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BETWEEN EXCELLENCE AND EQUITY: THE CASE OF THE GERMAN EDUCATION SYSTEM

***Entre la Excelencia y la Equidad: El Caso del
Sistema Educativo Alemán***

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ABSTRACT

The paper provides a selective analysis of the strengths and weaknesses of the current German education system. After an introduction to the historical development, the administration and structure of the German education system, the author focuses on three 'fields of tension' in particular, which will need to be successfully managed by any 'excellent' education system: the tension between selectivity and comprehensiveness of the school level, the balance of equity and excellence and the tension between academic subject knowledge and didactic skills in teacher education. The analyses are mainly based on the empirical evidence provided by the various PISA studies, which have had a major impact on educational reforms in Germany since 2000. In conclusion, the author points out, that while the implemented educational reforms have improved some of the deficits identified in the PISA studies, the equity-inequity problem is still very prominent and requires intensified attention. In addition, there is the need for further empirical studies, in order to evaluate the effectiveness of the introduced educational reforms and to facilitate progress towards 'excellence'.

KEY WORDS: Excellence, Equity, Germany, PISA, Educational Reform.

RESUMEN

El presente artículo ofrece un análisis selectivo de las fortalezas y debilidades del actual sistema educativo alemán. Tras una introducción sobre su desarrollo histórico, su administración y su estructura, el autor se detiene particularmente en tres «campos de tensión» del sistema educativo alemán que necesitan gestionarse de manera exitosa por un sistema educativo «excelente»: la tensión entre la selección y la comprensividad de los niveles educativos, el equilibrio entre la equidad y la excelencia y la tensión entre el conocimiento académico de las asignaturas y las competencias docentes en la formación del profesorado. El análisis se fundamenta principalmente en la evidencia empírica ofrecida por los diversos estudios PISA que han tenido un amplio impacto en las reformas educativas alemanas desde el año 2000. Como conclusión el autor enfatiza que, mientras las reformas educativas implementadas han mejorado algunas de las deficiencias identificadas en los estudios de PISA, la cuestión equidad-inequidad todavía tiene una presencia acusada y requiere una atención más intensa, además, se pone de manifiesto la necesidad de estudios empíricos posteriores que permitan evaluar la efectividad de las reformas educativas emprendidas y se facilite así el verdadero progreso hacia la excelencia.

PALABRAS CLAVE: Excelencia, Equidad, Alemania, PISA, Reforma Educativa.

INTRODUCTION

From a German perspective, and at this particular point in time, it seems rather 'brave' or 'foolish' (or indeed both) to include the German education system into a monograph, which is titled 'Excellent Education Systems'. The intense political and academic discussion about the seemingly inferior quality of the German education system, which was caused by the publication of international comparative assessment studies like TIMSS in 1997 (BAUMERT et al., 1997) and particularly by the first PISA results in 2001 (DEUTSCHES PISA-KONSORTIUM, 2001), reached a climax in the last decade and has not stopped until the present day. Numerous publications and newly coined phrases like 'PISA shock' and 'PISA hysteria' are outward expressions of national

feelings of self-doubt which were instigated by the performance of German pupils in the first PISA study which was below expectation.

However, what was the cause of this extreme irritation? The PISA 2000 study had placed the German education system among the 32 participating education systems below OECD average in all three areas of competence measured, i.e. 20th rank in mathematical and scientific literacy and 21st rank in reading literacy. These results came as a severe shock to educational policy makers, teachers, parents and pupils. The poor performance of the German education system in the PISA study led to specific ‚PISA sessions‘ in the German parliament, it dominated the newspapers and TV discussions for months and led to statements from almost all social partners ranging from the German Trade Union Association (*Deutscher Gewerkschaftsbund*) to the Association of German Employers (*Bundesvereinigung Deutscher Arbeitgeberverbände*). In other words, PISA became a universally understood cipher for the under-performance of the German school system (vgl. HOPMANN, BRINEK, RETZL, 2007) and motivated hundreds of German MPs, officials from the Länder ministries of education, headteachers etc. to travel to Finland, to visit and learn from the ‘PISA champion’. Gruber (2006) even maintains that in no other country were the results of the PISA study so intensely discussed as in Germany. There are a number of reasons for this unique extraordinary political and media reaction. The most important one being that — with the exception of TIMSS (Third International Mathematics and Science Study) in 1997 (BAUMERT et al., 1997) and PISA in 2000— Germany had not taken part in any other international large scale assessment studies for about 20 years (cp. BOS & SCHWIPPERT, 2002) which had given rise to the (empirically unchallenged) assumption that the German education system was in good shape and highly efficient, a belief which was then severely shattered by the, at best, mediocre PISA results.

Whoever thought that this intense educational debate initiated by the PISA results was going to be short-lived or ‘a flash in the pan’ was proven wrong in the years to come. Scientific publications like “After Pisa” (Nach Pisa) (TERHART, 2002) were followed by publications such as “School in Year IV after PISA” (Schule im Jahr IV nach PISA) (HERMANN, 2005) and “What has happened since PISA?” (*Was ist seit PISA geschehen?*) (BMBF, 2005), which showed that the debate was going to stay. The PISA debate continues until the present day and has produced — apart from the

initial ‘shock-horror’ reactions in the media and the more or less superficial and rash attempts ‘to learn from the PISA champions’ — a very serious academic discussion on fundamental educational questions such as the aims of education, the notion of *Bildung* in the 20th century, the measurability of competences and educational ‘outcome’, the structure and governance of the education system, the provision of equal opportunities in education etc. Perhaps it is the scope, depth and quality of these educational reflections and discussions on the aims, the provision and the control of education and schooling in the 21st century that are presently going on in Germany that justify the inclusion of the German education system into this collection of ‘excellent education systems’.

However, maybe there is more to it than simply the high quality of the educational reflection and criticism going on at the moment. Following this introduction (1), this paper will try to investigate this assumption by looking at the historical development of the German education system (2), which should help to contribute to the understanding of its present administration and structure and its characteristic features (3). In the fourth section the analysis will focus on three highly controversial issues in the German education system (4), which have a long history and therefore go beyond the immediate concerns of the current German PISA debate. Thus, the analysis focuses on the following three aspects in particular, which are regarded as key elements for educational excellence in many international comparative studies and also in this monograph: i.e. the balance between selectivity and comprehensiveness at the secondary education level (4.1), the balance of quality and equity of the school system (4.2), and the quality of the teacher education system (4.3). Finally, and on the basis of these analyses, the last part of this paper will attempt to identify ‘strengths’ and ‘weaknesses’ of the German education system, which can either be built on or which need to be considered as object for future educational reforms (5).

1. HISTORICAL DEVELOPMENT OF THE GERMAN EDUCATION SYSTEM

Looking back at the historical development of the German education system, educational federalism is one of the pervading structural

characteristics of schooling and education. Although centralist Prussia took a prominent role in the shaping of the modern German model of education in the late 18th and early 19th centuries (cp. TENORTH, 1992), the politically diverse German Länder have always enjoyed a rather far-reaching cultural and educational sovereignty until the present day. The recent 'reform of federalism' (*Föderalismusreform*) in 2006 has strengthened the educational sovereignty of the Länder, yet again, by curtailing the educational authority at the federal level even further.

The particularistic traditions of different educational ideas and practices in the different Länder kept up regional and cultural diversity in education, while the nation-building process in the 19th century and the ambition to 'democratize' education (PAULSEN, 1906: 171) by making it accessible to larger circles of the population was favourable to the contradictory idea of a national German education system. Still, as Anweiler pointed out, a common and uniform education system was neither achieved in the 'German Reich' (1871-1918) nor in the 'Weimar Republic' (1918-1933). Only the 'Reich-primary school law' (*Reichsgrundschulgesetz*) of 1920, which introduced a common four-year primary school, led to the first obligatory regulation for the whole of the 'German Reich'. Similarly, obligatory school attendance, which had already existed in 1717 in parts of Prussia, was only established throughout Germany when it was legislated through the Weimar Constitution. Even during the Second World War and under the National Socialist dictatorship (1933-1945) which was characterised by a far reaching ideological levelling, a new nationwide educational structure was not established in Germany. The tripartite school system and the general and obligatory introduction of vocational education in 1938, for example, were kept, in principle, apart from a few minor changes. The only new structural element which was introduced under national-socialist dictatorship was the establishment of the so-called 'Hitler Youth' (*Hitler-Jugend*) as the sole state youth organization which served as a parallel education system and was therefore instrumental in establishing the totalitarian character of the national socialist education policy (ANWEILER, 1996: 31).

After the breakdown of the national socialist regime in May 1945, the allied forces took over the control of the education system in the four occupational zones and in Berlin. While the Western allies took up and continued the pre-war educational structures in Germany in principle, the

Soviet occupational zone witnessed a complete restructuring of the education system with the development of an eight-year comprehensive school (*Einheitsschule*) and — at a later stage — a polytechnic upper school. When the joint conference of the education ministers of all four zones in 1948 could not achieve common agreement with regard to the school structure the ‘Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany’ (KMK) was created in 1948, while the German Democratic Republic (GDR) established a central ‘Ministry for Education of the People’ (Ministerium für Volksbildung). The abolition of the five Länder in the GDR which followed in 1952 can be seen as the logical next step to increase central state control over education in East Germany and to develop a more strongly standardized and structured more strongly regulated and less individual-centred education system. Towards the end of this early post-war period it is therefore possible to clearly distinguish between a federal structure of education in the West and a centralized educational administration in the East.

Since the 1950s the education systems in the two German states took a markedly different development: While the West German education system did not back any specific philosophical conviction and followed a rather individualized culture of achievement, education in the GDR was strictly aimed at forming a ‘Socialist personality’. To this end the ‘Socialist Unity Party of Germany’ (*Sozialistische Einheitspartei Deutschlands; SED*) tried to ‘re-orientate’ the whole education system ideologically and to restructure it according to Marxist-Leninist beliefs which also became the official ideology/*Weltanschauung* in the GDR during the 1950s. Until the German re-unification in 1990 the SED determined not only the educational goals and the school curricula but also the ‘out of school education’ of children and young people through its youth organisation, the so-called ‘Free German Youth’ (*Freie Deutsche Jugend, FDJ*). However, while the GDR introduced rather far-reaching and partly innovative structural reforms such as the introduction of the comprehensive school and emphasized officially egalitarian and democratic access to pre-school, school and higher education institutions, the system remained overall highly selective (e.g. only 12 percent of any age group attended A-level schools which qualified for access to Higher Education) because education and schools fulfilled increasingly a

political and a social selection function and became more and more dominated by ideological and political discussions and goals.

In West Germany it was the early (economic) successes during the ‘economic miracle’ after the Second World War and the resulting international reputation of the German education and training system (TROUILLET, 1981; PHILLIPS, 2000) which handicapped rather than advantaged far-reaching structural reforms in the West such as the abolition of the old-fashioned tripartite school system (*Volksschule/Hauptschule, Realschule and Gymnasium*). In spite of the rather wide-spread reluctance towards fundamental change in post-war West Germany, a rather intensive period of comprehensive educational reforms began in the middle of the 1960s and lasted until the mid-1970s. This educational reform era was partly the result of a widely discussed so-called ‘educational catastrophe’ (*Bildungskatastrophe*) which was apparently threatening Germany’s future economic success because of an impending shortage of qualified engineers etc. (PICHT, 1964). The educational reforms were closely linked to the activities of the newly founded ‘German Education Council’ (*Deutscher Bildungsrat*), which shaped educational policy in Germany between 1965 and 1975 and developed a number of initiatives and educational reforms concerning all phases and stages of the education system and which are partly influential to the present day (e.g. the foundation of technical colleges and polytechnics in the 1970s).

With the ‘peaceful revolution’ (Wende) in the autumn of 1989 in the GDR and the subsequent German Reunification in 1990 the development of two separate German education systems with two very different educational philosophies came to a sudden halt. When initial efforts to harmonize the two German education systems finally failed, the federal structure of the West German education system was extended to the five newly formed East German Länder through the Treaty of Unification on 3rd October 1990 and from the academic year of 1992/93 onwards the West German tracked school system was introduced in all five new Länder.

Although the unification process in 1990 initiated first discussions about necessary educational reforms in Germany, it was only after the publication of the —at best— mediocre results of German students in international surveys on student performance such as TIMSS (Third International

Mathematics and Science Study) (BAUMERT et al, 1997) at the end of the 1990s and particularly PISA (DEUTSCHES PISA-KONSORTIUM, 2001) and the complementary national study PISA-E (DEUTSCHES PISA-KONSORTIUM, 2002) in the early 2000s, that the quality of the education system became subject to an intense public debate in Germany. It is this debate, or reaction to mounting external pressure, which finally, after decades of stagnation, has brought about considerable transformation in the German education system. In spite of the aforementioned formally strengthened cultural and educational sovereignty of the Länder, these more recent reforms have, for the most part, been initiated from the federal level (e.g. by the 'Standing Conference of Ministers of Education and Cultural Affairs', Kultusministerkonferenz, KMK) and have led to increased central influence and surprising harmonisation processes in education which, only a few years ago, would have been met with strong resistance by the Länder.

2. ADMINISTRATION, STRUCTURE AND DISTINCTIVE FEATURES OF THE GERMAN EDUCATION SYSTEM

Although the above mentioned harmonisation processes and central influences are becoming increasingly visible in the education systems of most Länder, there are still considerable variations between the Länder. This is due to the special role of the Länder in the administration and organisation of the system. According to Article 30 of the German Constitution, "the exercise of governmental powers and the discharge of governmental functions are incumbent on the Länder insofar as this Basic Law does not otherwise prescribe or permit". For the education system, this means that the Länder have the legislative and administrative competence for all issues of cultural policy and administration, from radio to state libraries to theatres, schools and universities (cf. ARBEITSGRUPPE BILDUNGSBERICHT, 1994: 79ff). The role of the federal government in education is therefore formally restricted to indirect interventions through federal bodies like the above mentioned KMK, which has no legislative power but rather serves as an instrument for the coordination of education policy, which largely comes into effect by the adoption of unanimous recommendations. However, recently the role of the federal government in education has been strengthened slightly through European integration which exerts pressure on

the Länder via the federal government. In addition, the influence of the federal or the Länder governments varies according to which phase of the education system is under consideration.

With regard to the administration of the school system, the legally guaranteed strong position of the 16 Länder governments in the development of the educational policy means that the municipalities have only very limited opportunities to shape a local or municipal school system. Individual schools have been granted more autonomy in recent years, which is, however, also clearly limited by state regulations. Generally speaking, the administration of the German school system can best be described as a 'multi-central' system. This means that the system as a whole is largely decentralized down to the Länder level which, in turn, administer a rather centralized education system with little responsibility for the municipalities and increasing, but still carefully defined, autonomy for individual schools. When characterizing the Länder education systems as centralized it should be kept in mind however, that the individual Länder and the 16 education systems have very different dimensions: During the academic years of 2005/06, for example, about 2.3 Mio. pupils and students were taught in the schools of the biggest Land North Rhine-Westphalia while there were only about 73.000 pupils in the schools of the smallest Land Bremen.

The present structure of the education system is rather complex, particularly in the secondary school phase (years 5-12/13). Apart from the educational federalism in Germany discussed above, the multi-tracked secondary school level is another distinctive feature of the German school system. Following the primary school which is attended by all children, there are, in addition to the numerous special (needs) schools, up to five different tracks. Not all Länder have all the different types of secondary schools: while some Länder have no comprehensive schools, others have joined up different types of secondary schools (*e.g. Haupt— and Realschule*) into schools with several educational tracks. The structure and the underlying problem of 'selectivity versus comprehensiveness' of the rather complex secondary school level will be analysed in greater detail in the following section (cp. 4.1).

Seen from an international perspective the organisation of the German schools with regard to the average length of the individual school day can be

regarded as rather noticeable. Until recently almost all schools were organized and run as so-called 'half-day-schools' (*Halbtagschulen*). Following the publication of the first PISA results in 2001 a federal programme was launched in 2003 to increase the number of schools with all-day programmes (*Ganztagsschule, GTS*). According to the latest 'National Report on Education', the percentage of schools that are offering all-day programmes has gone up to 42%. (AUTOREN GRUPPE BILDUNGSBERICHT-ERSTATTUNG, 2010: 7) A further increase is expected within the next years.

Another striking feature of the German school system is the special relation between state and public schools. Most private schools in Germany are run by the churches and are categorized as so-called 'substitute schools' (*Ersatzschulen*), which means that they can replace 'ordinary' state schools. The classification of a private school as a 'substitute school' implies certain duties and rights: on the one hand 'substitute schools' have to follow the state school curricula and fall under the supervision of the state school inspectorate (*Schulaufsicht*). On the other hand they have got the right to award the state school-leaving certificates (e.g. *Realschul-certificate or Abitur*) and they are eligible to receive substantial or even full state funding. Up to the present day the vast majority of pupils and students attend state-run schools. However, the number of pupils and students who attend private schools has increased steadily over the last 45 years: While in 1960 only 3 percent of all pupils attended private schools the figures have risen slowly but steadily and have reached 6,7 percent in 2005 (FÖSSEL & LECHINSKY, 2008: 200). There is, however, a broad dispersion of private school found between the different school types (i.e. high percentages amongst grammar, vocational and special schools) and the Länder (lower percentages in the five 'new' Länder in East Germany).

A final distinctive feature that has to be mentioned with regard to the German school system is the field of vocational education. In contrast to most European education systems, vocational education which is exclusively organized and run by full-time vocational schools plays only a marginal role in Germany. For the majority of young people in vocational education, the main route into employment is provided and organized by the so-called 'dual system', which consists of a vocational training within an apprenticeship and weekly lessons in a vocational school. The apprenticeship

usually lasts for three years and the apprentices receive a monthly salary which is set and paid by the employers. Although the dual system has been strongly criticized particularly in the 1970s for its emphasis on the practical training provided by the companies, it has enjoyed a very high international reputation. Among the second category of full-time vocational schools (*Berufliche Schulen*) which are attended by about 20 percent of all students in vocational education, the ‘vocational training colleges’ (*Berufsfachschulen*) represent the majority. These training colleges are fully responsible for the vocational training of their students including the practical internships prior, during and after the vocational training.

With regard to the administration and organisation of the German higher education (HE) sector, there is a greater convergence with international developments than in the school sector: Universities and other institutions of higher education, e.g. ‘universities of applied science’ (*Fachhochschulen*), which were established in 1970, enjoy a much greater autonomy than schools and are therefore far less dependent on the influence of the Länder parliaments or governments. In addition, the establishment of national HE institutions such as the ‘German Rectors’ Conference’ (*Hochschulrektorenkonferenz*) and federal HE legislation such as the ‘Framework Act for Higher Education’ (*Hochschulrahmengesetz*) have led to an increasing influence of the federal level, which, together with the growing influence of supra-national structures and processes (e.g. Bologna process), has marginalized the influence of the Länder in the tertiary sector even further. However, in contrast to many other systems of HE, teacher education, which is mostly offered by the universities or specialized ‘universities of education’ (*Pädagogische Hochschule*), is partly exempt from this process, because it is still very much influenced by the state or Länder regulations. The main reason for this is that teacher education courses usually finish with a so-called ‘state examinations’, which means that the universities are rather restricted in the development of their course curricula.

3. ANALYSIS OF SELECTED CONTROVERSIAL ISSUES

The following analysis focuses on three highly controversial issues, which have to be successfully managed in any ‘excellent’ education system.

For analytical reasons these issues will be described as ‘fields of tension’ in this section, with opposing poles, although in practice these poles will have to be balanced out or even ‘reconciled’, in order to achieve an ‘excellent’ education system.

The first ‘field of tension’ is characterized by the two opposing poles of comprehensiveness and selectivity at the secondary school level, which have to be balanced out in any school system. The second field of tension ‘quality versus equity’ is concerned with an issue, which was intensely debated in the 1960s and 1970s, but has recently gained an even higher profile in Germany through the regular publication of PISA results since 2001. The third issue is concerned with the quality of teacher education, which can either be more directed at the transfer of academic subject knowledge or at the practical didactic training of the future teachers. Teacher education is regarded as an important factor for the quality of education systems in general and has therefore been one of the prime targets of educational reform in Germany for many years.

3.1. Selectivity versus comprehensiveness: the organisation of the secondary school sector

The question of comprehensiveness versus selectivity at the lower secondary school level (years 5-9/10) with its various educational tracks has been object to intense political debate since the 1960s. At the core of this debate, which is — at least in Germany — rather more ideological than scientific, is the pedagogical question of ‘integration versus differentiation’ and the related structural issue, whether forms of ‘outer differentiation’ (e.g. through different educational tracks or secondary school types) are preferable to forms of ‘inner differentiation’ in an integrated comprehensive school for all children. In 1993 the KMK issued a common orientation framework which confirmed the diversity of school types in secondary education while at the same time defining a common core of school subjects and curricular content in the various school types. In addition, the KMK framework regulated the mutual recognition of school leaving certificates. The (general) *Hauptschul-leaving* certificate is awarded after a total of nine or ten years in school, the *Realschul-leaving* certificate after ten years and

the *Abitur* which is taken at the *Gymnasium* after 12 or 13 years (all including a four-year primary school). In order to increase the permeability between the three main secondary school types, Years 5 and 6 of the *Hauptschule*, *Realschule* and *Gymnasium* are regarded as an ‘orientation phase’ (*Orientierungsstufe*). This initial phase of secondary school is meant to be a period of observation, orientation and support, during, or after which, the transfer decision may be reviewed. However, the appropriate selection of the secondary school type is still of high importance because the permeability between the three school types is rather limited and works mostly ‘downwards’, i.e. from the *Gymnasium* to the *Realschule* or to the *Hauptschule*. In spite of these regulations which silenced the structural debate for some time, the discussion has recently gained momentum again following the publication of the PISA results and due to the constant decline of the *Hauptschule* since the mid-1970s.

The *Hauptschule*, is to be found in almost all Länder except the former East German Länder and the Saarland and includes years 5-9. However, in some Länder compulsory schooling and, therefore, also the duration of the *Hauptschule* has been extended to year 10. In other Länder year 10 of the *Hauptschule* is optional and is attended by about 20 percent of the pupils. The introduction of the term *Hauptschule* was the result of the ‘Agreement of Hamburg’ of the KMK in 1964 and replaced the upper Volksschule which had been the main school type for the vast majority of children mainly from the lower classes. Next to the *Realschule* and the *Gymnasium* the *Hauptschule* was supposed to be the third main pillar of secondary schooling which was, in principle, of equal value to the other two school types. However, while the former upper Volksschule had been attended by 70 — 80 percent of the 13 year olds in the 1950s the number of pupils attending the *Hauptschule* has dropped to about 17 percent in 2009 (DEUTSCHES PISA-KONSORTIUM, 2010: 286). In the same period the *Realschule* and the *Gymnasium* have increased their number of students five— and threefold respectively. The *Hauptschule*, which has been named the ‘loser of the educational expansion’ and more recently ‘*Restschule*’ (‘left-over’ school) because of its rapidly declining numbers, is facing an increasingly difficult challenge caused by extremely heterogeneous pupils with very high numbers of socio-economically deprived and poorly motivated children. In the face of these challenges the total closure of the *Hauptschule* seems to be a question

of time rather than a matter of principle. In some primarily East German Länder the *Hauptschule* has already merged with the *Realschule* to form what is now called a ‘school with several educational tracks’ (*Schule mit mehreren Bildungsgängen*) and which could be described as a fifth column in the lower secondary school phase. Other Länder such as Bavaria and Baden-Württemberg are trying to stop this process. However, given the recent demographic changes in Germany, and the resulting permanently decreasing number of school beginners and the increasingly competitive labour market which clearly favours the more prestigious school leaving certificates from the *Realschule* and the *Gymnasium*, it seems highly unlikely that the *Hauptschule* will survive in its present form.

The second type of secondary school, the *Realschule*, has received very little public attention in recent decades and has caused hardly any controversy concerning its curricular or structural concept either in the general public or amongst educational politicians. However, in spite of this public and also political ‘neglect’ the development of the *Realschule* can be described as a success story in terms of pupil enrolment numbers which have increased from 10-12 percent (of all 14-year-olds) in the 1960s to 26 percent in recent years (op. cit.: 286). The curriculum of the *Realschule* is — quite similar to the *Hauptschule* — mostly targeted towards the labour market and offers an explicit vocational orientation as well as encounters with the world of work through periods of practical training and/ or work placements. However, by offering a second optional foreign language to its pupils the *Realschul*-leaving certificate does not only qualify for vocational training and apprenticeships but may also qualify — depending on the final grades achieved — for the upper secondary phase of the *Gymnasium* and/or various types of vocational upper secondary schools (e.g. *Fachoberschule*) which can provide access to technical colleges and other institutions of higher education. About one third of all *Realschul*-leavers take the opportunity to continue their studies in the upper secondary school sector.

The *Gymnasium* comprises the years 5-10 and 10-12/13 and covers therefore the lower and the upper secondary school phase. The *Gymnasium* looks back to a history of more than 200 years during which there have been numerous and rather fierce debates about its educational programme and the value of its leaving certificate, the *Abitur*. Thus, phases of opening and widening the school curriculum to include a broader circle of pupils and

students have alternated with phases of re-standardization and increased emphasis on academic standards. For example, while the reform of the upper secondary phase of the *Gymnasium* (*gymnasiale Oberstufe*) in 1972 substantially extended individual options by reducing compulsory subjects and by extending individual subject choices, the developments since have pointed in the opposite direction, by identifying a compulsory core curriculum for all A-level students which consists of compulsory subjects and courses (e.g. in maths, German, sciences). The traditional profiles of the *Gymnasium*, which are humanistic-classical, linguistic or mathematical-scientific, have in recent years been extended to also include schools with a specific profile in music or economics etc. Some Länder (e.g. Baden-Württemberg) have also initiated the foundation and development of vocational grammar schools (*berufliche Gymnasien*) which belong to the vocational sector however. The high reputation and the popularity of the *Gymnasium* amongst parents and in public opinion can be explained by the fact that the *Gymnasium* offers the direct path into higher education after successful completion of the *Abitur* while also offering the best chances of getting hold of the more attractive training places and the more sought after positions on the labour market. As a result the proportion of 14-year-old pupils attending the *Gymnasium* has risen from 14 percent in 1960 to about 33 percent in 2009 (op. cit.: 286) which has changed the formerly rather elitist character of the *Gymnasium* considerably. The last major reform of the *Gymnasium* concerned its reduction in duration from nine to eight years which, to date, has been implemented in all 16 Länder apart from Rheinland-Pfalz. This reduction has brought about substantial changes and concentrations in the subject curricula which have not always been popular with the parents and the pupils. However, along with the introduction of BA and MA courses in higher education, the reduction of the *Gymnasium* to eight years is regarded as a major instrument to reduce the overall duration for education and training in Germany which is, in international comparison, still very long.

The fourth type of secondary school, the ‘integrated comprehensive school’ (*integrierte Gesamtschule*), which was originally intended to replace the traditional tripartite school system rather than adding a fourth pillar to it, was initially introduced as part of an educational experiment in all the West German Länder in the mid-1960s (DEUTSCHER BILDUNGSRAT, 1969).

The aim of the integrated comprehensive school was to react positively and constructively to the strong criticism of the traditional lower secondary school types at the time which were considered to be rather backward and socially selective. The new concept for the lower secondary school phase envisaged replacing the rigid vertical separation of the school system in three school types with an integrating system which catered for all children in one school. The double aim of supporting the development of each individual child according to its abilities through differentiation and of increasing equality of opportunity in the school system through integration at the same time placed great demands on the organisation of the comprehensive school, the curriculum and the teaching. Even critics of the integrated comprehensive school would acknowledge in historical hindsight that the integrated comprehensive school produced a lot of innovative ideas in its early phase of development such as inner school and inner class differentiation which have had a considerable and lasting impact on the development of the traditional tripartite school system. At the end of the experimental phase of the testing of the integrated comprehensive school the KMK declared in 1982 the mutual recognition of the *Gesamtschul*-leaving certificate and thus accepted the *Gesamtschule* formally as an official type of lower secondary school in Germany. In some Länder (e.g. North Rhine-Westphalia) comprehensive schools included, from their foundation in the 1970s, also an upper secondary phase (years 10-12/13). The development of the comprehensive school since the early 1980s has varied considerably between the individual Länder depending largely on the political party in power in that respective Land. In 2009 the national average of 15-year-old pupils in comprehensive schools amounted to almost 9 percent (DEUTSCHES PISA-KONSORTIUM, 2010: 286).

The relative significance of the different educational tracks in the German lower secondary phase and their development in recent years can be documented ‘at a glance’ on the basis of statistical data used for PISA 2009, which compares participation in education of 15-year-olds in the different educational tracks between 2000 and 2009

TABLE 1. Participation in education of 15-year-olds in percent according to educational tracks in PISA 2000 and PISA 2009

	2000	2009
Hauptschule	19.6	16.8
Schule mit mehreren Bildungsgängen	8.7	6.6
Realschule	25.9	26.8
Integrierte Gesamtschule	8.8	8.7
Gymnasium	28.3	33.5
Berufsschule	5.3	4.0
Förder- und Sonderschulen	3.5	3.7

Source: Deutsches PISA-Konsortium 2010: 286.

With regard to the question of the effectiveness of the early differentiation at and the high selectivity of the lower secondary school level, the results of the PISA studies are quite illuminating (DEUTSCHES PISA-KONSORTIUM 2001, 2004, 2007, 2010). In summary, the PISA 2000 study showed that the attempt to homogenise learning groups and whole schools through forms of tracking and other forms of outer differentiation does not work properly. There is a huge overlap between the performance of 15-year olds in the *Hauptschule*, the *Realschule*, *Gymnasium* and the integrated comprehensive school. For example, students in the *Hauptschule* reach performance levels which reach well into the student performance level of the *Gymnasium* and vice versa (DEUTSCHES PISA-KONSORTIUM, 2001: 120-21). The huge overlap between the performance levels of students in different types of secondary schools indicates clearly, that taking decisions about the ‘right’ secondary school track at the end of the primary school is a rather risky business and often leads to ‘wrong’ decisions due to the lacking reliability of the transfer diagnosis and due to the difficulty of predicting later student performance at the early age of 10.

A second attempt to increase homogeneity in German classes and learning groups can be seen in the frequently applied measure of making low performing pupils re-take a whole school year in order to move them closer to the average performance of their new class. Compared to the other OECD countries in the PISA study, the number of students, who have to re-take one school year, is particularly high in Germany (op. cit.: 413-15). Finally,

attempts to homogenize learning groups through transfers of students between school types have to be mentioned in this context. As pointed out above, the mobility between secondary school types is mostly 'downwards', which means that the school 'relieves' itself from the lower achieving pupils, which require particular effort and didactic creativity to keep up with the required standards that prevail in that type of secondary school. However, the constant 'down shifting' of lower achieving pupils leads to a concentration of those pupils in the lower demanding schools, which is usually the *Hauptschule*. If we add the number of 'down-shifters' to the number of pupils who re-take one or more schools years, but disregard those children, whose school enrolment is postponed for one year due to lacking cognitive abilities at the age of 6, the percentage of pupils whose school career is characterized by 'failure' amounts, according to the PISA 2000 study, to more than 30 percent (op. cit.: 473-4).

However, according to the members of the German PISA consortium and in spite of the above mentioned measures to increase homogeneity through early, external tracking and high selectivity in secondary schools, school teachers in Germany complain more than their colleagues in other OECD countries about heterogeneous classes and learning groups (op. cit.: 454). In addition to the dissatisfied teachers with regard to the homogeneity of their schools and classes, the selection of students for different secondary school types shows that the social background of the pupils and parents has a considerable influence, which points to a second issue of social selectivity and equity within the German education system, which has been at the top of the educational agenda for the last 10 years and which will be dealt with in the following section.

3.2. Quality versus equity: the long struggle for a better balance

When the first PISA results were published in December 2001 there was an initial public outcry concerning the below average performance of German students in reading literacy, maths and science. However, what was considered to be even more concerning was the considerable variation that was found between the best and lowest performing students. In other words: not only was the average school achievement below average, but also the

difference in achievement between stronger and weaker students was greater in Germany than in any other country. The evidence that caused the most irritation however, was the finding that, in international comparison, the relationship between school achievement and social background was nowhere stronger than in Germany. In other words: the PISA results showed very clearly that Germany is among those countries in which educational success is most closely linked to pupils' socio-economic background:

When 15-year-olds with the same level of basic cognitive ability are compared, the relative probability that students from the highest socio-economic status groups will attend the *Gymnasium* rather than the intermediate-track *Realschule* is three times higher than for students from the lowest socio-economic status groups. Performance is closely linked to a student's social background as well. While about 10% of students from the highest socio-economic status groups have only elementary reading skills (Level I or below), the proportion in other socio-economic groups is between 20 and 30%, reaching almost 40% among children of unskilled and semi-skilled workers. In all PISA countries, there is a link between social background and performance. However, nowhere is this relationship as strong as it is in Germany (STANAT, ARTELT, BAUMERT et al, 2002: 10-12).

This finding has been particularly irritating because, according to PISA, there are a number of education systems which manage to raise the achievement of their students to the highest degree while at the same time loosening the connection between social class and school achievement (e.g. Japan, Korea, and Finland). In the same way that PISA has shattered the assumption that the German education system is highly efficient (see above), it has also dispelled the illusion of equal educational opportunities which had spread through the German education system since the 1970s (GEISSLER, 2004).

In addition to social disparities, the early PISA results also indicated that students with a migrant background do less well in German schools when compared to migrants in other countries with a comparable migrant population. Finally, the PISA-E study, which was based on additional and more comprehensive samples taken in the different Länder, showed clearly that there were large differences between the school achievement in the

individual Länder (DEUTSCHES PISA-KONSORTIUM, 2002), which is particularly alarming given the German Basic Law (*Grundgesetz*) guarantee, that standards of living are to be equivalent throughout the Federal Republic of Germany.

The reforms following the publication of the first PISA results in 2001 have covered a wide range of areas and issues ranging from questions of systems monitoring and educational governance to the extension of pre-schools and the introduction of educational standards etc. However, for the present analysis, which is focused on the tension between excellence and equity, we will concentrate on those reforms which were primarily aimed at the improvement of the severe equity problem described above.

One of the first reforms that had already been introduced in 2003 was the introduction of so-called ‘all-day-school’ (*Ganztagschule*). Apart from more general changes in family work patterns and the increasing professional occupation of women in particular, which made the extension of the school day inevitable, the introduction of schools with an all-day programme was particularly aimed at the support of children with a migration background and children from socio-economically disadvantaged families. It was those children, who were supposed to benefit most of all from the extension of the school day with regard to their cultural, social and linguistic development. Although the effects of ‘all-day-schooling’ have not yet led to the desired improvement in the school achievement of this particular target group, the extended school day, which has been the object of a comprehensive longitudinal study, has led to positive ‘side-effects’ (e.g. increased cooperation between teachers and between teachers and parents) which could — in the long run — also improve the performance levels of the children (cp. KLIEME, FISCHER, HOLTAPPELS et al, 2010).

A second reform, which was directly aimed at children with a migration background, has been the development and intensification of pre-school education and particularly the improvement of the linguistic competence of children of migrant families. The aim of this measure is to improve the connection and cooperation between pre-school and primary school, to support the language development of migrant children and to detect language deficiencies early on. By now all children are supposed to take language tests

one year before school entry, so that language support measures can be taken before they enter the primary school, if necessary.

A third reform has been initiated by the results of achievement studies carried out by the Länder. The huge overlap between the performance levels of the students in the different secondary school tracks mentioned above, does not only point to the fact that the recommendation for a certain type of secondary school only partly reflects student ability, but could also indicate, that the teachers' diagnostic competence is insufficient for a reliable recommendation to a particular type of school. As a result, reforms in primary school teacher education have aimed at the improvement of teachers' professionalism, with a special focus on their diagnostic and methodical competence.

Finally, the discrepancy between the PISA results of the different Länder caused the KMK to initiate the development and implementation of national standards of achievement. Alongside the introduction of nationwide educational standards, the KMK has also introduced numerous measures to develop and improve the system monitoring. Among these measures are various instruments which aim to evaluate the quality in classrooms and schools (e.g. internal and external evaluation of schools, school inspection etc.) and at the system's level (e.g. comparative achievement tests within and between the Länder, regular participation in international large scale assessments etc.).

According to the most recent PISA results, which were published in December 2010, the problem of social disparities in the participation in education has improved between PISA 2000 and 2009 (DEUTSCHES PISA-KONSORTIUM, 2010: 247-249). While the percentage of children from the highest social classes, who visit grammar schools, is still relatively high and stable (55%), the percentage of pupils from middle or lower social classes has risen from 24 to 31% or 11 to 15% respectively. This is in line with the expectation that youths from middle and lower social classes benefit more from the expansion of the grammar schools than the members of the higher social classes. In summary, the slight reduction of social disparity, which had already been observed in PISA 2006, has strengthened in PISA 2009. In addition to this, the differences between the levels of competence between the social classes have been reduced. This reduction is mostly the

result of increased levels of competence amongst students from middle and lower social classes. Taken together the presented empirical findings have to be rated as positive with regard to the development of equity in the German education system and show, according to the members of the German PISA consortium, desirable developments:

In summary we can conclude: While in PISA 2000 the slope of the social gradient with regard to reading literacy was more pronounced in Germany than in any other OECD country, this parameter has substantially decreased over time. In PISA 2006 as well as again in PISA 2009 the extent of social disparities in the competences of the 15-year-olds is close to the OECD average. This can be seen as a positive development. However, the objective still remains to achieve an equally high degree of de-coupling between social origin and performance level, which was already achieved in some OECD-countries a decade ago through the consistent development of the education system (op. cit.: 250) (author's own translation).

While social disparities have been reduced between PISA 2000 and 2009, the development of the disparities in the participation of education which are linked to the migration status of the students has been less positive (op. cit: 224-228). The PISA 2009 data show that 26% of the 15-year-old students in Germany are from migrant families. This is an increase of about 4 % when compared with the numbers in PISA 2000, but generally in line with the average percentages of comparable middle or Northern European countries of destination. However, the social disparities between migrant families and families without a migration background are particularly high in Germany and do not decrease from the first to the second generation. With regard to the reading literacy of students with a migration background, it has to be pointed out, that it has improved since PISA 2000. This improvement is related to the improvement of the reading literacy of first generation migrants (33 points), but also — although to a lesser degree — to the performance of the second generation migrants (24 points). However, in spite of these positive developments, the disparities which are related to the migration status are still considerable. Particularly the low level of the reading competence of first generation migrant students with a Turkish background, which is 109 points lower than the reading literacy of students without a migration background, is still very unsatisfactory and does not even improve significantly among the second generation students, whose average score is 94 points lower.

3.3. Academic subject knowledge versus pedagogical-didactic skills: the reform of teacher education

The average performance of German students in the PISA study has also put the quality of teacher education back on the educational agenda again. However, the reform of teacher education is not a new topic in German education, but has been going on for years. Even experts in German teacher education admit that one of the main reasons for the seemingly endless reform debate is the lack of empirical evidence with regard to the effectiveness of teacher education (TERHART, 2008: 746), which leads to an abundance of normative assumptions in this ‘field of tension’.

The organisation of teacher education in Germany is closely linked to the organisation and structure of the school system (cp. section 4.1). Following the primary school, which is a comprehensive school for all pupils, the secondary school is strictly vertically tracked. This school system, which can be described as a ‘mixed model’ of a horizontally and vertically structured system is also reflected by the teacher education system. Thus, we can identify strictly vertically differentiated teacher education ‘tracks’ for the secondary school level (e.g. grammar school teacher, Hauptschul-teacher) and a horizontally structured, comprehensive teacher education phase for the primary school level. As a result of this mixture of horizontal and vertical structures, there is a multitude of teaching degrees for the primary and secondary school level in the different Länder.

In spite of these differentiations, there are, according to Terhart (2008), some formal similarities in teacher education, which can be found in all Länder: The organisation of teacher education comes under the responsibility of the Länder, which have agreed on some basic requirements and standards in order to guarantee mutual recognition and mobility of the teaching force. The work of the teachers is generally regarded as an educational occupation, which requires an academic education and training and is therefore based at universities (or specialised institutions of HE with a university rank). The academic course includes the acquisition of academic subject knowledge as well as pedagogical and didactic training. Traditionally all of these elements are offered from the beginning in a concurrent teacher education course. The academic education of future teachers at the universities (first phase) is supplemented by a second phase, which is more practical and directly geared

towards the future professional activity as a teacher. Both phases are completed with a first and a second 'state exam' (Staatsexamen), the content and form of which is decided by the responsible ministry of education, rather than the university.

The presented common structure of teacher education as well as broader social changes have led to a number of problems, which have been identified many times in the past (e.g. TERHART, 2000). However, in spite of many rational and very elaborate proposals, most of these problems are still unresolved. One of the main reasons for the strong resistance to change within the German teacher education system is that debates on teacher education reforms are partly dominated by self-appointed experts and numerous interest groups (e.g. universities, ministries of education and/or science, representatives of academic disciplines, teachers, parents, trade unions, employers, churches etc.). Their sometimes contradictory aims lead to a situation, in which a suggestion by any interest group will be immediately scrutinized and resisted by the other stakeholders with the effect that the teacher education system changes slowly, if at all.

The main problems, which were already identified by the so-called KMK 'Mixed Commission for Teacher Training', which was created in 1998 in reaction to the TIMSS results and reported its findings in 2000 (op. cit), are still pressing to the present day and can be summarized in the following way: Due to the constantly eroding educational function of the family, the educational role of the school is constantly increasing. As a consequence teachers need to be better prepared for their educational and consultative function for the children and students. Thus, it could be argued, that teacher education should focus less on the academic subject study and more on the necessary pedagogical and diagnostic competences of future teachers. In the context of these broader social changes, it is claimed that the first phase of the current teacher education system, which is based at universities, does not provide the teachers with the necessary professional skills. The subject knowledge, especially for the grammar school teachers, is still very much orientated towards the corresponding academic discipline rather than the school subject and didactics, which are more relevant for the children and students. Educational and didactic studies, which should be the core disciplines of teacher education courses, seem to be rather arbitrary and dependent on the individual preferences of the tutors and lecturers. Teaching

practices in schools and academic studies at the university are not well related to each other. The reasons for this are partly structural because teacher education at universities is often rather widely spread over several faculties and the specific needs of the teaching students are often neglected, because teacher education has a weak lobby at universities (TERHART, 2008: 755).

A second major problem concerns the integration and cooperation of the different phases of teacher education. Universities and state teacher seminaries, which are responsible for the second phase of teacher education, are usually rather isolated 'worlds' and do not take much notice of each other. The lack of contact and cooperation does not only concern the staff, but also the content and objectives of the two phases, which leads to repetitions and/or gaps and prevents cumulative learning processes. In addition to this, teachers in the second phase are often directly dependent on their tutors, who do not only train and consult the teachers, but also assess their performance, which forces the teachers again into the role of a pupil rather than an independent professional. The lack of cooperation also includes the so-called 'third phase' of teacher education, which is the professional development of the teachers throughout their working life through in-service training measures. According to the estimates of the 'Commission of the Federation and the Länder for Educational Planning and Research Promotion' (BLK) only 30-40% of German teachers take part in in-service training and the overall training time per year amounts to about 3-4 days only (op. cit.: 756). In-service training is compulsory for teachers, but exactly how teachers fulfil this obligation is entirely up to the individual and cannot be prescribed in detail either by the school or the relevant school authority.

A third set of well-known problems touches on the issues of recruitment, promotion and gratification of teachers. Due to demographic changes (e.g. decreasing birth rates in some regions and increases in others) and substantial shifts in the number of children and students in the different educational tracks, it is rather difficult to predict the future demand for new teachers at a particular type of school. The varying employment opportunities have a backlash effect on the attractiveness of the teacher education courses, which will only 6-8 years later affect the number of qualified teachers. If newly qualified teachers cannot find an adequate number of employment opportunities, this will have a negative effect on the attractiveness of the

teaching education courses, which in turn might lead to a shortage of qualified teachers in 6-8 years time, when the demand might be higher again. In addition, the fact that the teacher education courses in Germany qualify almost exclusively for the teaching career means, that teachers stay a long time in their profession, due to a lack of alternatives. The fact that most teachers in Germany are still employed as civil servants reduces the degree of flexibility in the teaching work force even further. This means in summary that, if newly qualified teachers hit a situation, where teacher supply and demand do not match very well, they might have to wait for a long time for an employment opportunity within the teaching profession and their career prospects outside the teaching profession are rather limited. The limited attractiveness of the teaching profession and its social status is also linked to the issues of gratification and promotion. Particularly teachers of the 'lower' types of school (e.g. primary school, *Hauptschule*) have very limited career prospects within the profession. All teaching qualifications offer possibilities of promotion in school management and administration posts, but gratification varies significantly and is only worthwhile for grammar school and vocational school teachers. The limited social status, inflated expectations by various interest groups (TERHART, 2001) and the limited possibilities of promotion and gratification as a well as the increasing feminisation and the extent of part-time employment have led to widespread view in Germany that the process of professionalization of the teaching career is not yet complete (BLÖMEKE, REINHOLD, TULODZIECKI & WILDT, 2004).

As pointed out above, suitable ideas and concrete measures as to how to remedy the identified weaknesses and deficiencies of the teacher education system in Germany have long been 'on the table'. For example, the following measures, which have been developed by the already quoted 'Mixed Commission for Teacher Training' more than 10 years ago, seem to have a high potential to solve at least some of the identified problems and enjoy a rather high standing amongst the many relevant stakeholders in teacher education:

The GKL [the 'Mixed Commission', HGK] [...] recommends gearing academic subjects, subject didactics, educational sciences and practical training more strongly towards the future career, and overcoming the arbitrariness of the course topics with the use of core curricula. The course contents of the first two phases should be coordinated with each other, the

coordination between the seminar and the training school should be improved and the training personnel for the preparatory service should be trained and selected specifically for this job. At the beginning of a career, professional competencies should be developed systematically, and appropriate support systems should be created for this purpose; this should be followed up by a system of compulsory in-service training measures. Finally, the development of professional competencies should be related to career development; ie, the remuneration of teachers should take account of achievement and competency (DÖBERT, KLIEME & SROKA, 2004: 322).

While some of the above mentioned measures are still awaiting implementation, other reforms have ‘already’ been put into practice. One of the most remarkable and perhaps promising reforms in teacher education in recent years has been the introduction of standards for teacher education, which had also been suggested by the ‘Mixed Commission’ and were passed by the KMK in 2004 (KMK, 2005). The standards for teacher education describe, in concrete terms, in which areas which competences and skills are expected from qualified teachers and are therefore suitable to not only systematically link the first with the second phase of teacher education, but also with the in-service training measures during the following teachers’ professional development. A second advantage of the new standards in teacher education is, that in the course of their development new functions and competences of teachers, which have hitherto been neglected or overlooked (e.g. school development and self-evaluation etc.), are now appropriately reflected in the education and training of teachers. Finally, taking account of the recently established ‘teacher education centres’ in some universities, which try to coordinate the interest of all the relevant stakeholders in teacher education and to give teacher education a stronger voice within the university, it seems possible that the intended and long overdue reforms of teacher education will finally at long last move forward.

4. CONCLUSION: STRENGTHS AND WEAKNESSES OF THE GERMAN EDUCATION SYSTEM

On the basis of the preceding analyses we will now try to identify and summarize strengths as well as weaknesses of the current German education

system. To begin with, it has to be pointed out, that after years of stagnation, the German education system has finally come to life and educational and even structural reforms such as changes in the secondary school tracks seem possible, that would have been impossible a few years ago. In addition, the speed and the breadth of the introduced educational reforms are quite remarkable, especially for the German education system, which is traditionally characterised by strong resistance to change. What is even more remarkable is the fact that the willingness for educational reform has also embraced those parts of the education system, which have in the past successfully resisted any plans to change, such as the teacher education system. However, if several educational reforms are introduced at the same time, there is of course the danger that the reforms produce unintended or even counter-productive side-effects. In addition to this, due to the parallel introduction of different educational reforms (e.g. different monitoring instruments like school inspections, comparative assessment studies, self-evaluation etc.), it will be difficult to assess empirically the impact of one particular reform. This is particularly problematic in an education system which is used to evaluating the effectiveness of educational reform purely on the degree of its successful implementation and which has only recently started to pay more attention to empirical analyses of the effectiveness of educational reforms.

Traditionally, educational reforms in Germany are based on thorough reflections, which try to anticipate possible effects and side-effects of the reform in question prior to its implementation. Apart from the obvious effect, that these debates delay or even prevent the successful implementation of educational reforms, substantial and high quality educational reflections can certainly also have positive effects, in that they can prevent 'quick fixes' or rushed and superficial copies of supposedly 'international trends' in education through the careful consideration of different or even opposing views and perspectives. For example, the discussion on the relationship between the German concept of '*Bildung*' and the PISA concept of 'competences' has been going on since the publication of the first PISA results and has produced a substantial theoretical debate in Germany, which is even noticed and studied abroad (cp. KOTTHOFF & PEREYRA, 2009). However, this debate has also had a beneficial influence within Germany in that it has influenced the development of educational standards for German schools, by showing that the

concept of ‘competences’ acquired in schools is a much more narrow concept than ‘Bildung’ and that ‘general education’ (*Allgemeinbildung*) still has an important role to play in German education. Thus, the tradition to carefully discuss and weigh the pros and cons of an educational reform before it is implemented, does indeed prevent the quick and determined realisation of reforms, but it also prevents rushed decisions, which could be regretted at a later stage. In addition, a critical and rather hesitant attitude towards new ‘fads’ in education also protects established characteristic features of the German education system, which have a long history and which have served the German education system very well for many years.

Finally, a summary of the strengths and weaknesses of the current German education system would be incomplete, if it disregarded the most recent PISA results, which were published in December 2010 (DEUTSCHES PISA-KONSORTIUM, 2010). Especially with regard to one of the main issues dealt with in this paper, the tension between excellence and equity, the results of the PISA study are particularly useful, because as a longitudinal study it shows developments and trends over time. The PISA-2009 study, which also included a summary of changes within the last ten years, seems to indicate, that the German education system has been making progress in both dimensions: excellence and equity. With regard to the relatively weak reading literacy of the 15-year-old German students, which was the main subject of the PISA studies in 2000 and 2009, the developments show that the competence levels have improved gradually but steadily in the last nine years and have now (2009) reached the OECD average. According to the members of the German PISA consortium, the rise of the average reading literacy is mostly due to rising competences in the lower levels of competence. As a result the variance in reading literacy has been reduced by 27% between 2000 and 2009, a reduction in variance which has, according to the authors of the report, not been achieved in any other OECD country (op. cit.: 280).

If we look at the correlation between socio-economic background and achieved performance levels, there are also strong indications that equity has improved in the German education system. While the reading literacy of the students from higher social classes remained relatively high and stable, the performance levels of students from lower social classes has improved, with the result that the gap between the two groups has been reduced by a third. In

addition, the slope of the social gradient, which is the main parameter for the extension of social disparities in reading competence, has been reduced significantly and is now close to the OECD average (op. cit.: 281). One of the reasons for these positive developments is, according to the PISA experts, the fact that the participation rate of students from lower classes in the grammar school (*Gymnasium*) has increased during the last ten years. “The school system has”, as the German PISA consortium put it, “moved a little closer to more equity” (op. cit.: 282, author’s own translation). However, in the long run, it will not be sufficient to concentrate only on the lower achieving students. If the German education system wants to provide optimal support for every single student, there is equally the need to support the gifted and talented students in future. However, according to the PISA 2009 results, individual support and differentiation is presently particularly underdeveloped in the grammar schools, which need to cater for an ever increasing heterogeneous studentship (op. cit.: 296).

In addition to the permanent task of balancing out excellence and equity, there are also a number of weaknesses or challenges, which have to be addressed in the future and which are also indicated by the latest PISA study (op. cit.: 296-7): Firstly, although the reading performance has improved and reached OECD average, there is still room for improvement, particularly in the important area of “reflection and evaluating”, which is still a weakness of the German students. A second problem, which needs further and intensified attention according to the latest results, is the deficient reading literacy of students with a migration background, who are more than one school year behind the non-migrant students. The proportion of students from migrant families who receive language support in German schools is well below the OECD average and is mostly restricted to the primary or pre-primary school sector, while other countries offer systematic language support also in the secondary school sector. A final challenge that is mentioned by the members of the PISA consortium, which is, however, not a result of the PISA study itself, will be the recruitment, training and in-service training of excellent teachers. According to the last ‘National Report on Education’, which is published every two years, there will be a shortage of teachers in selected subjects which ranges from the early childhood education phase to vocational education (AUTORENGRUPPE BILDUNGSBERICHTERSTATTUNG, 2010).

To sum up, a number of important steps and measures have been taken in recent years, which have the potential to improve the deficits and weaknesses of the German education system identified in the PISA studies. However, it will be necessary to carefully monitor the effects of the implemented changes and to learn from these experiences. In this respect, it is particularly encouraging, that in recent years empirical research has been strengthened considerably through a variety of federal and Länder research programmes, which aim to analyse the effectiveness of the educational reforms introduced. Thus, there is a real chance that, in future, educational reforms will be based more on empirical evidence than on normative or even ideological assumptions, which have long prevented educational reform in Germany.

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