in the *Realschule* due to the rising number of low-achieving students¹¹, the Ministry of Education, Youth and Sports is currently working on a concept to support the group of low-achieving students. Since 2012/13, the *Gymnasien* have been given extra resources to support students individually in year 5 and 6, especially in the subjects German, Mathematics and foreign languages.

¹⁰ This list is adapted from Rüp (2012: 25f.). Margret Rüp was Administrative Head at the Ministry of Education, Youth and Sports and Deputy Minister of Education from May 2011 through July 2013 and, in this function, played a major role in developing and introducing the *Gemeinschaftsschule* in Baden-Württemberg. She has also published extensively on the ideas and theories underlying this new type of school.

¹¹ 2012/13: 23 per cent of the students in year 5 at the *Realschule* had been recommended to move on to *Hauptschule/Werkrealschule*, cf. chapter 1

b. Strengthening personalized learning in all phases of teacher training

Teacher training in Baden-Württemberg is organized in three different phases. In order to qualify as teachers, students attend courses at a university or a university of education respectively – depending on the type of school they intend to teach at. They complement their theoretical studies by gaining practical teaching experience at schools. This phase is completed once a student has passed his First State Exam (*Erstes Staatsexamen*). During the next phase of their training, prospective teachers are assigned to a school where they acquire more practical experience under the guidance of a mentor. In addition, they attend courses at a State Center for the Training of Teachers. They complete this phase by passing their Second State Exam (*Zweites Staatsexamen*), which covers both theoretical and practical aspects. The third phase consists of in-service training courses offered by various institutions (cf. chapter 4).

Acquiring competence in diagnosing students' levels of skills, competencies and knowledge has been implemented – to varying degrees – in the first and second phases of teachers' training in Baden-Württemberg by now. Especially the State Centers for the Training of Teachers have developed concepts based on current standards of personalized learning which allow trainee teachers to extend their theoretical knowledge and their skills in this field and to apply them in the classroom.

As far as the third phase of teachers' training goes, various universities of education offer extra courses of studies for teachers wishing to develop their diagnostic skills and to use their extended competencies for supporting students individually or else to qualify for developing concepts, for advising schools or for training other teachers in that field. In cooperation with the State Academy for In-Service Training and Human Resources Development at Schools and the State Institute of School Development various materials and training concepts have been developed. A project aimed at a wide range of people working in education – among them not only teachers, but also school supervisors, teacher trainers and head teachers – "Learning with a focus on the development of competencies – Supporting students individually through observing - describing - evaluating - attending" intends to:

- strengthen the diagnostic skills of teachers
- extend the possibilities of personalized learning in the classroom
- tailor teaching to the individual educational needs and demands of students

- recognize the further development of teaching as a necessary process for shifting the focus more on the individual student and the development of his competencies

In order to reach these goals, various measures have been taken – brochures and other written aids have been provided as well as in-service training courses which also include qualifying teachers to act as advisors in the process.

The necessity to further strengthen teachers' diagnostic skills as well as their competencies in the field of personalized learning will also figure prominently in the restructuring of the teacher training system, which is currently at the planning stage. In spring 2012, the Ministry of Education, Youth and Sports and the Ministry of Science, Research and Culture appointed a commission of experts to receive some input. The commission presented their recommendations in March 2013. After the two ministries had reached an agreement as to which of these recommendations were to be followed, Parliament made a formal decision on the basic points the Ministries involved had agreed on in December 2013.

c. Revising the curricula

The *Gemeinschaftsschule* and the implementation of personalized learning require a revision of the curricula for schools in Baden-Württemberg. Until now, the curricula were revised roughly every ten years, most recently in 2004. There was a separate curriculum for each type of school, compiled by separate commissions working independently of each other. As a consequence, even some subject matters taught in all types of school were placed in different years, which made it very difficult for students to switch between the different types of school. To prevent this from happening in the future and to help provide every student with the best possible education, teachers from all types of school are now collaborating on a new curriculum containing educational standards for all types of school. These standards are subdivided into three different levels of difficulty – corresponding to the three types of school-leaving certificate students can obtain in general education in Baden-Württemberg: lower secondary general education certificate, intermediate secondary general education certificate and general qualification for university entrance – to ensure that all students are sufficiently challenged.¹² A nation-wide novelty is that teachers at all types of school

¹² Since the standard eight-year-type of the *Gymnasium* in Baden-Württemberg has to proceed at an accelerated pace, a separate curriculum is being developed – in close cooperation with the curriculum to be used in all other types of school, however.

– whichever school-leaving certificate they might lead to – see all three levels of difficulty next to each other on the same page rather than having to check three different curricula. After diagnosing the skill levels and abilities of their individual students, the three levels help them to make learning offers to students of different abilities and skill levels. Further help will be provided by grids of competencies, lists containing different learning methods and other learning materials to support personalized learning. All these materials are developed alongside the new curriculum.

In the academic year 2013/14, a working draft is being tested in 60 schools of all types. Working drafts are available for the subjects German and Mathematics in years 1 through 4 of elementary school and for all subjects taught in years 5 and 6 at secondary school. The new curricula are supposed to become effective as of academic year 2016/17.

d. Grids of Competencies

Grids of competencies can be a useful tool to encourage students to reflect more on their own learning processes and play a more active role in organizing their own learning. They show students which competence they have acquired and on what level:

Example: English, year 5

	A 1.1	A 1.2	A 1.3	A 1.4	A 1.5
Reading Comprehension	I can understand very short, simple texts, picking up familiar names, words and basic phrases, and reread them as required.	I can understand short, simple texts, picking up names, words and basic phrases, and reread them as required.

However, in order to be used efficiently they have to be embedded within a corresponding learning concept at the respective school. By 2012, many schools – many of them intending to become *Gemeinschaftsschule* in the foreseeable future – had

already started using grids of competencies in order to plan learning processes individually. Many of these schools had developed the grids on their own without being aware what constituted a grid of competency or that they should not be used as an isolated device. Therefore, the Ministry of Education, Youth and Sports installed teams consisting of members from all types of school, among them teacher trainers from the State Centers for the Training of Teachers. Their task was to evaluate grids of competencies that had already been compiled, to collect what all of them had in common and what conformed to qualitative criteria, to use these elements to develop new grids and – seeing as grids of competencies have to be used as parts of more comprehensive learning concepts – to put together some guidelines for schools wishing to introduce concepts involving grids of competencies, learning jobs, check lists and learning journals.

In October 2012 the teams started to compile grids of competencies, checklists and learning jobs for the subjects German, Mathematics and English in years 5 and 6. These grids of competencies – which are based on the 2004 curriculum still effective – were made available to the schools for use in the academic year 2013/14. In a next step, grids of competencies, check lists and learning jobs based on the working drafts of the new curriculum are to be developed for the subjects German, Mathematics, English, French and Biology.

e. Evaluation

As was outlined in chapter 3, it is essential that schools becoming *Gemeinschaftsschulen* evaluate their transformation processes. In the coalition agreement between the Green Party and the Social Democratic Party, it is emphasized that "*Gemeinschaftsschulen* evaluate their processes of school development. Academic research accompanying the introduction of the *Gemeinschaftsschule* is desired" (Bündnis 90/Die Grünen/SPD Baden-Württemberg 2011: 6). After advertising this academic research among universities and universities of education, the Ministry of Education, Youth and Sports and the Ministry of Science, Research and Culture commissioned a team consisting of the Universities of Tübingen and Heidelberg and the Universities of Education in Freiburg, Heidelberg, Weingarten and Schwäbisch Gmünd to conduct the research – this being another example of how the Ministry of Education, Youth and Sports enlists the support of researchers and theorists to ensure that reforms are carried out successfully. The project is divided into four sub-projects, one of which is

entitled "diagnostic competence of teachers". According to Uwe Maier (2013: 1f.), this sub-project is concerned with the question "how *Gemeinschaftsschulen* change or elaborate on their methods of diagnosing in order to be able to meet the requirements of an increasing heterogeneity as regards students' performances." Maier points out that heterogeneity among students reaches an especially high degree in the subject German. Therefore, diagnostic techniques and supportive concepts are of great importance. Within the subject German, his sub-project concentrates on students' writing skills – including the two fields of "writing texts" and "spelling". Thus, the focus is on students' written products. Maier is especially interested in how teachers correct students' texts. Therefore, he intends to analyse which correction marks teachers use and how they comment on students' texts. Apart from that, teachers will be assisted in using grids of analysis, both for the surface and the deep structure of the text. According to Maier (2013: 2), the use of these quantitative-qualitative grids of competencies allows for inferences regarding possibilities to individually support students. All in all, "the sub-project intends to find out from various perspectives to what extent *Gemeinschaftsschulen* succeed at developing a feasible system of diagnosing, documenting and helping students improve their individual writing skills in years 4 through 6", Maier (ibid.) summarizes. His second aim is to develop and evaluate an in-service training for teachers with regard to diagnosing students' writing skills and helping them improve them.

It is expected that the results of this sub-project can be adapted for developing strategies of personalized learning in other subjects too.

5. Leadership and Partners

Supervisory school authority in Baden-Württemberg is organized in a three-fold system with the Ministry of Education, Youth and Sports figuring as the *Highest Supervisory School Authority*, the school departments of the four Regional Administrative Authorities in Stuttgart, Karlsruhe, Freiburg and Tübingen being the *Higher Supervisory School Authority* and 21 local school authorities all over Baden-Württemberg being defined as *Lower Supervisory School Authority*. While the Ministry of Education, Youth and Sports is in charge of education policy and the legislative processes this involves, among the main responsibilities of the school departments at the Regional Administrative Authorities and the Local School Authorities is the direct supervision of schools. When it comes to implementing projects and innovations decided on by ed-

education policy, the different authorities have to cooperate closely – this, for example, applies to the process of establishing new *Gemeinschaftsschulen*. It goes without saying that – for reforms to be successful – a permanent contact with the schools themselves is essential. Three advisory boards – School Committee, Parents' Committee and Students' Committee – along with various committees of teachers from all types of school ensure that the Ministry is provided with the necessary feedback on a regular basis. Since the towns/cities, municipalities and rural districts are responsible for the school buildings, facilities and other non-human resources, a close cooperation with their respective representatives is also essential.

It has become apparent in previous chapters of this paper that, as far as creating and introducing new educational concepts is concerned, many more institutions are involved. In compiling the new curricula and learning materials such as grids of competencies, check lists and learning jobs, the Ministry of Education, Youth and Sports cooperates with the State Institute of School Development.

As far as teacher training and in-service training is concerned, even more institutions participate. In a manuscript yet unpublished, Sliwka et. al (2013: 7) refer to

a system of 'strong institutions' [which] developed in the history of Baden-Württemberg and [which] covers different phases of the teacher training and the in-service training of teachers. Universities, universities of education and State Centers for the Training of Teachers differ [...] mainly with regard to the types of school for which they train teachers and with regard to the phase of teacher training of which they are in charge.

In-service training is "characterized by a great variety of providers and a high complexity as regards the structure of the total supply. In principle, it is divided into a central level and a regional level" (Sliwka et al. 2013: 10). The three locations of the State Academy for In-Service Training and Human Resources Development at Schools in Esslingen, Schwäbisch Hall und Bad Wildbad

have developed their own respective profiles and offer a wide range of courses for the qualification of teachers and management personnel in schools. Additionally, the Local School Authorities and the Regional Administrative Authorities offer in-service training on a regional scale. The Universities of Education also offer specific courses for the further qualification of teaching staff (ibid.).

A challenge to be tackled in the future – for which Sliwka et al. argue in their paper – will be to connect and structure what these different providers bring to the table in a more systematic way.

6. Resources

In chapter 1 of this paper, it was pointed out that due to the challenges a consequent change towards concepts of personalized learning involves *Gemeinschaftsschulen* are provided with extra resources. Seeing as increasing heterogeneity among students has become an issue all types of school have to deal with, *Realschulen* and *Gymnasien* are given additional resources for the individual support of students too – albeit on a smaller scale, since the resources the Ministry has at its disposal for establishing innovations within the school system are limited. This is due to the fact that the previous government of Christian-Democratic Union and Free Democratic Party left Baden-Württemberg with a huge amount of debt. Therefore, the current government is obligated to balance the budget of the federal state until 2020 – a process to which the Ministry of Education, Youth and Sports also has to make a contribution. The reasoning behind this is that, mathematically speaking, the demographic development resulting in a decreasing number of students allows for a reduction of the number of teachers. Therefore, due to a political decision, the Ministry of Education, Youth and Sports has to reduce the number of teachers by 11.602 until 2020. If additional cutbacks will be necessary is currently being debated. These requirements limit the scope for reforms. However, the Ministry of Education, Youth and Sports is convinced that reforms are necessary and is committed to accomplishing as much as possible within the means at its disposal.

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